The University of Massachusetts Medical School, A History:

Integrating Primary Care and Biomedical Research

Ellen S. More

The Lamar Soutter Library
University of Massachusetts Medical School

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Introduction

In 2009, *The New York Times* ran the following headline: "Doctor Shortage Proves Obstacle to Obama Goals. Primary Care Lacking." The story ran as the lead on page one. In Massachusetts, according to the Worcester *Telegram and Gazette*, new patients wait an average of 43 days to be seen by a primary care physician. To anyone in America old enough to remember the 1950s and '60s the situation will seem familiar, as will the solutions being offered, namely, to expand existing medical school classes, open a dozen or more new schools, and produce more doctors - preferably doctors who will practice primary care.[1]

Indeed, these solutions are identical to those proposed more than 50 years ago. This book tells the story of one such school, the University of Massachusetts Medical School, one of many founded between the 1950s and the early 1970s in response to a nationwide call for more doctors. Today, however, we have learned that producing more doctors is not the same as producing the kind of doctors most Americans need.

The idea for a state medical school in Massachusetts was broached in 1948, a response to the wave of veterans who could now consider it feasible to seek higher education. The Commonwealth did not begin to seriously consider the idea for another decade. At the time, medical education in the United States appeared to have reached a plateau. As soon as medical schools seemed to have achieved the technical and scientific rigor prophesied for them by Abraham Flexner's famous 1910 report, many medical educators - and even some commentators

outside the profession - worried that the trend had gone too far.[2] After decades of concerted effort to embody Flexnerian ideals - to eliminate substandard medical schools, to restrict the numbers of medical students admitted to the remaining schools, to educate medical students in the rigorous thought processes of the "scientific" method, to ally medical schools with first rate hospitals, to encourage medical faculty to become "full-time" professors (rather than clinicians for whom part-time teaching afforded a gratifying honorific), and finally, if implicitly, to encourage specialization and biomedical research - medical educators and the public were having second thoughts. Had medicine become too "scientific" and technical? Had physicians lost touch with the art of good practice? Why was it so hard to find a family doctor?[3]

Of all these pressing questions, two called for immediate resolution: whether to expand the pool of prospective physicians and if so, whether to modify their education to emphasize generalist clinical medicine. These were concerns throughout most of the United States. Unique to Massachusetts was the political subtext underlying the fight to establish a state medical school, an undercurrent produced by a pronounced shift from an establishment dominated by old-line Brahmin Republicans such as Henry Cabot Lodge or Leverett Saltonstall, to the populism of Democratic politicians supported by organized labor, the Catholic Church, and in general, the non-elite. Such constituents were eager to bolster public education despite the increased taxes that would inevitably result. Sentiments ran high that the sons and daughters of plumbers and electricians should have the same opportunities as any other hard-working students.[4]

This book will examine Massachusetts' responses to these challenges and how they shaped the culture and values of its only state-funded medical school, chartered in 1962. As we will learn in the ensuing pages, UMass Medical School was just one of an unusually large cohort of medical schools founded between 1960 and 1978. But the politically complex circumstances of its founding and ongoing political challenges that lasted for decades created a distinct legacy. More fundamentally, the determination of UMass Med, embodied in its founding dean, Lamar Soutter, to resist the pressure to become a "community" medical

school - one that exclusively emphasizes primary care education at the expense of specialization and world class research - makes its history exemplary, if not unique.

University of Massachusetts Medical School founding dean, Lamar Soutter, M.D., at the future site of the medical school, farmland previously owned by Worcester State Hospital. *(Reprinted from "Achieving A Dream, A Commemorative," Photo courtesy of the Office of University Relations, University of Massachusetts Medical School*

Part I of this book, Chapters 1-4, tells the story of those early political challenges and the importance of Dr. Soutter's Boston Brahmin background and his wartime heroics at the Battle of the Bulge in arming him to fight for his notion of educational excellence. It also recounts the legislative epic of Worcester's surprising choice as the location for the school, a fight which embroiled the University's Board of Trustees with organized labor, state and national legislators, the Catholic Church, and, of course, the Massachusetts medical establishment. Legislative battles were a constant feature of the school's pre-history (and surely didn't disappear after it opened in 1970). The groundbreaking

ceremony of 1969, more than 20 years after the first proposal to found a state medical school was made, occurred only after a concerted struggle by the Dean and Trustees to wring adequate construction funds from the Legislature, the governor, and the federal government. Part II will describe the school's successful struggle to outgrow the confines of the state's original vision—a "community" medical school—into an academic health science center that emphasizes both research and primary care education, and the growth of other major components, such as the Graduate School of Nursing, the Graduate School of Biomedical Sciences, and Commonwealth Medicine, as the school matured.

A note on terminology: The University of Massachusetts Medical *School* became the University of Massachusetts Medical *Center* from 1976 through 1997 when it divested itself of University Hospital and reverted to its original designation as the University of Massachusetts Medical School. This book has tried to honor these changes and refers to UMMS or UMMC depending on the years under discussion.

Aerial view of University of Massachusetts Medical School, circa 2012. *(Photo courtesy of the Office of University Relations, University of Massachusetts Medical School)*

NOTES

INTRODUCTION

1 Robert Pear, "Doctor Shortage Proves Obstacle to Obama Goals. Primary Care Lacking," New York Times (New England ed.), April 27, p. 1; Donna Boynton, "State Lags in Access to Primary Care," *Telegram and Gazette*, May 9, 2011, p. 1; A.G. Sulzberger, "New Path for Small-Town Doctors Starts in Kansas Small Town, *New York Times*, July 23, 2011, pp. 1, 3.

2 Carnegie Commission on Higher Education, "Higher Education and the Nation's Health: Policies for Medical and Dental Education, Special Report," October, 1970, pp. 1-11, in Series 6: Position Statements, Box 1, fol. 4, AAMC Archives, AAMC Reference Center, Washington, D.C. [hereafter, AAMC/DC]. Accessed at https://www.aamc.org/about/history/foundations/ on July 12, 2011.

3 Also see the AAMC's position statement on the need for more support for new medical schools, written largely by the deans of the newest of those institutions. "Draft: New and Developing Medical Schools, A Statement of Position," Feb. 5, 1970, typescript, pp. 1-10, ibid.

4 I owe the latter insights to conversations with H. Brownell Wheeler, M.D., founding chair of Surgery at UMass Medical School, and with Nicholas Soutter, Esq., son of Dr. Lamar Soutter, founding dean of the medical school.

Chapter 1

Does Massachusetts Really Need Another Medical School?

Between 1943 and 1978, 48 medical schools opened in the United States and Puerto Rico, an increase of close to 60% over the number of schools already in existence. Thirty-eight schools were founded between 1960 and 1978, including many that explicitly acknowledged a need for more primary care physicians as a major impetus for their founding. Largely, those were state schools. This chapter describes the context for founding so many medical schools and the specific - one might even say raucous - politics attending the birth of Massachusetts' only state medical school in 1962.[1]

American Medical Education at a Crossroads: the 1950s and Sixties

As leaders of the Association of American Medical Colleges (AAMC) and the American Medical Association (AMA) considered the future direction of medical education in the 1950s, they must have felt challenged by the strikingly mixed messages they received from both the government and the American public. Reflecting Cold War fears following the Sputnik satellite launch in 1957, reports issued from Washington called for intensified production of scientists, engineers, and physicians to meet a perceived scientific "manpower" gap. On the other hand, the numbers of general practitioners (GPs), available for the everyday medical needs of the public were rapidly declining. True, 10 new medical schools had been founded between 1943 and 1959, in part to accommodate returning soldiers in search of medical degrees on the GI bill.[2] But they would not meet the need. The American population's rising birth rate and lengthening life span, not

to mention its changing disease profile in the era of antibiotics, led many in the medical establishment to heed calls from the U. S. Surgeon General, the Carnegie Foundation, and others to rethink their decades-old policy of keeping a tight rein on the physician supply.[3] Underlying these conflicting demands was a much trickier problem: how to assure that a sufficient number of these new physicians actually became family doctors. Opening the profession to thousands more practitioners does not, by itself, improve access to medical care unless a higher proportion of those physicians choose to become "generalist" or "primary care" practitioners.

Efforts to find a workable balance between specialists and generalists extended back nearly half a century.[4] Since the 1930s, when the "Final Report" of the Carnegie, Rockefeller, Milbank Memorial, and Russell Sage Foundation-supported Committee on the Costs of Medical Care (CCMC) was published, one stream within organized medicine publicly advocated for more rationalized medical care delivery systems that integrated specialism and generalism into multi-specialty group practices offering comprehensive care. The CCMC Report's sponsors were primarily interested in cost containment and increased access rather than in primary care per se. At any rate, neither the AMA nor medical educators paid much attention to the CCMC's findings. The AMA feared, among other things, that GPs, who comprised the preponderance of their members, would lose out to specialists. Medical educators and hospital residency directors were too committed to the goal of medical specialization to consider making a place for what they saw as a dying breed - the GP.[5]

World War II dramatically accelerated the growth of specialization in biomedical research and medical practice, just as it had in most other fields of scholarship and the professions. Core specialties such as internal medicine, pediatrics and surgery, beneficiaries of new technologies, new techniques, and startlingly focused targets of research, all subdivided into subspecialties to adequately train young physicians for their newly enlarged, scientifically ambitious disciplines. As Rosemary Stevens observed more than 40 years ago, medical practice had begun to resemble "a federation of diverse disciplines."[6]

Passage of the Hill-Burton Hospital Survey and Construction Act of 1946 enabled hospitals to grant clinical departments more lines for residents.[7] By calling for thousands more interns and residents, the Act translated into a call for more highly trained specialists. Dramatic improvements in medical technologies, whether chemotherapeutic agents such as antibiotics, corticosteroids, tranquilizers and antipsychotics, or surgical techniques such as open heart surgery, made the seemingly indisputable case for medical students to pursue highly specialized medical careers.[8] Graduate medical education expanded both because of the desire of most medical graduates to become specialists and subspecialists, and because physician-researchers needed residents to carry a heavier load of the hospitals' expanding clinical workload and medical student teaching. Such physicians, specialty-oriented and research-literate if not actual researchers themselves, were the antithesis of old-style general practitioners.

This picture began to change during the 1950s. The Surgeon-General's Report of 1959, titled "Physicians for a Growing America," known as the "Bane Report" after one of its lead authors, announced the federal government's serious attention to medical "manpower" issues. The Report called for a drastic expansion of the numbers of physicians produced each year, and especially a large increase in the number of medical schools. As one analysis concluded, "If the Surgeon General's Consultant Group's estimate of 10,500 M.D. graduates by 1975 were to be met...21 new 4-year schools would be needed by 1971 and an additional twelve more by 1976...a total of 33 new schools..." not counting the schools opened since 1943.[9] More than a call for more doctors, the Report registered the public's growing concern about the kind of medicine they would practice and, necessarily, the education that produced such practitioners.[10] According to surveys taken in the late 1950s, the medical workforce could be characterized as highly qualified, highly specialized, and scarce. The public's belief that physicians were becoming a limited commodity –a belief shared by the authors of the Surgeon General's Report, the AAMC, and even the professionally conservative AMA – was strengthened by the spread of prepaid health insurance like Blue Cross/Blue Shield, by fledgling HMOs, and by passage of Medicare and

Medicaid in July, 1965, which increased demand. Even the AMA was changing its views on the need for more physicians.[11]

Was the profession's focus on specialization and technologically driven medicine overshadowing its delivery of humane, patient-centered medicine? Was the science of medicine replacing the art of medicine? Would typical medical graduates of the 1960s be prepared for or even willing to serve the nation's growing need for "continuing, comprehensive," *primary* care?[12] How could medical education serve the ordinary needs of patients while also preparing young physicians for the most advanced medical science in the world? These questions rose to the top of the national health "manpower" agenda.

In short, demand was increasing for accessible primary care. Historian John Burnham cites studies from the 1950s attacking the medical profession for greed and a lack of empathy, possibly in reaction to rising health care costs and the AMA's ardent campaign against national health insurance during the Truman administration.[13] By the late 1960s, only 20 percent of practicing physicians defined themselves as general practitioners, although residencies in pediatrics, surgery, and internal medicine were very full. The AMA's placement service in 1968 classified about one–third of its listings as general practice, but only eight percent of the physicians registered were general practitioners. Yet, according to physician and scholar John P. Geyman, "In 1966, among callers to the Chicago Medical Society's Referral Service specifically requesting a field of practice, calls for general practitioners were about four times more frequent than for internists or gynecologists…"[14]

Medical schools, for their part, by fulfilling their Flexnerian mission, had become more divorced from the realities of everyday clinical practice than at any time since the 1920s. Responding to the new call for practitioners to relate to their patients' real-world health problems, medical educators tried to improve "the educational process, largely from the standpoint of better and more effective learning, but also with regard to increased relevance of medical practice to social needs." Education reformers called for increasing the role of the behavioral sciences in an expanded curriculum that stressed comprehensive

care of the "whole" patient. For example, the new field of family medicine was authorized to grant board certifications in 1969 and had campaigned for specialty status most intensively from the mid-1960s; the concept of the "biopsychosocial model" also emerged in the 1960s and '70s, becoming a conceptual bulwark for both psychiatry and family practice.[15] Among the most prominent proponent of modifying the goals of medical education to reconnect it more directly to the public's needs and to incorporate more of what might be called "doctoring" was Ward Darley, Executive Director of the AAMC from 1959 to 1965. Others, too, began expressing concern over the dearth of small-group teaching and "active" learning rather than the still common reliance on large lectures and memorization during the first two years of medical school.[16]

By the time of the Surgeon General's Report in 1959, in short, both the AAMC and the AMA were cognizant of a growing mismatch between the kinds of physicians entering the profession and those that the general population actually needed: primary care doctors. According to "The Future Need for Physicians," a statement adopted at the 67th annual meeting of the AAMC in 1956, "In the ten-year period [1945-46 to 1955-56] the number of medical schools has increased from 77 to 82, the number of entering freshmen from 6,060 to 7,686, and the number of graduates from 5,655 to 6,485...It is possible that some existing schools can, with new and larger facilities, accept additional students, but the need cannot be met completely in this manner. The larger contribution in the number of students will have to come, as it has in the past, by the establishment of new schools."[17] But Ward Darley of the AAMC came closer to the real problem, noting that, "The availability of physicians for general care has been threatened by the growth of specialism...The availability and adequacy of continuing, comprehensive health and medical care for individuals and their families is, I believe, one of the most important questions facing the future of American medicine."[18]

The "New" Generation of Medical Schools

In short, by the time Massachusetts officials took up the question of authorizing a state medical school, questions about the future of health-care access and reform of medical education informed legislative agendas across the United States. Yet, in a state where three private universities - Harvard, Boston University, and Tufts - already ran established medical schools, how could the state justify sponsoring its own? What needs should a state-supported medical school fulfill? Should it embrace the ideal of university affiliation? Should it strive to become an academic health science center, necessitating either affiliating with, or building, a major teaching hospital? Such questions boiled down to one overall decision: Should a new medical school in the 1960s and 'seventies become a "community-based" medical school emphasizing education for primary care in alliance with community hospitals and local medical practices, or become the now traditional academic health science center with an elite hospital and a strong referral base? The choice would determine the long-range goals and even the cultural identity of members of this large cohort of new schools, including UMass Medical School.

After the 1959 call for more medical "manpower" by the Bane Report, the AAMC received a veritable flood of inquiries from potential founders of new medical schools.[19] In 1963 Public Law 88-129, the Health Professions Education Assistance Act, established matching Federal grants for construction and improvement of medical schools, as well as student loans for medicine, osteopathy, and dentistry. A Medical Library Assistance Act was passed in 1965, providing construction and other funds for this essential unit of any medical school. Between 1959 and 1968, more than 8,000 additional students were enrolled, an increase of about 27% over pre-Bane Report levels.[20] The founders of this new medical school cohort, as noted above, faced two divergent pathways depending on whether they envisioned their future as so-called "community-based medical schools" or as "academic health science centers" in

the Flexnerian tradition. In 1964 Ward Darley asked Dr. Lowell T. Coggeshall, Dean of the medical school of the University of Chicago, to chair a commission that would write a policy statement for the AAMC delineating the desirable features of modern medical education and the AAMC's desired role in promoting it. Published in 1965, the "Coggeshall Report" became the definitive policy statement of the academic medical establishment for the next twenty years. The Report suggested that bridging the divide between "community" and "academic" medical schools would not be easy - and might not be possible at all.

Coggeshall recognized the need for more physicians to better serve a nation in which both population and demand for health care were rising steeply. But he also made it clear that the "community-based" medical school would always be seen as a second-class citizen by what he termed the "great public and private medical schools." In the context of his own career as a professor and then dean of an elite, private medical school, Coggeshall did not expect elite institutions to adapt readily to the current national need. He wrote, "Clearly the publicly supported medical schools have greater responsibility to orient their efforts toward meeting requirements of their sponsoring states...The primary emphasis of American medical education - especially since the Flexner Report - has been on establishing and sustaining quality of instruction and research... The need of the future will be for the field of medical education to assume responsibility for meeting the quantitative as well as the qualitative needs of the nation and individual states and communities." Implying that "quantity" might militate against "quality," he warned against allowing a "re-emergence of schools of marginal quality."[21] His reservations were widely shared among leaders of established medical schools. The Massachusetts Medical Society formed its own committee to study the question of a state-supported school in Massachusetts. (Lamar Soutter was a member.) The committee prefaced its (tepid) support for a new school by saying, "The Society, however, can only favor the creation of a new medical school that is capable of graduating physicians of the same quality as those now provided by our three present medical schools."[22]

Rather than creating such (supposedly) second-class schools, Coggeshall

called for new schools to be "integral parts of mature universities with well-established graduate programs." They should not be "hospital schools." Thus, it would be imperative for new medical schools, like the best of the current institutions, to be closely allied with their parent universities. They must also be closely affiliated with a high-quality clinical setting, preferably with both inpatient and outpatient facilities. Medical students moreover, should experience the "multidisciplinary health care team" of the future, since specialization, Coggeshall believed, was clearly too entrenched to be dissolved. At the same time, such schools should take on the education of related health professions, emphasizing the skills necessary to be part of a "physician-led health care team."[23]

New medical schools faced an ambivalent reception from the academic establishment if they tried to deviate from the now established "Flexnerian" model. The AAMC itself retreated from its brief focus on community-based medical education under Darley shortly after his retirement in 1965, the year when the influential Coggeshall Report was published. The organization instead renewed its earlier focus on federal funding for medical research and national health policy.[24] The rise of federal funding for medical research in the post WWII decades produced a steep increase in the number of "full-time" faculty, that is, faculty funded entirely for their academic efforts with no independent clinical income, from close to 4000 in 1951 to about 19,500 in 1967. Many of these were strictly researchers. From the perspective of academic medicine, these trends were expected to continue.[25] Even in 1961, early in the cycle of new medical school construction, a report issued by an expert AAMC/AMA committee on the planning of medical schools advised that, "Increasingly the teaching of medical students is carried on in close conjunction with graduate teaching programs in the basic and clinical sciences, with the training of hospital house staff, and with other educational activities of the medical school and its parent university." This report suggested an ideal class size of 100 as well as an academic teaching hospital controlled, if not owned outright, by the school and large enough to hold 500-700 inpatient beds and outpatient clinics catering to about 350 visits per

day. (It is worth noting, that even while advocating the close linkage between medical schools and universities, the report also acknowledged the emerging primacy of comprehensive care, reflecting "a growing concern with the problems of the patient as a person and as a family member, as distinct from the study of cases of a particular disease.")[26]

Dr. William R. Willard, the dean of the University of Kentucky Medical School (established in 1956 and opened in 1960) and a nationally prominent educator, was one of the report's authors. More consequentially, Willard was the author of one of the most important reports on medical education of the 1960s, an AMA/AAMC collaborative effort titled *Meeting the Challenge of Family Practice: The Report of the Ad hoc Committee on Education for Family Practice of the Council on Medical Education*. In it he called for a new specialty, "Family Practice," to take on the growing need for "continuous, comprehensive" care. Yet Willard was also adamant about the need for a first-rate medical school to be closely affiliated with a parent university for the sake of collaborative research and academic enrichment. UMass Medical School founding dean, Lamar Soutter, ardently agreed with this advice. As succeeding chapters will show, Soutter assumed the new school would be located on the UMass Amherst campus, something for which he argued strongly. Willard was the first expert invited by Soutter to advise the UMass Board of Trustees after Soutter had accepted the deanship at the Medical School. Willard told the Board that most of the existing research at his medical school was being done in cooperation with "allied university research units such as the engineering school, psychology and sociology departments, and the basic life sciences departments."[27]

Many of the newer schools, however, could not afford to adopt the academic medical center model. For one, after 1968 the government's predicted support for new medical school construction had become a hollow promise as the competing costs of the Viet Nam War siphoned off much of the available money and triggered rising inflation. The United States Public Health Service Surgeon-General, William B. Stewart, spoke to the AAMC Executive Council in 1966, warning them of the downturn to come and added that research grants, too,

were becoming less likely to receive funding. He noted that each grant's costs, like the costs of medical technology and hospital and school construction, all had "doubled in about two years." The downturn in federal funding, it should be noted, coincided exactly with the years of UMMS's efforts to raise construction funds and, literally, get off the ground.[28]

Therefore, some new medical schools faced financial barriers that precluded following the academic medical center model. By the late 1960s, as a faculty member from one of these schools wrote, "Issues of minority admissions, affirmative action, educational and financial supports for disadvantaged students, and medical care for the poor became preeminent in the consciousness of all of us." According to data compiled by the AAMC, schools that opened between 1970 and 1980 allotted, on average, 65% of their first-year slots, to women applicants, significantly above the norm. Funding exigencies, however, discouraged any ambitions to become elite research centers –at least for awhile. For example, "many new schools found it necessary to use community hospitals...whether by choice or because of the essential unavailability of federal funds for university hospital construction after about 1970..." The new, community-based schools relied more on community physicians for teaching than established schools, and often had less authority over hospital policies than at university hospitals.[29] In the words of Richard Egan, M.D., Secretary to the Council on Medical Education of the AMA, echoing Coggeshall, "There is understandably a concern about the creation of new schools that may, at least superficially, bear some resemblance to the prereformation [i.e. pre-Flexnerian] schools."[30]

True, some of the new cohort, such as the University of California at San Diego Medical School, or Mt. Sinai, for example, became almost immediate successes as research enterprises - in large part due to their affiliation either with a research university or a venerable and well-endowed hospital. Many others, however, either took much longer to reach that status or made no plans to follow that path. The new schools of the 1960s and 1970s more often made their reputations not only via their more diverse student bodies, or by more readily integrating family medicine or general internal medicine into their

undergraduate and graduate programs, but also by affiliating with community hospitals and clinicians.[31] Finally, new schools were associated with curriculum innovation to introduce medical students to actual patients in their first two years, and enhancing clinical science education with behavioral and social science. They thus early acquired the reputation of espousing, "a somewhat different set of values than did their established institutional peers."[32] As noted by President John Z. Bowers of the Macy Foundation, which had begun funding curriculum innovation grants as early as 1954, "Primary care and family/ community medicine are... supplanting biomedical research and specialty training as the watchwords of medical education," especially in schools of the newer cohort.[33]

When the University of Massachusetts and the state government began to seriously consider establishing a state medical school, therefore, the question of *whether* to create the school rapidly was supplanted by the question of *what kind* of school it should be. That, at least initially, seemed to depend on its location, whether a campus-based, non-urban site, or an urban location separated from the flagship campus at Amherst. It also reflected the pressures brought to bear by the deans of the established Boston medical schools. Most crucially, however, the question of whether to promote research and super-specialization over primary care, community service, and community hospital affiliations loomed large for years after Governor John Volpe signed the enabling legislation in 1962. For UMass Medical School, as for a few of the other members of its cohort (for example, UC-San Diego School of Medicine), that "choice" proved to be false, or at least unnecessary. Legislative pressures aside, in Massachusetts Dean Soutter adamantly refused to choose between primary care and specialization. In fact, he stipulated building a university hospital as one of his bedrock assumptions for the school. Ambitious plans for research, as will be detailed in Part II of this book, took longer to fulfill, but they were never off the table even during Dean Soutter's earliest planning. Besides, as he would argue, even for careers in primary care, medical students must be well educated and that required their being exposed to specialty medicine.

Politics, Medical Education and the Commonwealth

> "The journey was fraught with repetitive challenges and dangers, and shipwreck seemed a constant threat."[34]

Starting around 1948, elected officials in Massachusetts addressed themselves to the need for a state medical school. And for the next 30 years, the fate of the state's medical school was bound up with larger concerns about the place of public higher education in a state that already boasted many excellent private colleges and universities ranging from elite schools like Harvard or Wellesley to those like Northeastern or Boston University that catered to a wider spectrum of students. The University of Massachusetts was incorporated in April 1863 as the Massachusetts Agricultural College under the Morrill Land Grant Act of 1862. In 1943, although the legislature renamed it Massachusetts State College, something of the "Aggie" school clung to its reputation. Finally in 1947 it was rechartered as the University of Massachusetts with the nominal mandate to provide a full liberal arts education for citizens of the Commonwealth on a par with other well-reputed state universities. Not until 1962, under the UMass system president, John Lederle, was the university able to wrest fiscal independence from the state legislature. Previously, UMass salaries were tied to the state salary schedule which, in Lederle's words, was "impossible."[35] The American Association of University Professors (AAUP) ranked UMass 82nd among American universities in average salaries in 1964, according to the university's provost. A decade later, the state was ranked "last among the states in per capita investment in higher education. Furthermore, of all the states, the Commonwealth of Massachusetts invested the lowest proportion of its total public higher education budget in the training of health professionals." As one observer summed it up, public higher education in Massachusetts was "a late-bloomer."[36]

John W. Lederle, President, University of Massachusetts *(Photo courtesy of the Department of Special Collections and University Archives, W.E.B. Du Bois Library, University of Massachusetts Amherst)*

President Lederle, who remained in office from 1960 to 1970, was a crucial figure in the expansion of the university and the solidification of its fiscal and intellectual autonomy. During his tenure, UMass gained a new campus in Boston as well as the medical school in Worcester. According to one estimate, enrollment at UMass grew from 7,000 in 1960 to 26,600 across its three campuses by the early 1970s. Yet because of state subsidies, tuition in 1970 ($200.00 for undergraduates, $600.00 for medical students) remained sharply lower than what private, non-elite universities such as Boston University were charging. Beginning in the 1960s, private universities like BU began to feel the pinch of competition from the state higher education system, and they didn't like it one bit. Between the early 1960s, when college costs - and tuition - began to rise steeply, and the 1970s, the percentage of in-state students at schools such as BU

and Northeastern fell almost by half, endangering their traditional "quasi-public" function of educating large numbers of middle-class Massachusetts students. By 1970, when John Silber became president of BU, his first public statements about higher education aimed a sharp protest at the Commonwealth's support for expanded public education embodied in the new Boston and Worcester campuses, claiming that a solid private institution - like BU - could make space for state residents at a relatively low cost to the taxpayer simply through state tuition subsidies, thus avoiding the cost of building new campuses.[37]

This public-private tension shadowed the development of state-sponsored medical education in the Commonwealth through much of the 1970s. Silber, for example, was indignant at the proposed cost of building a new university hospital on the medical school campus when BU's medical school could provide spaces for Massachusetts students in return for tuition subsidies and support for renovation of Boston City Hospital - a bargain, he claimed. In comparison, he projected a cost of more than $130 million for the new medical school and hospital. In words that still rankle among veteran faculty of UMass Medical School's early years, Silber wrote, "The building of this school is a monument to the folly of forgetting that all universities are public, and of allowing anything but educational need to dictate expansion of the state sector." In the early 1970s, Silber was fighting for the life of his financially-strapped university; his protests against the medical school were merely part of a larger campaign to draw more Massachusetts dollars to BU. His principal target was not the medical school, but the entire UMass system. But it nicely played into the hands of Boston's private medical schools.[38]

In fact, resistance to a state medical school by the deans of the medical schools in Boston - Harvard, Tufts, and BU - weighed much more heavily in the political scales. Long before UMass began its expansion into Boston and Worcester, a state medical school attracted opposition strictly on its own terms - as a potential competitor for patients. Such opposition, particularly from the Dean of Harvard Medical School, posed a serious threat throughout the 1950s. As early as 1952, it was said to have blocked any effort to create a state-supported medical school, particularly since its proponents wanted to build it in Boston.

Tensions between public and private medical education, in short, began in the late 1940s and persisted for nearly thirty years. (There are those who would say that opposition from "the privates" has never fully abated, but in the current era they would be mistaking intense rivalry for outright opposition.) During Democratic Governor Paul Dever's term (1949-1953), the first of successive legislative commissions reported favorably on the idea in 1950, but only as a two-year, pre-clinical school. In 1952, another proposal from the Massachusetts Medical-Dental Commission favored a Boston site for a four-year school without absolutely ruling out a location in the western part of the state. That same year, Governor Dever proposed a state school be built adjacent to the new Lemuel Shattuck chronic disease hospital in Boston. Worcester, too, first made its case as a site for a medical school in 1952 when the Worcester District Medical Society, the superintendent of Worcester City Hospital, and several local college presidents banded together to stake a claim for the city. The costs estimated to build a new medical school that year were $35 million, with operating expenses of $1 million per year.[39]

Publicly, Boston's medical establishment offered only oblique criticism. An editorial in the *New England Journal of Medicine* argued that the need for doctors did not exist in the state; but if it did exist, the need was gravest in the western part of the state, especially for "general practitioners." It concluded that any medical school in the Commonwealth must be "capable of producing graduates of the highest quality," implying that limiting admissions to only Massachusetts applicants and emphasizing low-status general practice would be antithetical to such a lofty goal.[40] Support for a state school seemed to cool in the next few years, and with a new Governor in the statehouse, Shattuck Hospital was run as a state-owned chronic disease unit.[41] But the issue only had been put on the back burner; a succession of investigatory commissions kept it gently simmering until the Bane Report of 1959 brought it back to legislators' attention.

As long as the Massachusetts Senate remained in Republican hands, powerful Republican constituencies such as the Boston medical establishment could block any action on behalf of a state school. Democrats, however,

had held a majority in the House since 1948 and did not let it die. The Bane Report happened to coincide with a democratic takeover of the Massachusetts Senate, giving that party control over both houses of the state legislature, a crucial development. As retired District Attorney (Worcester) John Conte, who previously held office in both the House and Senate, remembered, many Massachusetts citizens - those affiliated with organized labor, but many other middle and working class citizens - perceived medicine as a "controlled profession [that] didn't give everyone equal opportunity." In other words, they keenly felt a sense of undue and unfair exclusion. The admissions policies of Boston's three private medical schools came to epitomize such exclusivity.[42] At the time, many elite universities and those aspiring to be ranked among the elite, began to deliberately transform their admissions policies in favor of students outside their own state or region. In 1957, for example, Thomas J. Wojtkowski, Democratic state representative from Pittsfield in western Massachusetts and chair of the House Committee on Education, was quoted as saying that he has "many students who apparently are fully qualified to become doctors, but ... are having a great deal of trouble getting into medical school [in Massachusetts]." Other legislators made the same claim. Under the GI Bill, many students from low- to moderate-income families could now aspire to a graduate or medical degree. But few places were open to them in Massachusetts - even if they could have afforded the tuition. One early leader of the UMass Med faculty described the atmosphere at the time as verging on "class warfare."[43]

In response to such constituent pressure as well as to the perceived crisis in health "manpower," the Massachusetts Medical-Dental Commission recommended in 1954 that the New England states create a New England Board of Higher Education (NEBHE). Since the state legislative Commission had not reached an agreement, a non-legislative Board seemed an excellent idea. When the U.S. Congress chartered the body in 1956, the NEBHE began to look closely at remedying the perceived shortage of medical school opportunities in New England.[44] To no one's surprise, New England was found wanting in the number of its young men and women who were admitted to medical school.

Forty of the 48 states currently supported public medical education "in some fashion," according to the Board's findings. In New England, however, only one state - Vermont - supported the medical education of its own residents. In the words of a Board report of 1957, "Fewer New England students study medicine in proportion to its population than students from the country as a whole...Because we use more doctors than the national average...we must import them in sizable numbers from the rest of the country." More persuasively, the Report continued, given the nation's future demands for physicians, "Certainly many more young men and women will be competing for admission to medical schools. However, those schools supported by state and municipal funds will logically feel that their first responsibility is to students from their own area..." New Englanders would be left out.[45]

The NEBHE thus proposed that every New England state agree to spend $2,500 for each local medical student who enrolled in one of the region's medical schools - *public or private* - beyond the number enrolled in 1956. For a moderate investment, the region might increase its medical graduates by the same number as if they had built a new school. Yet when the Board examined the results of its plan three years later, despite the fact that every state but Connecticut had agreed to participate, the figures revealed a sorry story. By 1959, the numbers had not increased. In fact, they had declined. As the Report detailed, "In 1959 there were 117 fewer [New Englanders admitted to New England medical schools] than in 1956 - a drop of 12.3% from 953 to 836." Only the University of Vermont had kept its part of the bargain. Other New England schools, notably Harvard, Tufts, and Boston University, had actually *reduced* the number of students admitted from New England, recruiting instead from the increasing number of students applying from across the United States. Although, the Report admitted, "the region <u>at present</u> does enjoy a favorable physician-population ratio - 155.4 per 100,000 for New England as compared with 118.4 for the United States," it invoked the Surgeon General's Report to emphasize that New England must do its share to help provide for the nation's future needs: "Except for the state of Vermont, we are not contributing our fair share." On October 18, 1959 the NEBHE adopted

three resolutions declaring that Massachusetts and Connecticut should establish medical and dental schools; that New England states without publicly supported medical and dental schools should create contractual arrangements with existing New England schools to admit more regionally-based students; and, that New England states without such schools establish financial aid for "qualified residents with limited financial resources" to attend those schools with which contractual arrangements had been established.[46]

The Commission's findings generated a strong reaction. By February 1960, the AAMC had received preliminary inquiries into starting a medical school from the University of Massachusetts, the University of Connecticut, Brown University, and MIT. By October, it acknowledged what it termed "serious" inquiries from Connecticut, Massachusetts, and Brown. The outgoing Massachusetts governor, Foster Furcolo, a Democrat, publicly supported creating a state medical school.[47] Also in 1960 he proposed a bill to expand Shattuck Hospital's ambulatory care department and construct a four-year, 100-student medical school and research building in Boston. Furcolo estimated the total costs at $17 million, of which fourteen million would come from the current surplus in the state budget, and $3 million from federal grants. Interestingly, Furcolo's draft bill incorporated the same funding requests that would be made two years later: $100,000 for hiring a dean and other expenses associated with planning, and $14 million for remodeling Shattuck Hospital and constructing the education and research building. The bill also called for a reconstitution of the University of Massachusetts Board of Trustees to better manage a medical school and hospital; henceforth the Board should include, besides the governor, "the Commissioners of education, agriculture, public health, and mental health, the president of the university (ex officio), and not more than 15 additional members to be appointed by the governor for seven-year terms of whom one is to be drawn from a list provided by the Mass. Medical Society."[48]

Handwritten, private notes by the newly arrived University of Massachusetts President, John Lederle taken during a meeting to discuss the matter convey the political complexities surrounding the question, still two years

away from actual passage of the enabling bill:

> [Judge] Fox is afraid of 2-year med. sch.-
>
> [State Representative John] Thompson wants issue - running for Gov.
>
> Leadership by [UM] - 3 Boston Deans - want a study -
>
> # of 2 year schools [compared?] with 4-year schools
>
> Movement from small areas to large areas
>
> Any boy or girl who asked about 2-year school... [49]

Roughly translated, the notes tell the following story: By the end of 1960, political opinion in the Commonwealth had reached an unstated consensus. As former medical school Chancellor Roger Bulger wrote in 1978, the legislature was the most powerful of the branches of state government in Massachusetts and after 1958, as noted earlier, both houses held a Democratic majority. The House, in combination with organized labor, had "consistently" led the battle for a state medical school.[50] But by 1960, a majority of both houses in the Massachusetts legislature favored creating a state medical school. So did organized labor, which was a powerful lobby on Beacon Hill, especially after the union of the AFL and CIO and the creation of a state Labor Council in 1962. The question wasn't *whether* to build the school, but what *kind* of institution it should be. That question hovered over Lederle's notes. First, Judge J. John Fox, a probate judge said to be a friend of three different Democratic governors (Dever, Furcolo, and Peabody), was an influential Boston politician sought after for his ability to bring politicians together with organized labor. He was also a member of the UMass Board of Trustees. Judge Fox, "A tall, lean man with craggy features [who] was said to possess one of the shrewdest political minds in the Commonwealth," is credited with securing a campus for the University of Massachusetts in Boston. His obituary noted that he also "was generally considered the father of the University of Massachusetts Medical School...which was established by the Legislature after tremendous behind-the-scenes battling with medical officers

in Boston."[51] Fox was adamant that the school be first rate and was convinced it must be a four-year school. Representative John Thompson from the western Massachusetts town of Ludlow and the Speaker of the House, wanted to run for governor as one who had brought the people a state medical school. Thompson was willing to start with a two-year school, but Fox knew that the day of the two-year medical school was over. (The AAMC went on record as opposed to such schools in 1961 at the same time as they began strongly encouraging new schools to become an integral part of a parent university.)[52]

Another issue embedded in this cryptic fragment was to prove much more troublesome, namely, whether to locate the school in an urban or rural part of the state. In early 1961, when Lederle's notes were written, the school's supporters already were touting locations in Boston, Worcester, Springfield, or a two-year school on the UMass campus in Amherst. Organized labor was quite open about

Judge J. John Fox *(Photo courtesy of the James P. Loughlin Papers, University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

its strong preference for an urban location for the school, preferably Boston. Hugh Thompson (no relation to Speaker John Thompson), who was at the time President of the Massachusetts Labor Council of the AFL-CIO and a member of the UMass Board of Trustees, made his views known plainly. Judge Fox, too, responsive to the wishes of organized labor, insisted the school be located in the heart of the Boston medical center. Labor would play an important role in winning approval for the school, in the selection of its location in Worcester,

and in assuring that it obtained its own teaching hospital. At this stage of the proceedings, however, Boston was Labor's first choice, but bitter factions were forming around the question of location. According to Speaker Thompson,

> Ever since the idea of a state-supported medical school was first advanced for legislative consideration by the late Governor Paul A. Dever, the Democratic Party in Massachusetts has strongly supported all efforts to establish a state medical school...At the present time, supporters of a four year state medical school are hopelessly divided as to the location of such an institution, and many informed observers believe that a divide and conquer strategy has been deliberately contrived by opponents of the plan in an effort to defeat all such efforts.

Thompson went on to say that although he favored a four-year school, it seemed unlikely that anything but a two-year school had any possibility of passage into law. For that reason he decided to support a proposal for a two-year school on the campus at UMass Amherst strongly favored by Mary Fonseca, Democrat of Fall River and Chair of the House Education Committee. The deans of the three Boston medical schools, too, had submitted a request to the Governor to authorize a formal study of the need for a state medical school, claiming to support a new school if it were shown to be necessary and if it were a top-quality school rather than one limited to accepting only in-state students. An editorial written by Lamar Soutter in the *Boston Medical Quarterly*, a journal published by Boston University School of Medicine and Massachusetts Memorial Hospitals, argued for a two-year school located on the Amherst campus, with either the existing Boston schools or the existing hospitals of Springfield and Westfield absorbing the students for their third and fourth years' clinical work until a 500-bed hospital could be built on the UMass Amherst campus. Few noticed at the time, however, that Representative Thomas Farrell, Democrat of Worcester and soon-to-be Chair of the House Finance Committee, spoke for Worcester, pointedly saying, "There seems to be an iron curtain down against spending

money anywhere west of Framingham."[53]

In 1962, the Massachusetts Medical Society issued its own report on the advisability of founding a state medical school. The Society acknowledged the need for more doctors, but declared itself "considerably more enthusiastic about supporting the establishment of a two-year school than a four-year school." The assumption underlying this conclusion was that the medical students from such a school would be accepted for their last two clinical years into the existing Boston schools - which would receive a state subsidy to make up the difference in tuition. The prospect of a financial windfall from the state was enticing. An editorial in the *New England Journal of Medicine*, a journal published by the Society, once again warned against limiting admissions to Massachusetts residents for fear of diluting the quality of its graduates. Instead of building such a school, it recommended that the three existing medical colleges be given tuition subventions similar to those already going to the University of Vermont. Boston University's president Harold Case hoped to increase BU's own medical school enrollment from 288 to 500 students, some presumably from Massachusetts, with money for tuition subventions and expansion of BU's facilities to be underwritten by the state.[54]

Politics, Medical Education, and the University of Massachusetts

In the midst of these trial balloons, the University of Massachusetts had yet to formulate its own policy and preferences. In the UMass President's office, for example, where John W. Lederle had just begun his 10-year term of office, little was known about running a medical school. The Board of Trustees had explored the issue a decade earlier, but with no definitive conclusions.[55] In May, 1960, four months before Lederle took office, the University Provost convened a fact-finding committee of faculty and administrators to investigate the question. The Committee was headed by the dean of the UMass School of Nursing, Mary A. Maher. Maher was not a neutral party, of course, in that the School of Nursing would greatly have benefited from having a medical school and teaching hospital

on campus. As it was, nursing students routinely were bussed into Springfield for their hospital training, an unnecessary expense of time and money in Maher's - and Lederle's - view. But the committee did a highly professional job in a very brief period of time, consulting both published documents and the personal opinion of medical experts in New England and nationally. Among those they consulted were medical school deans from Vermont, Albany, and from Kentucky--Dean William Willard. Lamar Soutter, dean of Boston University Medical Center, was also among the report's expert consultants. Although these consultants included Dr. Alfred Frechette, Commissioner of Public Health for the Commonwealth and a determined proponent of a Boston site for the school, the committee's report strongly reflected the pro-campus bias of most members. In this it also reflected the bias of their consulting deans. All of the latter stood behind the sentiment of Dean Willard that, "the high level of Medical Education in the United States exists in part because of the close affiliation of the medical school and university; and because of its control by university administration.' It 'greatly' facilitates faculty recruitment..." They concluded, "The ideal location for a medical school is on the campus of the sponsoring university, even if the location is not in a large city. School and hospital should be physically connected, because of the increasing importance of clinical instruction throughout the four years." These educational ideals, it must be noted, accorded fully and deliberately with the Boston medical school deans' determined opposition to having another four-year school share their already strained clinical resources, much less run a hospital that would compete for their patients. The UMass report commented, "...the deans of all three Boston medical schools...are perfectly willing to actively support a new medical school in Massachusetts if it is located outside of the Boston area and if it is to be developed according to high educational standards." The report rejected the idea of a two-year school and, adding an observation of its own, pointedly noted that, "The staffing of a medical school requires a degree of freedom from control which does not currently exist in the state of Massachusetts." In only a few months, the committee sifted through and reached a consensus on most of the critical concerns that would be faced by the incoming

president, the Board of Trustees, and the legislature: the desired type, stature, location, and fiscal structure of the future school.[56]

The Maher study represented academic opinion, while the founding of a state medical school, certainly in the Commonwealth of Massachusetts, was fundamentally a political, not an academic, decision. Lederle made this discovery even before he arrived on campus in September from the University of Michigan. At the time, Lederle knew next to nothing about running a medical school. As he recalled in 1975, "I felt we sooner or later...ought to have a medical school." But not in Amherst, "because like everyone else my impression was that Amherst was a small country town and my impression, not knowing about medical education particularly... was that medical schools ought to be located in large centers of population. That a great deal of their clientele consists of people that are whisked there after auto accidents by ambulance with sirens screaming, etc." In August, a month before his move to Amherst, he took a phone call at his Michigan office from former governor Furcolo, who invited him to a meeting in a hotel near Lederle's summer home. When Lederle arrived, he discovered that Judge John Fox was traveling with the governor. As Lederle learned, "Judge Fox from the very beginning had been interested in a medical school for Massachusetts. Judge Fox is very much interested in opportunity for people to get medical education... So he, from the beginning, had the concept of pushing for a medical school." Even before Lederle had moved to Massachusetts, he was introduced to a major lobbyist for a medical school and a future member of his Board of Trustees. As it happened, Fox was devoted to the idea of a medical school in Boston that could make use of Shattuck Hospital, commonly seen as the "white elephant" of Dr. Frechette's Department of Public Health. Traveling to Michigan to meet UMass's incoming President, Fox made sure his hopes, which were also shared by many in organized labor, were crystal clear. Thus began the medical education of President John Lederle.[57]

Once he settled in, President Lederle quickly began to learn more. After informal discussions with pertinent members of the newly augmented Board of Trustees, and perusal of the Maher report, Lederle still did not feel he was

sufficiently in command of the details to lobby effectively for a medical school. At a meeting of the Trustees, he requested that they go on record in favor of establishing a medical school "immediately." Significantly, although the Board did go on record favoring a state medical school under the aegis of UMass, but specified that it be located "in the greater Boston area," a harbinger of future wrangling.[58]

Also at Lederle's request, UMass Amherst Provost Gilbert Woodside called for a second study to supplement the Maher report with concrete details about budgeting and timetables for the entire process. As Woodside wrote in July, 1961, "Frankly, we have no idea how much money should be budgeted for this." But, the "medical center" they had in mind included "a medical school, an associated hospital, a dental school, a school of nursing, a school of public health, and possibly a school of pharmacy." When the Provost wrote, however, that "Whether any or all of these should be established would be the work of the initial planning group," he gave ample evidence that the President's office at UMass Amherst still had no notion of how little discretion the Legislature would eventually afford them in what Lederle clearly viewed as an academic matter. The report made several more assumptions that indicated the need for a steep learning curve in the realities of state politics; for one, it assumed that "the research activities of the [medical center] staff will be supported initially by state funds."[59]

In fact, even before Lederle's office weighed in with its own investigation, the Democratic-controlled Massachusetts legislature authorized a "Recess Commission on the Establishment of a State-Supported Medical School" on May 31, 1961. Worcester is usually seen as the surprise winner in a four-way race to host the school. Yet, the results of a little-known straw vote by the members of the 1961 Recess Commission suggest that this may not have been true. The Commission was chaired by Senator Maurice Donahue, a Democrat from western Massachusetts, a graduate of The College of the Holy Cross in Worcester, with ties to organized labor. Donahue was also the majority leader in the Senate, and its future president. Among his committee's 15 members, only three had any direct connection to Worcester: the presidents of Assumption College and

Clark University and Representative Vite Pigaga, a Democratic member of the House for Worcester since 1958. Pigaga firmly supported a state medical school and openly supported Worcester as the best site for it. He seemed greatly outnumbered...at first.

Donahue sought advice from leaders of the AAMC and traveled to their headquarters in Evanston, Illinois to consult with them. Primarily he took the political pulse of Massachusetts' citizens by holding a series of 10 meetings covering most of the state. From the outset, Donahue and most of the Commission were convinced that the school should be a four-year institution and be built in a major urban center. They also clearly hoped to link it to an existing hospital, both to reduce the cost and the time of construction. Thus, the Commission closely inspected potential locations in Boston, Worcester, and Springfield. All three cities owned municipal hospitals that were viewed as, in Vite Pigaga's words, "white elephants" they hoped to "unload" to the state. Donahue had consulted with the Executive Director of the AAMC, Ward Darley , and so presumably knew that medical educators strongly opposed building a new school apart from a university campus. Nevertheless, in his public testimony, he listed Boston, Springfield, and Worcester - in that order - as sites with hospital facilities that would be "adequate" for a medical school. Cannily, by estimating the costs of building only a school, not a teaching hospital, the cost was estimated at about $10 million, a low estimate even on its own terms.[60]

According to both Donahue and Pigaga, the three Boston medical schools and the Massachusetts Federation of Taxpayers' Associations all opposed the idea. The Massachusetts Medical Society, as we have seen, tried to hedge its bets. Labor unions were strongly in favor, and didn't hesitate to say so from the beginning. In Worcester, supporters at first were cautious. But, by the fall of 1961, when word got out that the Commission would recommend a four-year state medical school to be affiliated with the University of Massachusetts, Worcester came out strongly in favor of locating the school there. The UMass Board of Trustees, through the testimony of Owen Kiernan, State Education Commissioner, made it known in December 1961, that it still favored a four-year

school in the "Boston area," with only the two Springfield-area Trustees openly dissenting.[61]

In the end, the Donahue Report recommended that the state establish a four-year school, that it be given fiscal independence as a guarantee of educational excellence, that the commissioners of public health and mental health be made University Trustees, and that an appropriation be made for a

State Senator Maurice A. Donahue
(Photo courtesy of the Department of Special Collections and University Archives, W.E.B. Du Bois Library, University of Massachusetts Amherst)

dean and an architect. But it also recommended that the site decision be left in the hands of the University Trustees and the future medical school dean. What neither the public hearings nor the Report disclosed is that Donahue privately took a straw poll of the Commission members' preferences. As Vite Pigaga recalled, Worcester won - by one vote. Only then did Donahue realize how contentious the location question could become, with many members of the legislature likely to lobby for their own districts. In order to pass the enabling legislation for the school, the Commission's close vote for Worcester was withheld from the record. Pigaga recalled that Donahue abruptly adjourned the meeting - "banged the gavel" - immediately following the informal poll without ever recording it officially. The Report - minus a recommendation for a site - was given unanimous approval by the Commission. It was accepted by the Senate on January 31, 1962 and sent on for consideration as a bill by the House. But, as Maurice Donahue acknowledged in recalling the events that followed, "Our work

was just beginning."[62]

Senator Vite Pigaga, Democrat, Worcester, c. 1965
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

At the legislative hearings of March 1962, just prior to passage of the bill authorizing a state medical school, supporting testimony was offered by representatives of organized labor, by the Worcester Area Chamber of Commerce (also representing the City Council and City Manager Francis McGrath), the Worcester City Hospital Board of Trustees, and the Worcester District Medical Society. House Speaker Thompson supported the Report, citing the state's low ratio of "GPs" to population. Finally, President Lederle reinforced the University's support by expressing appreciation for the bill's provision for fiscal autonomy for the school. He told the legislature he was glad to see that the Report, "recognizes the importance of proper fiscal self-management as a prerequisite for operating a good medical school." Representative Mary Fonseca, chair of the House Finance Committee, supported the Report, too, except for its endorsement of fiscal autonomy for the school, something she vehemently opposed. In the Senate, the chair of the Ways and Means Committee, a Worcester Democrat, recommended against it. Donahue, as Majority Leader, brought it to the floor for a full vote and won, 19 to 17. In the House, the bill had no easier passage, but with labor support

and the efforts of Speaker Thompson, representing western Massachusetts, it passed. On July 27, 1962 the legislature enacted a bill to authorize a four-year state medical school as part of the University of Massachusetts.[63]

When a bill is passed by a Democratic House and Senate, of course, there is no guarantee that it will be signed into law by a Republican governor especially when, as in the case of John Volpe, his own fiscal conservatism was reinforced by the arguments of political allies among the Boston medical establishment.

As John Lederle commented in 1975, it was only by "a thin thread," woven by the adept lobbying of Judge Fox, Senate majority leader Donahue, and organized labor with its ally, the Catholic diocese of Boston, that the bill was signed. Lederle recalled that he made a trip into Boston to see the Governor about the bill on a Monday. "And," he told his interviewer, "it looked as though the Dean of the Harvard Medical School had slept with [the Governor] over the weekend because the Governor, instead of listening [to me], immediately started blaring out, 'Any qualified student can get into medical school.'" Lederle brought out his facts and figures, information originally collected by the New England Board of Higher Education and incorporated into the UMass study of 1960, detailing "the number of kids, how qualified they were, who couldn't get into medical school." Lederle told him, "Your information is just poppycock...He now listened to me instead of popping out the arguments that he was getting from the private medical schools." But Lederle knew he could not be sure of Volpe's vote. "I left the office and...I went immediately over to [Maurice] Donahue's office...he was Majority Floor Leader and I said...You guys will have to take it from here."

Lederle left no doubt as to whom he meant by "You guys." He went on to say that, "In the afternoon, we knew that Labor was going in. Fox had that all arranged with the head of the AFL-CIO organization. They went in and then Judge Fox told me that he was going to have Cardinal Cushing use whatever influence he could...And about seven or eight o'clock that night, the Governor signed the bill...It was by a thin thread that that one got signed." Trustee Hugh Thompson, who led the six-man Labor delegation that followed President Lederle, remembered that even after an hour's discussion with Volpe,

the Governor was still not fully persuaded. The final effort came a little later, presumably from the Cardinal and Judge Fox.

And so President Lederle added another chapter to his education in Massachusetts politics. By then he knew for sure that, "Labor and the Church influence was greater [than mine]."[64] This was the easy part. The fight over choosing the school's location lasted another three years.

NOTES

CHAPTER ONE

1 At least half of the post-1960 cohort, including such medical schools as the Universities of Texas-San Antonio, Kentucky, Arizona, New Mexico, Penn State, Eastern Virginia, and Michigan State, can be characterized this way. Thirty of the 38 were state or federally sponsored; eight were private including two established in Puerto Rico. These figures do not count some additional campuses added to preexisting schools, as for example the University of Illinois' Colleges of Medicine at Rockford, Peoria, and Urbana, all founded in 1970. "Medical Schools' Founding Dates from AAMC Directory of American Medical Education, 2002-2003," AAMC Archives, AAMC Reference Center, Washington, D.C. [hereafter, AAMC/DC], personal communication from Molly Alexander, Jan. 6, 2010. I am extremely grateful to Molly B. Alexander, AAMC archivist, and Marian Taliaferro, Reference Center Manager, for this information as well as for many other courtesies. Also see *Medical Education Since 1960: Marching to a Different Drummer*, ed. Andrew D. Hunt and Lewis E. Weeks (Lansing, MI: Michigan State University Foundation with the W. K. Kellogg Foundation, 1979; and *New Medical Schools at Home and Abroad: Report of a Macy Foundation Conference*, ed. John Z. Bowers and Elizabeth F. Purcell (New York: Josiah Macy, Jr. Foundation, 1978).

2 They include the Universities of Texas-Dallas, Alabama, Washington, Puerto Rico, UCLA, Miami, New Jersey, Albert Einstein, Florida, and Texas-San Antonio.

3 Carnegie Commission on Higher Education, "Higher Education and the Nation's Health: Policies for Medical and Dental Education: Special Report," Oct., 1970, pp. 1-11, in Series 6: Position Statements, Box 1, fol. 4, AAMC/DC, accessed online, July 12, 2011; Rosemary Stevens, *American Medicine and the Public Interest* (New Haven: Yale University Press, 1971), pp. 362-366; Surgeon General's Consultant Group on Medical Education, *Physicians for a Growing America* (Washington, DC: U. S. Government Printing Office, 1959). The Report is often referred to as the Bane Report, after Frank Bane, chair of the consultant group; C. H. William Ruhe, "Present Projections of Physician Production," *JAMA*, 1966, 198:10; pp. 1094-1100.

4 Cf. George Weisz, Divide and Conquer: A Comparative History of Medical Specialization (New York: Oxford University Press, 2006); and Stevens, American Medicine and the Public Interest for in depth discussion of the history

of medical specialization.

5 The Report was published in 1932. Theodore M. Brown, "American Medicine and Primary Care: The Last half-Century," in Stephen J. Kunitz, ed., *The Training of Primary Physicians* (New York: University Press of America, 1988), pp. 1-58, esp. pp. 5-8, 16-17.

6 Stevens, *American Medicine and the Public Interest*, p. 348. More than two decades later, according to Kenneth Ludmerer, almost 20 percent of residencies were unfilled, with foreign-educated physicians now filling the open slots. Cf. Kenneth Ludmerer, *Time to Heal: American Medical Education from the Turn of the Century to the Era of Managed Care* (New York: Oxford, 1999), pp. 180-181.

7 Ludmerer, *Time to Heal*, pp. 181-184.

8 Naomi Rogers, *An Alternative Path: The Making and Remaking of Hahnemann Medical College and Hospital of Philadelphia* (New Brunswick, NJ: Rutgers University Press, 1998), p. 194. John C. Burnham, "American Medicine's Golden Age: What Happened to It?" *Science*, March 19, 1982; reprinted in Rosemary Chalk, ed., Science, Technology and Society (Washington, D.C.: AAAS, 1988), pp. 147-152.

9 Stevens, *American Medicine and the Public Interest*, pp. 362-363, notes that a 1958 report funded by the Department of Health, Education and Welfare, "The Advancement of Medical Research and Education," known as the Bayne-Jones Report, addressed a related matter of concern to medical schools, namely, how to balance funding for expanded medical research with that for medical education. This was a matter that increasingly occupied the new UMass Medical School in the 1970s, but is ahead of our story for the moment. Lee Powers, Ward Darley, and K. C. Oppermann, "National Goals for the Construction of New Medical School Facilities," *Journal of Medical Education*, 1960, *35*:2 (Feb.), pp. 108-118, quotation pp. 117-118. Powers et al. (p. 112) calculated that the average cost of a new building, whether "research, clinical [or] educational" is $23.4 million, although the total amount spent by the 10 new schools since 1945 was $182.5 million dollars, or an average of $18.25 million per school.

10 Burnham, "Medicine's Golden Age," p. 148. Cf. Lester J. Evans, *The Crisis in Medical Education* (Ann Arbor: University of Michigan Press, 1964).

11 Stevens, *American Medicine and the Public Interest*, pp. 362-366, 405-

408. The AMA's position, as was pointed out long ago by historians Gerald E. Markowitz and David Rosner, reflected the genuine poverty of many doctors in the 19th and early 20th centuries, when easy access to a medical degree had produced a massive over-supply of (often poorly educated) physicians. Gerald E. Markowitz and David Rosner, "Doctors in Crisis: Medical Education and Medical Reform during the Progressive Era," in Susan Reverby and David Rosner, ed., *Health Care in America* (Philadelphia, PA: Temple University Press, 1979), pp. 185-205. Paul Starr makes the same point in *The Social Transformation of American Medicine* (New York: Basic Books, 1982). Also see Burnham, "American Medicine's Golden Age," esp. p. 147.

12 The term "primary care" was not yet the universal signifier of generalist medical care that it would become by the mid-1970s. For example, in an article from 1966 (three years before the specialty of Family Medicine was approved), Dr. Soutter fell back on the term "family physician" for lack of anything else: "The problem of the diminution in the ranks of the family physician has been upon us for many years...There can be no doubt of the value of the family physician to the American household, the question is who can and should do something to see to it that there is an adequate number of these doctors...," in Lamar Soutter, "Some Aims of a New Medical School," *Clinical Research*, 1966, 14:1, pp. 3-6, quotation, p. 5. Also see Alice Sardell, *The U.S. Experiment in Social Medicine: The Community Health Center Program, 1965-1986* (Pittsburgh: University of Pittsburgh Press, 1988), pp. 17-18. It was used, however, in the context of discussions of "community-oriented primary care" as the objective of programs developed by the emerging field of Community Medicine. See Shirley K. Longlett, Jerry E. Kruse, and Robert M. Wesley, "Community-Oriented Primary Care: Historical Perspective," *Journal of the American Board of Family Practice*, 2001, 14:1, pp. 54-63, esp. pp. 54-55. On the other hand, the phrase "comprehensive, continuing care" was earning some cachet. It was invoked throughout an address by Ward Darley, Executive Director of the AAMC, "The Family Physician of the Future: Fact or Fiction?" pp. 142-149, quotation p. 142, in Appendix to the *Journal of Medical Education*, 1961, *36* (Dec.), titled "Medical Education and Medical Care, Interactions and Prospects." It also occurred in the AMA-sponsored report by the Citizens Commission on Graduate Medical Education, *The Graduate Education of Physicians* (Chicago, IL: AMA, 1966), p. 44, also known as the "Millis Report" after its principal author. The phrase reoccurred frequently over the next ten years in discussions about the need for primary care physicians and is now in general use.

13 Burnham, "Medicine's Golden Age," pp. 147, 149, 151 n. 14, 18, 40-42. Also

see, Ellen Singer More, "'Empathy' Enters the Profession of Medicine," in Ellen Singer More and Maureen A. Milligan, *The Empathic Practitioner: Empathy, Gender, and Medicine* (New Brunswick, NJ: Rutgers University Press, 1994), esp. pp. 27-31.

14 In rural states such as Minnesota, organized medicine was replete with general practitioners who could still wield political power based on the desperate need for their services among the majority of voting districts - and the influence of their local state representatives. I am indebted for this insight to Prof. Dominique Tobbell. Cf. "Town and Gown: The Politics of Medical Education and Practice in 1960s America," paper presented to the annual meeting of the American Association for the History of Medicine, May 1, 2010, Rochester, Minnesota; John P. Geyman, *Family Practice: Foundation of Changing Health Care* (New York: Appleton-Century-Crofts, 1980), p. 9.

15 Nassir Ghaemi, *The Rise and Fall of the Biopsychosocial Model* (Baltimore: Johns Hopkins University Press, 2010); George L. Engel, "The Need for a New Medical Model: A Challenge for Biomedicine," *Science*, 1977, *196*: 4286 (April 8, 1977), pp. 129-136.

16 Andrew D. Hunt, "A Time of Change and Reform in Medical Education," pp. 2-9, in *Medical Education Since 1960: Marching to a Different Drummer*, ed. Andrew D. Hunt and Lewis E. Weeks (Lansing, MI: Michigan State University Foundation with the W. K. Kellogg Foundation, 1979), quotation p. 2.

17 As quoted in "Regional Co-operation in Medical and Dental Education for New England: A Recommendation of the New England Board of Higher Education," Winchester, MA: NEBHE, Feb., 1957, quotation pp. 13-14, in Box 43, fol. 532, "Medical School, pre-1960," John W. Lederle Papers, Special Collections and University Archives, University of Massachusetts-Amherst, Amherst, MA. [Hereafter, Lederle, UM/A.]

18 Darley, "The Family Physician of the Future: Fact or Fiction?" (1961), pp. 142-149, p. 142.

19 Data on the founding of U.S. medical schools are taken from the AAMC database of medical schools (see n. 1, above). Although the AMA and the AAMC had collaborated in the accreditation process through their jointly run Liaison Committee on Medical Education since 1942, by the 1950s the AAMC seems to have functioned as the first line of attack for new schools preparing to run the

accreditation gauntlet, having taken upon itself to publish reports and pamphlets to advise those attempting to start such a school. Donald G. Kassebaum, "Origin of the LCME, the AAMC-AMA Partnership for Accreditation," *Academic Medicine*, 1992, *67*:2, pp. 85-87. And see, "Procedures Approved by Executive Council, 1959," pp. 1-2, in Series 3, "Historical Documents, Box 1, fol. 22; "Outline: The AAMC: What it is Doing. What it Should Be Doing, 1959," pp. 17, 32, Series 3, "Historical Documents, Box 1, fol. 26," both in AAMC Archives, accessed online at https://www.aamc.org/about/history/foundations/174074/aamc_historical_documents.html on May 5, 2011.

20 G. Gayle Stephens, *The Intellectual Basis of Family Practice* (Tucson, AZ: Winter Publishing Co., 1982), pp. 45-46; R. Stevens, *American Medicine and the Public Interest*, p. 373; "Undergraduate Medical Education," *JAMA*, 1966, *198*: 8 (Nov. 21), 179ff, esp. 186-187; Martin M. Cummings and Mary E. Corning, *Bull. Med. Library Association*, 1971, *59*:3 (July), 375–391, accessed online at http://www.ncbi.nlm.nih.gov/pmc/articles/PMC197606/ on Nov. 7, 2010.

21 Lowell T. Coggeshall, MD, "Planning for Medical Progress Through Education," (Evanston, IL: AAMC, April 1965), pp. 33, 36. Cf. Joel D. Howell, "Lowell T. Coggeshall and American Medical Education: 1901-1987," *Academic Medicine*, 1992, *67*: 11 (Nov.); 711-718.

22 "Appendix No. 24: Committee to Consider the Needs of a State-Aided Medical School in New England," *New England Journal of Medicine*, Supplement No. 2, "Proceedings of the Massachusetts Medical Society," *266*: 2 (June 28, 1962), esp. pp. 120-122. Quotation p. 120-121. I am greatly indebted to Wendy M. Brown, Librarian, Massachusetts Medical Society and the Boston Medical Library/ Countway Library, for making the Massachusetts Medical Society materials available to me.

23 Coggeshall, "Planning for Medical Progress," pp. 36-37; William Rothstein, claimed that "The most important new medical schools [after 1950] have been community medical schools and clinical campuses of medical schools." Cf. William G. Rothstein, *American Medical Schools and the Practice of Medicine* (New York: Oxford, 1987), p. 229.

24 A sampling of medical schools founded during the 1960s reveals more diversity over time than commentators expected. For example, the Kellogg Foundation's conference group, made up of 10 such schools in 1978 included

representatives from the University of New Mexico (est. 1961), a leader in primary care, as well as the University of California-San Diego (est. 1962), a research powerhouse. Cf. Hunt, "A Time of Change," pp. 7-8; Harold J. Simon, "Recruitment, Admission and Retention of Socioeconomically Disadvantaged Medical Students from Racial and Ethnic Minority Groups at UCSD School of Medicine," p. 91, both in Hunt and Weeks.

25 Rothstein, *American Medical Schools*, Table 13.1, p. 257; Cf. Stevens, American Medicine and the Public Interest.

26 "Medical School Facilities: Planning Considerations," PHS Publication No. 874 (Washington DC: Public Health Service, 1961) pp.1-2, 4, 10. The report was prepared by the Ad Hoc Committee on Medical School Architecture of the AAMC and the Council on Medical Education and Hospitals of the AMA, for the U.S. Public Health Service. The committee, chaired by George T. Harrell, MD, Dean, University of Florida College of Medicine, also included John Z. Bowers, head of the Commonwealth Fund, William Willard, dean of the new University of Kentucky Medical School at Lexington, and Lee Powers and Glen Leymaster, both of the AAMC. The book was intended as a guide for those who were planning new medical schools. Willard and Harrell both testified at UMass Trustees' hearings on where to locate UMMS. Cf. William R. Willard et al., *Meeting the Challenge of Family Practice: The Report of the Ad hoc Committee on Education for Family Practice of the Council on Medical Education* (Chicago: AMA, Sept. 1966).

27 By 1969, only seven percent of medical schools were unaffiliated with a university. "Medical Schools' Founding Dates," see n. 1 above; William R. Willard, MD, "A Summary of Considerations Leading to the Establishment of the University of Kentucky Medical School and a Preliminary Statement of its Objectives," rev. 9/29/1956, in Box 43, fol. 532, "Medical School, pre-1960," Lederle, UM/A; "Minutes, Board of Trustees Agenda" (Jan.-June), May 22, 1964, Box "Minutes of Meetings of Full Board and Committee, 1962-1964", fol. "Board of Trustees, Minutes, Agenda, 1964 (Jan.-June)," Board of Trustees Papers [hereafter, Trustees, UM/A]; Willard et al., *Meeting the Challenge of Family Practice*. Willard continued to be one of Soutter's trusted advisers to the UMass Board at least through 1965 when the location of the school was finally decided.

28 "Remarks by Surgeon General William B. Stewart to the Executive Council of the AAMC on Sept. 13, 1966," p. 3, in AAMC Executive Council Minutes, 1966, AAMC/DC. Examples of some schools that were intended to be "community based" include Michigan State, University of New Mexico, and Brown University,

obviously a diverse group united mainly by their reliance on preexisting hospitals and their commitment to primary care education. Cf. Robert D. Sparks, "The W. K. Kellogg Foundation and the New Medical Schools," in Hunt and Weeks, pp. 10-13, esp. p. 11. The National Science Foundation faced the same funding crisis in the late 1960s. Cf. Toby A. Appel, *Shaping Biology: the National Science Foundation and American Biological Research, 1945-1975* (Baltimore: Johns Hopkins, 2000), p. 233.

29 Hunt, "A Time of Change," p. 5; Stevens, *American Medicine and the Public Interest,* pp. 367-368. Ellen S. More, *Restoring the Balance: Women Physicians and the Profession of Medicine, 1850-1995* (Cambridge, MA: Harvard University Press, 1999), pp. 193, 220.

30 Coggeshall, "Planning for Medical Progress Through Education," p. 35; Hunt, "A Time of Change," pp. 5, 6; Richard L. Egan, "Recent Developments in the Process of Accrediting Medical Schools," in *New Medical Schools at Home and Abroad*, pp. 121-124, quotation, p. 123.

31 Good examples of such schools are the University of Missouri at Kansas City and Michigan State.

32 More, *Restoring the Balance*, pp. 187, 193; Hunt, "A Time of Change," p. 6; Stevens, *American Medicine and the Public Interest*, p. 375.

33 Bowers, "Preface," *New Medical Schools at Home and Abroad*, quotation p. vii.

34 Roger J. Bulger, "The Medical Center: University of Massachusetts," pp. 125-146, in Bowers and Purcell, *New Medical Schools at Home and Abroad*, quotation p. 125.

35 Not until then could the school award merit raises to deserving faculty. Bulger, "The Medical Center," pp. 125, 127. In 1965 the UMass Boston Campus was created in south Boston, establishing a three-campus university. In 1991 the University of Lowell and Southeastern Massachusetts University (renamed UMass Dartmouth) were incorporated into a new, five-campus university system. See [Robert J. McCartney], "Oral History Interview with John W. Lederle, 1975," typescript fragment, pp. 1-11, in John Stockwell Papers, UM-W. Original in Box 1, fol. 14, Oral History Program Interview Transcripts, UM/A.

36 Lederle's predecessor, Jean Mather, resigned in 1960 when the state Senate killed a pay raise for faculty while agreeing to fund new buildings. His obituary quoted his reply: "It will profit us nothing to build a lot of bright new tin cans and fill them with half-baked beans." Bryan Marquand, "Jean Paul Mather, 92; helped expand UMass as president in '50s," *Boston Globe*, June 26, 2007, accessed at https://web.archive.org/web/20150806145818/ http://www.boston.com/news/globe/obituaries/articles/2007/06/26/ jean_paul_mather_92_helped_expand_umass_as_president_in_50s/. Also see "Minutes, Board of Trustees Meeting," July 2, 1964, in Box "Minutes of Meetings of Full Board and Committees, 1962-1964," fol. "Trustees, Minutes, Agenda, etc. (Full Board and Committees, 1964 (July-Dec.)," Trustees, UM/A. Quotation in Nina McCain, "Public-Private Clash in Massachusetts," *Change*, 1973, *5*:4 (May), pp. 16-19, quotation p. 16. Accessed at http://JSTOR.org/stable/40161744 on Jan. 11, 2010.

37 McCain, "Public-Private Clash," pp. 16-17.

38 John R. Silber, "Paying the Bill for College: The 'Private' Sector and the Public Interest," 1975, *The Atlantic*, *235*:5, pp. 33-40, quotation p. 35.

39 Chapter 70, "Resolve Providing for an Investigation and Study by a Special Commission Relative to the Establishment of a Medical School by the University of Massachusetts," Approved Sept. 18, 1951, *Massachusetts Acts and Resolves*, 1951; Chapter 38, "Resolve Reviving and Continuing the Special Unpaid Commission Established to Investigate and Study the Advisability of Establishing a State Medical and Dental School Under the Jurisdiction of the University of Massachusetts," Approved April 29, 1952, *Acts and Resolves*, 1952; [Robert J. McCartney], "Oral History Interview with Leo Redfern, 1970," pp. 6, 9, typescript, in Oral History Series II, Box 3, fol. "Leo Redfern," UM/A.

40 "Cui Bono," *New England Journal of Medicine*, 1952, *246*:26 (June 26), pp. 1021-1022.

41 "Chronology of the Development of the University of Massachusetts Medical School," Box 43, fol. 541, Lederle Papers, UM/A, quotation on p. 1; Bulger, "The Medical Center," p. 128. Also see "[Chap. 70], Resolve providing for an investigation and study by a special commission relative to the establishment of a medical school by the University of Massachusetts, Sept.18, 1951;" "[Chap. 38], Resolve reviving and continuing the special unpaid commission established to investigate and study the advisability of establishing a state medical and dental school under the jurisdiction of the University of Massachusetts, April 29, 1952,"

Box, "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol. "Newsclippings, 1951-1964," both in Record Group 55-2, "Other Campuses - Medical School, Worcester, 1962-, UM/A [hereafter, Other Campuses, UM/A]. The 1952 cost estimates are given in "Notes from press clippings on history of the establishment of the Medical School," typescript, n.d., p. 1, in H. Brownell Wheeler Papers, University of Massachusetts Medical School Archives, Worcester, MA [hereafter, Wheeler, UM/W].

42 For quotation from Hon. John J. Conte, see Peter Castaldi, (UMMS '02), raw footage of videotaped interview of Hon. John J. Conte, Chapter 21, DVD, in Peter Castaldi Collection, UM/W [hereafter Castaldi, UM/W]. Also see Oral History Interview transcript with Hon. John J. Conte, interviewed by Ellen More, Oct. 25, 2010, Worcester, MA, Oral History Collection, UM/W.

43 "Medical School at U. of M. is urged anew at Hearing," *Springfield Union*, Feb. 26, 1957, in Box, "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol. "Newsclippings, 1951-1964," Other Campuses, UM/A; personal communication with H. Brownell Wheeler, by telephone, Jan. 19, 2012.

44 Commonwealth of Massachusetts, Fourth Preliminary Report of the Recess Commission on University of Massachusetts Medical and Dental School, April 5, 1954, in Box 2, fol. 3, John J. Conte Papers, UM/W [hereafter, Conte, UM/W]; "Medical Schools and Medical Education: A Survey of Facts and Opinions Relative to Factors Involved in the Establishment of a New Medical School, A Staff Study Prepared at the Request of the Provost of the University of Massachusetts," July 22, 1960, pp. 2-5, typescript in Box 46, fol. 571, Lederle, UM/A. The study was prepared by Mary A. Maher, Dean, School of Nursing, Study Coordinator, Lawrence M. Bartlett, Professor of Zoology, chair Pre-medical Advisory Committee, and Edward T. Dowling, Statistician, Bureau of Government Research, and was known ever after as the "Maher Study."

45 "Regional Co-operation in Medical and Dental Education for New England: A Recommendation of the New England Board of Higher Education," Winchester, MA: NEBHE, Feb., 1957, quotations pp. 3, 5, 6.

46 Oral history interview with President William Lederle by Peter Castaldi (UMMS '02), DVD, in Castaldi, UM/W; "Regional Co-operation in Medical and Dental Education for New England: A Recommendation of the New England Board of Higher Education;" Robert H. Kroepsch, Exec. Secretary, "A Report

of the New England Regional Medical-Dental Education Plan, 1956-1959," plus Appendices, Winchester, MA, NEBHE [1959], quotations on pp. 1, 4, 5, 6-7, in Box 43, fol. 532, "Medical School, pre-1960," Lederle, UM/A.

47 Foster Furcolo, Governor, "To the Honorable Senate and House of Representatives, House No. 3333, Sept. 1960," Box 43, fol. 533, "Medical School, 1960," Lederle, UM/A; AAMC Executive Council, "Minutes," 1958-1963, Feb. 6, and Oct. 27-28, 1960, AAMC/DC.

48 "Furcolo Urges Establishment of UMass Medical School," *Massachusetts Collegian*, Sept. 28, 1960, Box, "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol. "Newsclippings, 1951-1964," Other campuses, UM/A. Also cf. "Redraft of House No. 3333, 1960: An Act Establishing a Medical School with the University of Massachusetts and Transferring the Lemuel Shattuck Hospital from the Department of Public Health, Sept. 1960," Box 43, fol. 533, "Medical School, 1960," Lederle Papers, UM/A. Furcolo's cost breakdown was: 400-student medical science and research building--$9,000,000; Expansion of Shattuck outpatient department--$1,000,000; 400-bed hospital plus utilities--$7,000,000.

49 Lederle was trying to catch up with an already moving train. "We propose to train general practitioners - We propose to train Mass. doctors," he told his Trustees. [Lederle], "Night Letter, To Honorable John A. Volpe, Governor;" John W. Lederle, handwritten notes to Board of Trustees, n.d., both in Box 43, fol. 533, "Medical School, 1960," Lederle, UM/A.

50 Bulger, "The Medical Center," p. 131.

51 UMass President John Lederle "paid warm tribute to Judge Fox for his devoted and effective service in steering the bill [to establish a Boston campus] through legislative and executive channels." "Minutes, Board of Trustees Meeting," July 2, 1964, in Box "Minutes of Meetings of Full Board and Committees, 1962-1964," fol. "Minutes, Board of Trustees Agenda, etc. (Full Board and Committees, 1964 (July-Dec.)," Trustees, UM/A. Edgar J. Driscoll, "J. John Fox, 95; retired judge known for his political savvy," *Boston Globe,* Oct. 5, 1999, accessed online at http:web.archive.org/web/20150803153232/http://www.highbeam.com/doc/1P2-8575649.html, on Feb. 5, 2012.

52 "Minutes," AAMC Executive Council, May 15-16, 1961, AAMC/DC; "Views Differ on Site for Medical School," *Springfield Union*, Feb., 16, 1961, p. 1, Box 46,

fol. 560, "Medical School Location, 1961-63," Lederle, UM/A.

53 "Legislature Plans Two Year Medical School for UMass," *Massachusetts Collegian*, March, 6, 1961, n.p.; "Education Committee Favors Medical School for UMass: Deans will Welcome Two Year Plan if Necessity Proved by Investigation," *Massachusetts Collegian*, March, 8, 1961, n.p., both in Box, "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol. "Newsclippings, 1951-1964," Other Campuses, UM/A. "Views Differ on Site for Medical School," *Springfield Union*, Feb. 16, 1961, p. 1, Box 46, fol. 560, "Medical School Location, 1961-63;" [Lamar Soutter], "A New Medical School? (Editorial), *Boston Medical Quarterly*, 1961 (March), pp. 28-31, in Box 43, fol. 534, all in Lederle, UM/A.

54 "Appendix No. 24: Committee to Consider the Needs of a State-Aided Medical School in New England," pp. 1121, 1122; "Editorial: State-Supported Medical School," *New England Journal of Medicine*, 1962, *266*: 17 (April 26), pp. 892-893; "Editorial: Medical Education Persists," *New England Journal of Medicine*, 1962, *266*: 26 (June 28), pp. 1385-1386.

55 "The following are references to the Board of Trustees [sic] actions in regard to medical schools and medical education [Feb. 6, 1951 to Dec. 12, 1961]," p. 1, in Box 43, fol. 534, Lederle, UM/A.

56 "Maher Study," pp. ii-iii, 17-18, original underlining, added in ink, presumably by Lederle; McCartney, "Oral History interview with John W. Lederle," p. 55. Cf. William R. Willard, "New Medical Schools: some preliminary considerations," *Journal of Medical Education*, 1960, *35*:2, pp. 93-107, quotation p. 97.

57 McCartney, Oral History interview with John W. Lederle," pp. 48-50.

58 "The following are references to the Board of Trustees [sic] actions," p. 2.

59 John W. Lederle to Alfred Frechette, Feb. 2, 1961; William G. O'Hare to Dr. John Gillespie, Feb. 27, 1961; Gilbert L. Woodside to Dr. Lawrence M. Bartlett, July 5, 1961; L. M. Bartlett to President Lederle, "Memo," July 24, 1961, all in Box 43, fol. 534, Lederle, UM/A.

60 "Abstract of Testimony at hearing on S-627 to Establish a Medical School as part of the University of Massachusetts, Wed., March 14, 1962," in Box 43, fol. 534, Lederle, UM/A. Hon. Vite Pigaga, Oral History Interview transcript, interviewed by Ellen More, Aug. 12, 2008, Worcester MA, Oral History

Collection, UM/W.

61 "The following are references to the Board of Trustees [sic] actions," pp. 2-3; "Abstract of Testimony at hearing on S 627 to Establish a Medical School as Part of the University of Massachusetts," Lederle, UM/A.

62 Pigaga, Oral History Interview; on Donahue's recollections, I have relied on handwritten notes taken by retired State Sen. Ed Burke during a lecture given by Donahue on Feb. 18, 1988 during Sen. Burke's class in health policy at Regis College. My deep appreciation to Sen. Burke for making them available.

63 Oral History of Hon. Vite Pigaga; "Report of the Recess Commission on the Establishment of a State Supported Medical School," Jan., 31, 1962, pp. 1-35, Senate No. 627, [authorized] Under Chapter 122 of the Resolves of 1961; Maurice Donahue to Robert Z. Nemeth, March 1, 1996, both in Box 1, Vite Pigaga Collection, UM/W. Also see "The Medical School Issue," [Worcester] *Evening Gazette*, March 7, 1961, p. 6; "City Promoted as Site for State Medical College," *Worcester Daily Telegram*, Nov. 10, 1961; "City's Bid for School is Readied," [Worcester] *Evening Gazette*, Dec. 8, 1961, all in Newsclippings, Public Affairs Collection, UM/W [hereafter, PA, UM/W].

64 Thompson was accompanied by Joseph Salerno, Salvatore Camelio, James Loughlin (all from the Massachusetts State Labor Council), AFL-CIO legislative representative James Broyer, and the Council's Committee on Political Education [COPE] Representative Joseph Cass. Information in the previous two paragraphs from McCartney, "Oral History interview with John W. Lederle," pp. 50-51. In 1962, the head of the Labor Council was the Secretary-Treasurer, its one paid employee, James, "Jimmy," Loughlin, a devoted native of Worcester. On Loughlin and the AFL-CIO during the 1960s and '70s, see Chapter 3. Also see "Appendix V, Final Report: Justifications of Worcester as the Site of the University of Massachusetts Medical School, presented by Trustees Hugh Thompson and Robert Gordon at a meeting of the Board of Trustees held on 4 Aug., 1965, and Recorded with the Minutes of that Meeting," Box "Other Campuses, Medical School, Worcester, 1962-O-P," fol. "Proposed Location-Ad Hoc Committee, 1965," Other Campuses, UM/A.

Chapter 2

Lamar Soutter

"We would not have a medical school in the Commonwealth today but for Bimi Soutter…"

ON December 20, 1963, the Board of Trustees of the University unanimously appointed Lamar Soutter, M.D. to be the founding Dean of the University of Massachusetts Medical School. He was to begin work on February 24, 1964, initially working from offices in the South College Building on the UMass Amherst Campus.[1] No one could have known then what tenacity, optimism, and grit Soutter would need over the next ten years to take a mere concept and turn it into a glass, stone, and concrete reality. Yet President Lederle's due diligence before choosing his dean was thorough. Even before he and Soutter began their long partnership to bring the medical school to life, Lederle learned enough about him to suspect that he'd hired a man with the toughness and ingenuity to succeed. In 1970, on his last day in office before retiring from the Presidency of the University, Lederle wrote a letter to Soutter, revealing his thoughts after many battles, many victories, and almost as many defeats. He told him, "I do not think that there is another man in the country who could have overcome all the obstacles you have faced and they still go on!" Five years later - soon after Lamar Soutter left the University - Lederle reiterated his claim: "Bimi [Lamar] Soutter is a hell of a guy. We would not have a medical school in the Commonwealth today but for Bimi Soutter....What a guy!"[2]

"Bimi" Soutter, by all accounts, was a man raised to seek challenges and confront obstacles - not excluding those that are endemic to politics in Massachusetts. Even his nickname, "Bimi," which he seems to have liked, hints

at a man who was not likely to back down from a fight. According to his son, Nicholas Soutter, the name was bestowed by his classmates at the St. Paul's School sometime after the class had read a Rudyard Kipling story titled "Bertran and Bimi." Bimi was an orangutan. After capturing Bimi as a baby somewhere in the "Malay Archipelago," the French naturalist, Bertran, raised him as a full member of his household. But after Bertran married, he began to ignore his former protégé, who nursed a murderously jealous grudge. When Bertran left the house one day, Bimi killed his new wife and ran off. But Bertran laid in wait to have his revenge. In the end, although Bertran succeeded in killing Bimi, the ape managed to kill his attacker before dying of his own wounds. Clearly, his classmates at St. Paul's thought that "Bimi" Soutter was not someone to underestimate.[3]

Dr. Lamar Soutter grew up in Boston, the son of a family of distinguished physicians and surgeons. His father, Dr. Robert B. Soutter (1870-1933), graduated from Harvard College in 1894 and Harvard Medical School in 1899. After graduation Soutter's father became a House Officer (intern) at Boston Children's Hospital followed by a two-year stint as the Surgical House Officer and then House Surgeon at Boston City Hospital. The bulk of his career combined a busy private practice of orthopedic surgery with teaching at Harvard Medical School and scholarly publishing, including nineteen articles, one book, and several book chapters on the subject of orthopedics. He married Helen E. Whiteside, one of the descendents of the prominent Shattuck family of Massachusetts, in 1904. Buried in the Harvard Class Secretary's files, lest we impute more conventionalism to Robert Soutter than might be warranted, are the following details: He "favored" the Democratic party, he did not belong to any church (although he "preferred" the Presbyterian or Episcopalian denominations), he did not "regularly" attend morning prayers, he included the Hasty-Pudding among his college clubs, and he contributed "a few jokes" to the Lampoon. In his graduation file of 1894, Robert Soutter noted both that he was headed to medical school and that he regretted not having taken more classes in philosophy and history. But by the time his son Lamar was born, on March

9, 1909, the third of five children, his father was immersed in the demands of a respectable - and respected - surgical practice. In summers, the entire family would head off to Barnstable to sail, swim, fish, and canoe. Lamar was proficient in all these pursuits by the time he was ten years old.[4]

From grades nine through twelve (from 1922 to 1927), Lamar Soutter attended St. Paul's School in Concord, New Hampshire, an Episcopal boarding school for boys. The prep school was established in 1856 at the summer home of Boston physician George Cheyne Shattuck, Jr., a maternal relative. St. Paul's declared itself as striving "to nurture a love for learning and a commitment to engage as servant leaders [and to] service to a greater good." Its value system of Christian stewardship was fully concordant with the self-proclaimed missions of the 19th century Episcopal elite, at least in the Northeast. While Lamar Soutter attended St. Paul's he acquired (besides his nickname) a liberal arts education and a strong taste for naturalism. He joined the Missionary Society, which promoted service to the needy, but he also acted the lead in at least one school play --to enthusiastic reviews. A photo from the St. Paul's archives also shows him in the back row of the school football team.[5] But, according to his son, Soutter was not at all athletic in the typical sense of team sports. Rather, he was an avid outdoorsman. The school occupied many hundreds of woodland acres with ponds and streams running through the grounds. Fishing, hunting, camping, and sailing were lifelong passions, compelling outlets for Lamar Soutter's intense need for excitement and achievement. Soutter and another boy brought their canoes to St. Paul's every year. One year they attempted a long canoe trip complete with portage through local lakes and streams, but set out so late in the day that their return, long after dark, barely forestalled a full-scale search party. Because of their presumed inexperience, the boys' main punishment was, in Soutter's words, receiving "considerable unwanted advice."[6]

Lamar Soutter's wife, Mary Bigelow Soutter, and his son agreed completely that Lamar Soutter was "absolutely part of the elite...a Brahmin," but that he was also extremely competitive, wanted to excel, and needed the stimulation of overcoming a crisis. "Taking risks and accepting responsibility" might well

have been his personal credo -- traits equally well suited to performing surgery or founding a medical school. As H. Brownell (Brownie) Wheeler, M.D., one of Soutter's closest colleagues at the Medical School and the founding chair of the Department of Surgery, wrote, "He was willing to take risks. And he had dogged determination, persistence and faith when he took a job on."[7]

After graduating from St. Paul's in 1927, Soutter attended Harvard College, graduating in 1931. Although he described himself as a "premedical student," his memoir of those years focuses on his ambitions as a budding naturalist, scheming for adventure in the wilds of the Yukon and Alaska. He was forced to defer those plans until his third year of medical school, but directly upon graduating from Harvard College in 1931 (the summer before he began medical school), Soutter signed on as an ordinary seaman for the maiden voyage of the "Atlantis," Woods Hole Oceanographic Institution's first oceangoing research vessel. (Fifteen years later, the founder of Woods Hole, Henry B. Bigelow, would become Soutter's father-in law.) They sailed from Copenhagen, where the ship had been built to its captain's specifications, to Plymouth, England and back to Boston, but the voyage was hardly smooth sailing. En route from Plymouth they encountered mechanical troubles, paralyzing bouts of seasickness, and at least one serious accident when the captain crushed his foot. Twenty-five years later, in his senior class "Anniversary Report," Dr. Soutter recalled, "As graduation approached, the thought of going to medical school became increasingly abhorrent," and he withdrew his application from Harvard. But by the end of the medically challenging forty-day voyage, he had changed his mind and went on to Harvard Medical School anyway, pleasing his father considerably.[8]

The two preclinical years of medical school were "dull and rather dreadful," according Dr. Soutter's memoir from 1956, but the clinical years proved completely fascinating. Summers offered a highly desired respite. In the summer of his third year of medical school, he and a classmate, Graham Webster, outfitted themselves for a more than 1,500 mile trek by land and canoe down the Mackenzie River and on into the Yukon River via the Rat River, which runs through the northernmost pass in the Rocky Mountains. The idea

for what turned out to be a long and dangerous canoe venture from Alberta via the Mackenzie and on to Fort Yukon in Alaska was planted when a favorite zoology professor in college mentioned the lamentable dearth of subarctic and arctic birds in the collections of the Harvard Museum of Comparative Zoology. Adventure could be balanced with sober zoological work. Much of their route took them through completely uninhabited territories with the exception of a few trapper camps. They drove from Massachusetts to Edmonton, Alberta, where they purchased a sturdy canoe and supplies. Then by train and boat, they traveled to the Mackenzie, where their adventures really began. At one point, on the Rat River, their canoe overturned in the icy rapids. Soutter nearly drowned; soon after, Webster, who was exhausted after this ordeal, cut a deep gash in his leg while trying to chop wood. Later, along their way to Fort Yukon they encountered isolated trappers, Indians, and occasionally the police. But, they finally reached their destination, sold their canoe, and eventually made it back for the last year of medical school.[9]

Captain Bob Bartlett, far left, Lamar Soutter, center, and unidentified others, Greenland
(Photo courtesy of Elizabeth B. Soutter)

The pattern was repeated the following summer when Soutter, a freshly minted physician, signed on to be ship's doctor and scientific officer on the Effie M. Morrissey, owned and captained by Bob Bartlett, a veteran of Admiral Robert Peary's voyage to the North Pole. The mission was sponsored by the Smithsonian and the Field Museum of Chicago. Its objective was a trawl up to Greenland in search of marine specimens. Their travels yielded everything from narwhals to sea urchins, with the bonus of an orphaned baby seal (which they named Peeuk, the "Eskimo word for 'good,'" according to Soutter). Peeuk quickly became the ship's mascot and pet, as evidenced by the urgent messages relayed to a seal expert at the Bronx Zoo for instructions on what to feed him: salt cod mash. Dr. Soutter was charged with collecting species of plankton. He used a sufficiently expert technique that the Smithsonian published a notice of his discovery of a new species. Judging by the logs Soutter kept, Captain Bartlett later wrote, "One can see that our medical officer and chief collector was a very busy man." A typical excerpt read, "'Sun high; arose at 2:45 a.m.'" But zoology was mostly a diversion as he prepared himself to plunge into the work of medicine and surgery. In the midst of the voyage's challenges and adventures, however, Soutter made careful note of the medical condition of the indigenous peoples along the coast of Greenland and their high rates of tuberculosis and syphilis (brought by the Europeans and Scandinavians, he observed) with which they contended in the years before penicillin. Soutter later used his earnings to fund a European tour of hospitals and clinics--not excluding beer halls, as he made sure to specify.[10]

At the end of the summer, Soutter began an internship and surgical residency at Columbia University College of Physicians and Surgeons in New York, apparently a combined program in which his residency took place first at Presbyterian Hospital from 1936 to 1938 and then for another year at Bellevue. The Department was chaired by Dr. Allen Whipple and included several notable surgeons including Hugh Auchincloss, Sr., a renowned hand and breast surgeon, and Fordyce B. St. John, who would become head of Mobile Hospital No. 2 in France during World War II. Interestingly, while Soutter was at Physicians and Surgeons, the faculty also included one of the earliest women to become

a successful orthopedic surgeon, Dr. Barbara Stimson. Dr. Virginia Apgar, the anesthesiologist who created the Apgar Test which has been utilized following the births of literally millions of children, was also there. Still, the residency seemed fairly tame to Soutter (especially after his Arctic adventures), but that would change. On May 6, 1937, the German-built, hydrogen-powered Hindenburg, the largest zeppelin ever launched, caught fire while approaching its landing site at the Naval Air Station near Lakehurst, New Jersey. One-third of the nearly 100 persons on board died, and many were severely burned. As part of an elite surgical department in nearby New York City, Soutter participated in the care of many of the 62 survivors, including Captain Max Pruss. When Pruss was well enough to travel home to Frankfurt, Dr. Soutter was asked to accompany him. While he was there, he also managed to tour the zeppelin factories in southern Germany, occasioning rumors – never substantiated –among some of his family that he had actually been spying on the German military. When his work in Germany was complete in 1937, Soutter considered returning to Boston for the remainder of his training. Whipple wrote a recommendation letter which said, "Soutter has been one of the best men we have had in a long time - thoroughly capable, reliable, industrious, and absolutely trustworthy. Furthermore, he has a very rare sense of humor which has been a joy...I am sure you will find him a delightful, as well as a very able resident..."[11]

Soutter instead continued in New York for another year, 1939-1940, as a surgical resident at Bellevue, where he was said to have done "outstandingly good work," while also working at the Free Hospital for Women in Brookline, a suburb of Boston. During his last year in New York City, Soutter married Norah Goldsmith. According to their son, Nicholas (Nick) Soutter, they met while she was a volunteer at the front desk of Bellevue Hospital. They married after a brief courtship, and soon afterwards they moved to Boston, where he continued his training - now in thoracic surgery - at Massachusetts General Hospital until 1941.[12]

For the next two years, Soutter was part of the staff at Massachusetts General Hospital both as a junior member of the surgical team, and as the

organizer and director of MGH's Blood Bank, the first in New England. It was begun in May, 1942. But getting the unit started was not uncomplicated. The superiority of frozen, stored blood over fresh blood was still in dispute. Moreover, the hospital had little money to fund the large refrigeration units and staff needed to run a Blood Bank, much less the funds to pay donors at a time when the idea of free donations had not yet taken hold. The hospital agreed to fund the initial effort, however, because of wartime fears of potential mass casualties and recognition that blood banks were already in use by the English, the Russians, and in the U.S., in Chicago and New York City. MGH committed to revamping a former Emergency Ward in the basement of one of its buildings, and hired a nurse, a technician, and a "part-time maid." Dr. Soutter, one of the Blood Bank's main advocates, was put in charge. But, Soutter wrote, "in the beginning everything went wrong." Using whole blood at first, they found that it clotted before it could be used; additionally, it could not be filtered through the kinds of filter then available; and, antigenic reaction rates were at a high of 12%. However, within three months, new filtering techniques using stainless steel, micromesh filters and new techniques to minimize clotting reduced serious reaction rates to 2%.[13]

Soutter's new goal was to introduce the use of frozen blood plasma that could be stored in large enough quantities to serve in civilian emergencies on a broad scale, as well as for individual burn surgeries. But, no additional funds were forthcoming from the MGH administration and Soutter was forced to raise money from private sources. With the necessary funds raised, the group purchased refrigerators and other equipment. Intending to stockpile frozen plasma in case of a large-scale emergency, the Blood Bank's stores began to grow, bottle by bottle. They could now also perform more sophisticated blood-typing and pre-typing of patients. Soutter's insistence on reliable blood banking proved its worth many times over when, on November 28, 1942, a popular and packed Boston nightclub, the Cocoanut Grove, caught fire. Of the reported 450 dead or injured, 114 were rushed to Mass General for treatment where they were offered the blood products newly collected by the Blood Bank.

Top: Lamar Soutter, M.D., first director of Massachusetts General Hospital blood bank
Bottom: Refrigerators storing plasma *(Photos courtesy of the Massachusetts General Hospital Archives and Special Collections)*

Soutter continued as the part time Director of the Blood Bank (while also pursuing his career as a surgeon) from 1942 to 1952, with a leave from 1943-1946 for war duty. But, as a history of Mass General, by its former director (and Lamar Soutter's boss), Nathaniel Faxon, makes clear, it was at the Blood Bank that the outlines of Soutter's career as an innovative - and strong-willed - administrator began to take shape. Faxon recalls that he and Soutter had a running debate over whether or not the finances of the Blood Bank – an independent department

at the Hospital – were running in the red or in the black. Soutter insisted that they were always in the black - as long as no one counted all the "free service" it provided to large numbers of MGH patients. Faxon, of course, saw the department's budget as running "bright red" because, "Dr. Soutter never paid much attention to budgets." In another instance, Soutter refused to carry out his Chief of Surgery's direct order to unfreeze all his bottles of plasma in anticipation of the arrival of a large group of casualties, patients who never materialized. Since plasma cannot be re-frozen, Soutter's decision to wait until the need was demonstrated proved prescient when, only a month later the Cocoanut Grove disaster struck. (In the meantime, he was not popular with his bosses.) By 1952 when Soutter left MGH to become an Associate Professor of Surgery at Boston University Medical Center, the Bank had given out an average of one transfusion per hour, or 10,000 gallons of blood products. In addition, the Blood Bank became a foundation for Soutter's long ties to the Red Cross. By 1952, 30% of the blood distributed at the MGH Blood Bank came not from direct donations but from the Red Cross.[14]

Within a year of establishing the Blood Bank, Soutter enlisted for duty in World War II as a member of the Army's Fourth Auxiliary Surgical Unit attached to General Patton's Third Army. At the time, he was stationed at Metz, France. "There is something that toughens you in war," Soutter told a reporter many years later. His storied flight into the besieged town of Bastogne in Belgium during the Battle of the Bulge in the winter of 1944-45, measures the distance between youthful adventuring in the Yukon and being responsible for the lives of hundreds of soldiers.[15] The main lines of the story of the Battle of the Bulge are clear and brutal: it represented the last major German assault against Allied lines of defense in Western Europe and it cost thousands of lives on both sides. Beginning mid-December, 1944, and lasting about a month, German Panzer divisions fought to control the Ardennes region in southern Belgium, drive a wedge through Eisenhower's troops, and gain an outlet onto the North Sea via the port of Antwerp. The German advance took the Allies by surprise. Bypassing and encircling American troops in the city of Bastogne on the 20th and 21st of

December, 1944, they created a "bulge" in Allied lines and trapped the 101st Airborne Division under General Anthony C. ("Nuts!") McCauliffe. Bad weather prevented Allied air strikes or supply drops until the 23rd, but by December 26th, almost 450 C-47 carriers had been flown over to drop supplies while 11 or more gliders carried in a handful of surgeons, medical corpsmen, and hospital supplies. The first ground troops of General Patton's Third Army also made contact with Bastogne on the 26th, and German forces retreated over the next two weeks into the middle of January, 1945. During the month-long campaign in the Ardennes and, especially around Bastogne, more than two thousand soldiers and civilians died, including some of the Army's medical corps.[16]

Clockwise from top left: 1. Lamar Soutter driving an English Ford in Normandy. 2. Soutter boarding the glider for Bastogne. 3. The Bastogne team after receiving their Silver Stars. Soutter is second from left. 4. Soutter helps to transport patients. 5. Soutter (left) performing surgery in the field hospital. *(Photos courtesy of the H. Brownell Wheeler, M.D. Papers, the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Lamar Soutter, at this point a surgeon whose Surgical Auxiliary unit was attached to Patton's army in Metz, was among those asked to volunteer to fly in to relieve the one surgeon still functioning in Bastogne. The call came on Christmas Eve, 1944. "'This was something we felt we absolutely had to do,'" Soutter told a reporter years later. Getting into Bastogne was a challenge. On December 26th, with minimal air cover due to poor visibility, Soutter and the other medical personnel boarded a glider towed by a plane. They all expected to parachute behind enemy lines into Bastogne. In fact, only the medical supplies were parachuted in; the men were expected to stay inside the glider after it was unhitched from its towline and land with it in an undoubtedly hair-raising descent under enemy fire. As if that were not enough, according to Soutter's son and granddaughter he was profoundly afraid of heights. A photograph of Major Soutter at the glider's entryway reveals the man's utterly appropriate sense of fear before the mission. According to Soutter family lore, he reluctantly abandoned his brandy flask before takeoff to minimize any extra weight. Although the glider did sustain some shelling, it landed intact behind a knoll that provided some protection as the medical unit scrambled –with supplies – into the woods where American soldiers had signaled their presence. In a letter to Norah, his first wife, several days after the landing, Soutter's sangfroid and deadpan humor were on display; he wrote her that the glider's emergency exit was marked with the following question: "Is this trip absolutely necessary?" The landing was successful and they began operating within two hours of their touch down. The wounded, many close to death, were sheltered in a warehouse. Soutter told a reporter in 1985, "We did what we could do, and, of course, we lost many." At the time, he bluntly told his commanding general that unless they could evacuate the wounded to a better supplied field hospital, they would lose most of them. According to his son, that first night in Bastogne, German dive bombers targeted their position. "Dad said afterward that the sound of the wounded screaming as they listened to the incoming bombs was the worst thing he ever heard…" Nevertheless, he operated on 56 cases in the first 24 hours

without a break, at least once while being shelled, and continued operating until a relief force arrived on December 28th with trucks to transport the wounded back from the front lines. Only then did Soutter return to one of his own unit's platoons –this time traveling by truck. He was awarded a Silver Star and three Battle Stars.[17]

After he rejoined his field hospital, he met up with a young corporal, James K. Sunshine, a surgical technician who later became a newspaper editor and writer in Rhode Island. The two men became friends, and Sunshine's recollections of Soutter during the war provide a vivid portrait of his leadership style. Sunshine, who had completed just one year at Oberlin College before he was drafted, described Soutter 50 years after the campaign of the Ardennes. His description, even though recalled after the passage of half a century, deserves quoting at length:

> Neufchateau, Belgium, January 9: Major Lamar Soutter, age about 35, with sandy curly hair, horn rimmed eyeglasses, and a patient voice resonant with the authority conferred by 300 years of Harvard. The voice is never raised, and the lowliest of enlisted men is patiently addressed by name followed by please and thank you. At home in Boston he is a well connected young chest surgeon. Here on the edge of the Siegfried Line, he is that rarity among commissioned officers, the idol of his enlisted men. Of all our surgeons, he is the best.
>
> Soutter is just out of Bastogne, having volunteered to be dropped by glider into the surrounded town where more than a thousand casualties lay in a warehouse under the care of a single surgeon. Blood and plasma were gone. Third Army asked for volunteers. Soutter and eight other surgeons and technicians

> responded and were loaded with fresh blood and drugs into a glider towed by a C-47 and cut loose to drift to a snowy field at the edge of town. Soutter said later that the first day in the warehouse they did 56 operations.
>
> By the 28th, the 4th Armored Division had broken the siege. The major and his team were given Silver Stars and assigned to us. We have become friends, and spend considerable time together mixing grapefruit juice and the contents of a 5-gallon can of medical alcohol that somehow made its way from the medical dump at Bastogne to the major's tent concealed in an old barracks bag.[18]

Soutter's capacities for leadership and determination, less obvious before the war, became steadily more apparent in the years after his return to civilian life. To his son, this was largely attributable to the surgeon's experiences in the Army. Nick Soutter remembers when his father admitted that before the war, he was "a party animal." Lamar Soutter liked "to party, to dance and to be frivolous... But in the Army, he discovered many talented dedicated people who were below him [in rank] but who could get things done intelligently...The playboy in him was drained out of him and he was convinced that there was serious inequality in America." Nick Soutter makes a direct connection between these realizations and his father's postwar career, particularly his steady gravitation toward reform of medical education. Lamar Soutter was "absolutely part of the elite." Yet his son is convinced that after his return to civilian life, "everything, [or] most, of what he did was to make it possible for [people with intellectual ability but limited financial resources] to have the opportunity to get a good education...all the way through to graduate school...to be part of the educated elite...no holds barred."[19]

Soutter's first marriage, like many others, did not survive the war, and in 1946 he remarried, to Mary Cleveland Bigelow Soutter (1909-2007), daughter of the founder of the Woods Hole Oceanographic Institute, a second

cousin, and someone he had known since they were young children. Mary Soutter remembered finding herself –around the age of four - behind the family grandfather clock with her slightly older cousin Lamar during a family gathering, exploring the old clock's workings. Mary Bigelow grew up in Concord, attending Concord Academy to which she rode her horse, Flash, most days. She graduated from Radcliffe with a major in art history. Like her husband, she loved to sail but, as her son-in-law confessed during her memorial service, Lamar was more fun to sail with than Mary because he didn't care as much about the proper knots, sheeting, and so forth. Mary Soutter also was known as an avid conservationist. Her bequest in 1993 of "many acres of land along the Concord River" to the town of Concord for preservation was recalled with gratitude. She was a lifelong pacifist, yet she served stateside in the United States Navy during World War II. The first faculty recruits to UMass Medical School recall Mary Soutter with appreciation and respect. Indeed, she was a partner with her husband in those early recruitment efforts, welcoming potential candidates to their large (and by some accounts, quite conservatively heated) house in Dedham for dinner, afterwards presumably discussing whether their dinner guests seemed "suitable" for the new school. She participated in many of the school's early activities. At her memorial service, her son-in-law disclosed that Lamar always referred to his wife as "the management."[20]

The couple adopted two daughters, Elizabeth and Sarah, and raised Dr. Soutter's son, Nicholas, from his first marriage. Nick Soutter remembers his father as "marvelous company. He listened to me and took my ideas seriously." He also attended Nick's local baseball games –even though he was outraged when Nick was "beaned" by one of the opposing team's pitchers (behavior of a kind that would not have been tolerated at St. Paul's, he made clear). He enjoyed working around the house, sailing, camping, growing orchids in the basement, and making exotic buffet-style dinners, for example, Indian curry. He always did the shopping and cooking for those dinners, kept the menus a secret and the kitchen doors firmly closed during their preparation. According to his wife, they were always a success. His younger daughter, Sarah Soutter, recalled her

father as “a tremendous amount of fun, one of those grownups who wasn’t entirely grown up.” He would “organize fun stuff…say, mushroom hunting…and invent prizes for the ugliest or biggest…everyone got a prize.” At Christmas he would “organize trades [with local friends of the family] of completely unwanted Christmas presents –large and bizarre items.” They would all sneak out at night to deliver them. One Christmas eve, they deposited an enormous stuffed sailfish. On another, a gaudily painted bath tub. Early in his career Soutter purchased a rugged and pristine island in New Hampshire for a getaway, Squam Lake (the locale chosen for the film “On Golden Pond”), which boasted a “ramshackle” cottage with neither running water nor electricity. Vacations on the island weren’t for the faint of heart. Eventually the Soutters deeded the island to the state of New Hampshire as a “forever wild” sanctuary.[21]

Lamar and Mary Soutter in front of their Dedham, MA home.
(Photo courtesy of Elizabeth B. Soutter)

The hub of Soutter’s surgical career between 1942 and 1952 (excluding his years in the military) was Massachusetts General Hospital. Back in Boston

in 1945, Soutter resumed direction of the MGH Blood Bank and nurtured a busy career specializing in thoracic surgery. He became an Instructor in Surgery at Harvard, began a long association with the Veteran's Administration hospitals when he became an Attending Surgeon at the West Roxbury VA Hospital, and carried on a busy practice with operating privileges in many of the hospitals around Boston. During these years his writing and research mainly focused on surgical management of tumors and the techniques and technology of blood typing and transfusions, an outgrowth of his work for the Blood Bank. He also began what would become a long association with the American Red Cross.
But Soutter was restless at MGH. Mrs. Soutter told me he decided to leave MGH and the Blood Bank not only to do more surgical work, but to "move up" as an academic administrator. Thus, in 1952 he was recruited to join Boston University Medical Center as Associate Professor of Surgery. Once there, he took an immediate interest in medical education in all its facets; within three years he was named Associate Dean. In this capacity, he organized a study of the financial resources required by medical students of limited financial means at BU to subsist at a level that would be "compatible with good scholarship." The faculty and administration were concerned about the number of able students who, because they needed to work while also trying to complete medical school, were suffering academically; some flunked out, while others with excellent undergraduate records became a "fixture in the lower part of the class." As his study group discovered by surveying the students, many did not even have enough money to buy all the textbooks they needed and likely subsisted on inadequate diets. (The report noted students' reliance on outdated bakery goods and sales of canned food from "little known producers.") Boston University's admissions policy was need-blind, but its capacity to provide financial aid was quite limited. Thus, many students worked at night and on weekends during the term. Many wives of students also worked, but usually only until they became pregnant, as was typical of the era. Soutter's concerns for these worthy, but financially needy, students, seems entirely consistent with the meritocratic values imbued in him by his war experiences. His concern for talented but less

privileged students presaged Soutter's long-term fascination with overall reform of medical education.[22]

The most significant reform effected by Soutter while at BU, a six-year combined liberal arts-medical degree, was not his idea, but seems to have appealed to him because it, too, addressed the problem of the talented, but financially needy, student. It also may have appealed to his elitism. The BU six-year curriculum, an idea suggested initially by the Rockefeller Foundation and funded by the Commonwealth Fund, became one of the nation's first such accelerated programs and combined a Bachelor of Arts degree with a medical degree.[23] Particularly appealing to Soutter, besides its potential to reduce the costs of a medical education by 25 percent, was that students gained the security to pursue coursework for its educational value, not for its ability to "impress an admissions committee, and to obtain a good score in the...Medical College Admission Test [MCAT]." He did not advocate minimizing the sciences in relation to the humanities in the six-year program; rather, he hoped students would take more advanced or specialized biological coursework or classes in the social sciences that might better equip them to practice socially responsible medicine. "We wanted not only to improve the student's background in [the social sciences] as they affect medicine, but also to develop his interest in being a responsible member of society and understanding the place of medicine in the social system." Students, in addition to their basic science courses, would take history, history of science, literature, and statistics. Boston University School of Medicine in the late 1950s was far less developed than it became during the 1970s and beyond. Its class size and quality were rather modest at the time Soutter was there, according to University President Emeritus and former Medical School dean, Dr. Aram Chobanian. According to Dr. Chobanian, another purpose of the accelerated program was to bring in a more "elite group of students." Someone qualified for such an accelerated and intensive curriculum would necessarily be among the most talented students in the country; Soutter and BU president Harold Case both had hopes of elevating the reputation of the school through this high profile experiment. Crucially, to carry out such a program would

require close cooperation between the faculties in the medical and the liberal arts campuses. And most important for student morale, Soutter hoped the University would build a housing unit dedicated to the program that would incorporate meeting rooms, athletic facilities, a library, and residences for "male, female, and married students, interns, residents, and some faculty members." The concept was based on the model of the Harvard College residential houses.[24]

A word about language and social diversity might be in order at this point: Lamar Soutter used the male pronoun almost exclusively throughout his professional writing, both because it was considered standard, i.e. good, English usage at the time and because his imagination generally did not run to envisioning women as medical students. When describing the plight of married medical students at BU whose spouses must work, for example, he always imagined those spouses as wives. Whether he referred to medical students or faculty, he generally called them "men."[25] But BU's medical college was, in part, the descendent of the New England Female Medical College; its early history also included a stint as a homeopathic school. Both traditions inclined to a somewhat more liberal policy toward women physicians. Soutter's upbringing and experience did not make him a feminist; but neither did it predispose him to conscious gender discrimination. The problem of discrimination against women in the medical profession, something that triggered a full-scale, highly divisive debate within and without the profession by the end of the '60s, no more than racial discrimination against African Americans, whether men or women, did not seem to have captured Soutter's imagination in the way that the problem of economic disparities did. For example, in order to fit in all the necessary credits for a six-year combined degree, Advanced Placement high school credits would substitute for elementary biology and chemistry, saving students quite a lot of credit hours and allowing for more interesting course work. Thus, for a student to succeed in the program, he or she must have come from an excellent, Advanced Placement-offering high school, a condition that would not have eliminated low-income students necessarily, but could have hindered students from segregated high schools that lacked the resources to offer accelerated courses. Nevertheless,

as his plans for the six-year curriculum at BU indicate, Soutter was probably more open to experimentation in medical education than most of his peers.[26]

Over the course of his stay at BU, Soutter continued to actively think, write, and experiment with reforms in medical education and practice. He was intrigued by the efforts of a dozen or more medical schools in the 1950s and '60s to create a better environment for learning. Too many, he believed, were little better than high schools with their regimented, passive learning styles that emphasized lectures and lockstep progression for students with widely differing learning styles, educational backgrounds, and intellectual interests. When Western Reserve's dean published an interim report in 1962 on his medical school's curricular reforms, Soutter was quick to write an editorial accompanying the article, lauding the school's achievements while acknowledging the new curriculum's inapplicability in many other settings. He wrote another editorial commenting on the decline of general practice as specialism "relegated the generalist into a less and less effective position" in the profession. He urged that organized medicine try to "preserve and strengthen an important part of practice...to improve our service to the public," by creating multispecialty group practices in which the role of the generalist is preserved by the presence of a full complement of specialists to back them up.[27]

The question of a future shortage of physicians preoccupied Soutter as much as the six-year curriculum. In his mind the two topics were linked; he frequently cited the new program as BU's share of the solution to the problem of increasing the future supply of physicians since it was intended to expand the graduating class by 28 medical students per year. Between 1958 and 1963, Soutter wrote more than a dozen articles or editorials on the state of medical education, its demography, curriculum, and finances. Interestingly, the year before publication of the Bane Report, Soutter wrote an editorial that took issue with the assumption that the potential shortage should be addressed by existing medical schools through sizable expansion of their classes. In 1958 he wrote in "Quantity and Quality in Medical Education," that BU's expansion by more than a modest number was viewed with "trepidation" because "quantity seriously affects

quality." The actual number of students per class was not his concern; rather, he emphasized the "student-faculty relationship" and its role in stimulating students' active learning. From his vantage as Associate Dean of the medical school Soutter declared, "We categorically condemn any educational policy which holds the number of students as a primary objective and sacrifices quality to get it."[28]

Over the course of the next few years, Soutter seems to have struggled to find a solution he liked for the problem of physician undersupply. A year after writing that article, the same year as the Bane Report's call for a rapid enlargement of the medical workforce, Soutter was named the Acting Dean of the BU Medical Center. He urged that existing medical schools be the ones to expand, but with federal support for medical education to allow more students from outside the most affluent walks of life to become doctors. This was a position strongly favored by BU's president, Harold Case. Yet, Soutter's overriding concern was to both preserve the high quality of medical education while increasing access to a medical degree by a broader segment of college graduates. He worried that medicine was "going to become more and more restricted to the upper income groups." Serendipitously, during the following year he acted as consultant to a faculty study conducted at UMass Amherst, known as the Maher Report, on the feasibility of building a state medical school, presumably on campus. His own preconceptions and prejudices favored the need for meritocracy and for scientific excellence. The study conducted by deans and faculty at the UMass campus in Amherst seems to have shown him a possible pathway for expanded opportunities for medical education in Massachusetts. It also gave him some helpful exposure to some of the same people who would choose him to become the new medical school's first dean.[29]

Thus, when the question of a new, state-supported medical school began to look like a genuine possibility for the Commonwealth, Soutter cautiously supported the idea in an editorial published in March 1961 in the *Boston Medical Quarterly*, BU Medical Center's journal. (Significantly, it was published only a few months before he resigned as dean at BU.) He believed that the current

doctor-patient ratio did not justify such an expenditure of state funds. In fact, Massachusetts ranked second nationally with a ratio of 180 physicians per 100,000 residents. (Only New York State was ahead of it.) But future needs were another story. Even if Massachusetts continued to enjoy a favorable doctor-patient ratio, it would not continue to hold its position of leadership as a center for medical education if it did not keep up with future trends. A limited response to the call for expanded numbers of students, such as BU's planned expansion by 28 students would not, he now believed, be sufficient to address the state's anticipated need for 100 additional medical graduates per year. Characteristically, Soutter tried to balance fiscal prudence with educational excellence. He recommended that a two-year school be established on the campus of the University of Massachusetts where a focus on the biological sciences was already established. Then after the medical school was running smoothly, it might expand into a four-year school with a new, 500-bed hospital to benefit citizens of the western part of the state in which students could carry out their last two, clinical years. Somewhat blithely he suggested that recruitment to such a "pleasant" town as Amherst would not be difficult. Perhaps it wasn't coincidental that his recommendations did not clash with those of the UMass Amherst's faculty report.[30]

During the academic year 1960-1961, despite Lamar Soutter's growing prominence among national leaders in medical education as well as in Massachusetts, his position at Boston University appears to have become untenable.[31] Appointed Dean in April, 1960, he resigned his deanship a little more than a year later. Indeed, almost eighteen months later, when UMass president John Lederle was vetting Soutter for the position of dean, the only negative comments he heard came from Boston University's President Case who declared Soutter to be "difficult" to work with. What happened? Although the details are unknown, it is commonly held, according to Dr. Chobanian, BU's President Emeritus, that, BU's presidents before the 1970s simply didn't understand the potential of the medical school to enhance the reputation of the university. Thus, in Soutter's era, the medical school did not receive the financial

or other support it would have needed to grow and thrive. Dr. Soutter's son was even blunter. He recalled receiving the impression from his father that President Case thought the school was a lost cause: it ran a deficit and its reputation was completely overshadowed by its neighbors, Harvard and Tufts. The six-year program so dear to Lamar Soutter could only fulfill its promise if the University followed through with a major investment in new facilities and faculty, something that was not on the President's long-term agenda. It may also have rankled that the Department of Medicine was more favored than Surgery or medical education.[32] But Soutter may have felt he could get neither the money nor the autonomy that he felt was due to any medical school head. Several years later, in a meeting with the UMass Board of Trustees to plan a Board subcommittee to work with him as Dean, Soutter ruefully recalled his experience at one (unnamed) school where the dean was "told how to run [the] school in detail." The clear implication was that he wouldn't be willing to repeat that experience.[33]

After resigning as Dean, Soutter returned to teaching and the practice of surgery at the BU hospitals as well as at others in the region. By the end of the year he had become Area Chief of Surgery for the New England and New York region of the Veteran's Administration. About that time, as we have already seen, the Legislature was finally coming to terms with the Commonwealth's need for a state medical school. One can imagine that Dr. Soutter paid attention to those developments. When, at the beginning 1963 the Board of Trustees formed a search committee for the medical school's first dean, Soutter was among the small group short-listed out of a larger complement of 25 candidates. UMass President Lederle was looking for someone youthful, with administrative experience, a leading scientist who could "deal with [the] legislature," and - this was underlined - with a "public attitude." The Trustees had a more pragmatic goal. As Joseph Healey, chair of the Board's medical school committee, told the *Boston Globe*, "We want a person of such distinguished and established reputation that he will be immediately accepted by the medical profession, the other medical schools, and the people of Massachusetts as an exceptional choice."[34]

Lamar Soutter, circa 1965 *(Photo courtesy Elizabeth B. Soutter)*

Soutter must have seemed well suited to the position. He had some years of administrative experience as a dean, he was well-respected as a surgeon and surgical researcher, and best of all, he had long been initiated into the Boston medical elite. Those connections were even more important because the Board of Trustees recently was augmented to include members who, as executive branch appointees, were well connected to Boston politics: the State Commissioners of Education, Mental Health, and Public Health. The screening committee of five included the latter two as well as two other Boston-based Trustees with strong political ties, Judge J. John Fox and Joseph Healey, chair of the subcommittee and a former state tax commissioner. President Lederle rounded out the group, the only one without close ties to the Boston political establishment. Soutter, as his son commented, was a genuine Boston Brahmin who believed in education: "he walked the walk and talked the talk of a well-to-do Boston Brahmin. Until you started talking about equality of opportunity." As noted earlier, only BU's Harold Case, with whom Soutter had tangled, expressed a negative view, telling Lederle that Soutter was "highly opinionated," "not ready to take criticism," and "unbending." To UMass president John Lederle, that was a good sign. It

told him that Soutter would be tough, and toughness was going to be a basic requirement for anyone trying to wrest sufficient funding from the Massachusetts legislature to launch a first-rate medical school. Lederle remembered saying to the search committee, “Look, this is going to be a rugged job.” After one promising candidate, a dean of another medical school, withdrew from the search and another, a former dean, was judged to be too old for the rigorous battles to come, Lederle was sure they’d found the right man in Lamar Soutter.[35] Thus, a little more than two years after resigning as Dean at BU, Dr. Soutter was named founding dean of the state’s only public medical school. In John Lederle’s words, “Bimi signed on. Then the problems began.”[36]

NOTES

CHAPTER TWO

1 "Minutes, University of Massachusetts Board of Trustees," Dec. 20, 1963, p. 9, fol. "Trustees, Minutes, Agenda, 1963 (Sept.-Dec.);" "Minutes, Board of Trustees," Jan. 15, 1964, p. 5, in fol. "Trustees, Minutes, Agenda, 1964 (Jan.-June)," both in Box "Minutes of Meetings of Full Board and Committee, 1962-1964," Board of Trustees Papers, Department of Special Collections and University Archives, University of Massachusetts-Amherst, Amherst, MA [hereafter, Trustees, UM/A]. Two Board members were absent from the vote to hire Dr. Soutter.

2 John W. Lederle to Lamar Soutter, June 30, 1970, Box 45, fol. 550, "Medical School Dean, 1962-1970," John W. Lederle Collection [hereafter, Lederle], UM/A; [Robert McCartney] Oral History Interview with John W. Lederle, 1975, typescript fragment, pp. 52-53, in John Stockwell Papers, UM/W. Original in Box 1, fol. 14, Oral History Program Interview Transcripts [hereafter, Oral History Collection], UM/A.

3 Of course, as Nicholas Soutter also wrote me, he was probably glad to be rid of his *previous* nickname, "Lamey." Personal communication from Nicholas Soutter to Ellen More, April 3, 2010; Rudyard Kipling, "Bertran and Bimi," accessed at https://web.archive.org/web/20150806151527/ http://www.readbookonline.net/readOnLine/on April 4, 2010.

4 "Lamar" was the family name of his paternal grandmother, Charlotte A. (Lamar) Soutter, whose father, Gazaway Bugg Lamar of Savannah, Georgia, was among the earliest Confederates to sign a loyalty oath to the Union. Elizabeth Soutter Schwarzer, personal communication, Sept. 12, 2008. "Robert Soutter," *Harvard College Class of 1894, Twenty-fifth Anniversary Report* (Norwood, MA: Plimpton Press, 1919), pp. 409-410, 609-610; graduation profile, Robert Soutter Collection, Harvard University Archives, Cambridge MA. I wish to express my great appreciation to Gael Evans, Judith M. Nordberg, and Robert Vander Hart, for research materials made available to me from their work on the website, "Lamar Soutter, M.D.(1909-1996): Founding Dean of UMMS," accessed at https://web.archive.org/web/20150804162446/http://library.umassmed.edu/soutter/. Many of the biographical details that follow are heavily dependent on the excellent research and writing of these three librarians. I am also indebted to the late Mrs. Mary Bigelow Soutter, Mr. Nicholas Soutter, Esq., his daughter, Elizabeth Soutter Schwarzer, and Dr. H. Brownell Wheeler for numerous kindnesses, including answers to email queries, phone conversations, the

willingness to be interviewed, and the generosity to share crucial materials with me for the sake of this history.

5 "Lamar Soutter, M.D." website, *ibid*; St. Paul's School website, accessed at https://web.archive.org/web/20150806154133/http://www.sps.edu/podium/default.aspx?t=112277 on April 18,2010.

6 Lamar Soutter, M.D., "Canoeing: The Mackenzie and Rat Rivers," n.p., in "Autobiography" (c. 1980), unpublished typescript transcribed by Elizabeth Soutter Schwarzer, Nov. 2009, in Lamar Soutter Papers, University of Massachusetts Medical School Archives, Worcester, Massachusetts [hereafter, Soutter, UM/W]. I am most grateful to Elizabeth Soutter Schwarzer for donating a copy of the manuscript to the UMass Medical School Archives.

7 Quotation from Nicholas Soutter, Esq., Oral History telephone interview by Ellen More, July 3, 2008; Mary B. Soutter, Oral History Interview transcript, interviewed by Ellen More, June 29, 2006, Concord, MA, Oral History Collection, UM/W. H. Brownell Wheeler, "Convocation, University of Massachusetts Medical Center," Nov. 1, 1996, quotations p. 1, typescript, in Soutter, UM/W.

8 Woods Hole Oceanographic Institute website, https://web.archive.org/web/20150806143036/http://www.whoi.edu/page.do?pid=12735&tid=201&cid=1551&ct=362# , accessed April 23, 2010; "Lamar Soutter, M.D." website, n. 4 above; Lamar Soutter, "Lamar Soutter," *Harvard Class of 1931, 25th Anniversary Report*, 1956, pp. 951-953, courtesy of Harvard University Archives, Cambridge, MA.

9 Soutter, "Canoeing: The Mackenzie and Rat Rivers," n.p. (n. 6. above).

10 Lamar Soutter, M.D., "Greenland," n.p., in "Autobiography" (n. 6 above). "Lamar Soutter, M.D." website, n. 4 above; Lamar Soutter, "Lamar Soutter," *Harvard Class of 1931, 25th Anniversary Report*, 1956, p. 952. Also see Capt. R. A. Bartlett, "Greenland Expedition of 1935," in *Explorations and Field-Work of the Smithsonian Institution in 1935* (Washington, D.C.: Smithsonian Institution, 1936), pp. 37-42, quotation, p.42.

11 Kenneth A. Forde, M.D. to Gael Evans, July 29, 2004, quoting from the Allen O. Whipple papers, Columbia University College of Physicians and Surgeons, Department of Surgery, and Stephen E. Novak to Gael Evans, personal communication, Aug. 17, 2004, both in Soutter, UM/W; cf. "Lamar Soutter,

M.D." website (n. 4 above).

12 Lamar Soutter, "Curriculum Vitae" [c. 1969], p. 1, Box "A-D," fol. "Annual Report, 1967-1969," Other Campuses, UM/A ; Stephen E. Novak to Gael Evans, personal communication, July 21, 2004; Nicholas Soutter, Esq. to Ellen More, personal communication, July 4, 2011.

13 Nathaniel W. Faxon, *Massachusetts General Hospital, 1935-1955* (Cambridge, MA: Harvard University Press, 1959), pp. 294-300; Massachusetts General News, 1942, *3* (Dec.), p. 3, courtesy of Massachusetts General Archives and Special Collections, Boston, MA, with special thanks to Jeffrey Mifflin.

14 Lamar Soutter, "Curriculum Vitae," p. 2; Faxon, *Massachusetts General*, pp. 297-299; *Massachusetts General News*, p. 3; "Celebrating 60 years of giving the gift of life," MGH *Hotline*, April 5, 2002, accessed at https://web.archive.org/web/20150810160441/http://www2.massgeneral.org/pubaffairs/Issues/040502btscelebration.htm on April 8, 2003. The story of Soutter's gutsy refusal to risk wasting frozen plasma was related to me by Dr. H. Brownell Wheeler, personal communication, by telephone, Jan. 19, 2012.

15 Wil Haygood, "The Medical Front: They Worked Wonders Wherever Men Fought," *Boston Globe*, Feb. 4, 1985, quotation, p. 3. Accessed at https://web.archive.org/web/20150810164124/https://secure.pqarchiver.com/boston/doc/294278959.html?FMT=ABS&FMTS=ABS:FT&type=current&date=Feb+4%2C+1985&author=Haygood%2C+Wil&pub=Boston+Globe+%28pre1997+Fulltext%29&edition=&startpage=&desc=THE+MEDICAL+FRONT%3B+THEY+WORKED+WONDERS+WHEREVER+MEN+FOUGHTon April 9, 2004.

16 Hugh M. Cole, *The Ardennes: Battle of the Bulge* (Washington, D.C.: Department of the Army, 1965), especially pp. 464-481. Accessed at https://web.archive.org/web/20150806185013/http://www.history.army.mil/books/wwii/7-8/7-8_19.htm on May 6, 2010. Also see George Koskimaki, *The Battered Bastards of Bastogne: A Chronicle of the Defense of Bastogne, December 19, 1944-January 17, 1945* Philadelphia: Casemate, 2003), pp. 329-332. My thanks to Robin Davidson, M.D. for alerting me to this source.

17 Soutter, "Curriculum Vitae," p. 2 (see n. 12 above). Quotation from Nicholas Soutter, personal communication with Ellen More, July 1, 2011. Also see Elizabeth Soutter Schwarzer, *SoutteReview*, *33* (2009); Nicholas Soutter, Esq., Oral History telephone interview; John Scibelli, "Doctors Remember the Battle

of the Bulge," *Worcester Telegram and Gazette*, Jan. 9, 1995, n.p.; newsclipping, *Massachusetts General News*, 1945, *29* (Feb.), p. 6, courtesy of Massachusetts General Archives and Special Collections, Boston, MA, with special thanks to Jeffrey Mifflin; direct quotation from Haygood, "The Medical Front."

18 James K. Sunshine, "War Stories," n.p., typescript courtesy of the author, Aug. 24, 2008, originally published in the *Providence Sunday Journal*, May, 1994. I offer my sincere thanks to Mr. Sunshine for his help in providing this account as well as for his delightful conversation.

19 Nicholas Soutter, Esq., Oral History telephone interview. Emphasis in original.

20 Nicholas Soutter, Esq., Oral History telephone interview; Mary Bigelow Soutter, oral history interview, both in Oral History Collection, UM/W. H. Brownell Wheeler, M.D., Oral History Interview transcript, Part 1, by Ellen More, p. 8; Part 2, interviewed by Ellen More, Oct. 23, 2006, South Portland, ME, Oral History Collection, UM/W; Wheeler, "Convocation," p. 6; Ellen More, [handwritten] notes from the Memorial Service for Mrs. Mary C. Bigelow Soutter, May 14, 2007, Concord, MA.

21 "Mary C[leveland] B[igelow] Soutter," *Concord Journal*, May 2, 2007; Nicholas Soutter, Esq., Oral History telephone interview; Mary Bigelow Soutter, Oral History Interview, see n 7. Also, Sarah Soutter, personal communication with Ellen More, by telephone, Sept. 26, 2011; personal communication with H. Brownell Wheeler, by telephone, Jan. 19, 2012.

22 Lamar Soutter, "Curriculum Vitae;" "Medical Center News," *Boston Medical Quarterly*, June, 1956, p. 61; Lamar Soutter, "Student Finances," *Journal of Medical Education*, 1958, *33*: 4, pp. 380-388, quotations, pp. 382, 385, 388, reprinted from the *Boston Medical Quarterly*, 1956, *7*:4.

23 Lamar Soutter, "The Dean's Notes," *Boston Medical Quarterly*, 1960, *11*: 4, pp. 137-138. Boston University had tried a version of the six-year program early in the 20th century, without success. See Owen J. McNamara, *Generations: A History of Boston University School of Medicine, 1848-1998* (Boston: Boston University, 1998), pp. 61-62. I am grateful to Dr. Aram Chobanian, Boston University President Emeritus and Dean of the Medical School Emeritus, for the gift of this book.

24 Interview with Aram Chobanian, M.D., June 22, 2010, Boston, MA. I am

most grateful to Dr. Chobanian for his willingness to be interviewed about Boston University's School of Medicine during the period of Lamar Soutter's deanship. Soutter reported in the *Harvard Medical Alumni Bulletin* in 1961 that the faculty at first was more concerned with *improving* the curriculum than with shortening it. Lamar Soutter, "The New Six-Year Program of Medicine and Liberal Arts at Boston University: A Sister Institution's Program of General Education with Medicine as a Major," *Harvard Medical Alumni Bulletin*, 1961 (Spring), pp. 16-20, quotation, p. 18.

25 A typical example comes from [Lamar Soutter], "Quantity and Quality in Medical Education," *Boston Medical Quarterly*, 1958, *9*: 4 (Dec.), p. 136: "A large department is difficult to control, for the contact between the director and men at the bottom is less intimate and more formal; the medical school administration is more remote, and the dean is less a member of the faculty..."

26 There is substantial literature on the history of women in American medicine. For an overview, see Ellen S. More, Elizabeth Fee, and Manon Parry, "Introduction: New Perspectives on Women Physicians and Medicine in the United States, 1849 to the Present," pp. 1-20, in *Women Physicians and the Cultures of Medicine*, Ellen S. More, Elizabeth Fee, and Manon Parry, ed. (Baltimore: Johns Hopkins University Press, 2009). For a discussion of the discriminatory environment for women students as late as the 1970s, see Naomi Rogers, "Feminists Fight the Culture of Exclusion in Medical Education, 1970-1990," pp. 205-241, in More et al, *Women Physicians*. Charlotte Borst, "Selecting students scientifically: Race, gender, and the history of medical school admissions in the United States," paper delivered at "The Flexner Centennial: 100 Years of Medical Education Reform," Harvard Medical School, April 16, 2010, explicates how embedded were stereotypes of the "ideal" medical student, an ideal that, by the end of World War II made room for some non-Protestants, but only a few women and non-whites.

27 Lamar Soutter, "Editorial: Western Reserve and Changes in Medical School Curriculums," *New England Journal of Medicine*, 1962, *267*: 17 (Oct. 23), pp. 892-893; *idem.*, "Medical Care: Its Social and Organizational Aspects, The Variable Curriculum - Continuing Changes in Medical Education," *New England Journal of Medicine*, 1963, *269*: 4 (July 25), pp. 189-195; Lamar Soutter, "Editorial: The Decline of General Practice," *Boston Medical Quarterly*, 1962, *13* (Sept.), pp. 120-121.

28 [Soutter], "Quantity and Quality in Medical Education," 1958, pp. 135-136.

In addition to articles cited above, other writings by Soutter during this five-year period on the organization, reform, and financing of medical education, include: "Hospital Teaching Expenses," *Boston Medical Quarterly*, 1957, *8*: 4, pp. 120-121; "Whither Higher State Education in Massachusetts?" *Boston Medical Quarterly*, 1959, *10*, p. 91; "The Dean's Notes," *Boston Medical Quarterly*, 1960, *11*: 4, 137-138; "A New Medical School?" *Boston Medical Quarterly*, 1961, *12*, pp. 28-31; Nathan A. Womack, Lamar Soutter, et al., "Debates: With Increasing Growth of Full-Time Clinical Faculties, Practicing Physicians Should Play a Decreasing Role in Instruction of Students," in *JAMA*, 1961, *176*: 10 (June 10, 1961), pp. 102-106; L. Soutter and Wagner, R. R., "Do the National Boards Influence the Curriculum?" *Bull. of the National Boards of Medical Examiners*, 1961 (June); "A New Combined Program of Liberal Arts and Medicine at Boston University," *Journal of the American Osteopathic Association*, 1961, *60*: p. 853; "The New Combined Liberal Arts-Medical Curriculum at Boston University," *Federation Bull.*, 1962, *50*: 24.

29 Lamar Soutter, "Medical Schools and the Bane Report," *Boston Medical Quarterly*, 1959: *10*: 128-129, quotation on p. 129. Mary Maher et al., "Medical Schools and Medical Education: A Survey of Facts and Opinions Relative to Factors Involved in the Establishment of a New Medical School, A Staff Study Prepared at the Request of the Provost of the University of Massachusetts," July 22, 1960, Box 46, fol. 571, Lederle, UM/A. For a more detailed discussion of the UMass faculty study, sometimes known as the Maher study, see Chapter 1, above.

30 Lamar Soutter, "A New Medical School?" The Donahue Commission was authorized just a month or so after this editorial appeared.

31 For example, Soutter's article on medical students' financial plight in the BU *Medical Quarterly* was reprinted in the *Journal of Medical Education* and widely read and discussed. Even Senators Hubert Humphrey and Lister Hill read it, and it contributed to the legislation passed as Title II of the National Defense Education Act of 1958. Lamar Soutter, "More about Student Finances," *Boston Medical Quarterly*, 1958, *9*:84, pp. 84-85.

32 Oddly, the official history of Boston University School of Medicine lists Soutter among all the deans, but gives his title as "Acting Dean." McNamara, *Generations*, p. 103. My deep thanks to Ms. A'Llyn Ettiene, archivist and Head of Technical Services, Boston University Medical School Library, for locating a Boston University Medical School press bulletin (No. 170-60) dated April 10, 1960, that announced Soutter's appointment as Dean. A subsequent

press release announced his last day as Dean as Aug. 1, 1961. Both documents are in the catalogued holdings of BUSM's Alumni Medical Library. Personal communication from A'Llyn Ettiene, July 23, 2010. Background information was also supplied by Dr. Aram Chobanian, interviewed by Ellen More; and, Nicholas Soutter, Esq., Oral History telephone interview. Soutter's successor at BU, Dr. Sidney Gellis, was given the title of Acting Dean for the two years he remained at the school. McNamara, *Generations*, p. 103.

33 Quotation in "Informal Meeting of Board of Trustees," Dec. 11, 1965, p. 5, Box, "Board of Trustees, Minutes of Meetings of Full Board and Trustees, 1965 (Oct.-Dec.) and 1966 (Jan.-Mar.)," fol. "Trustees (Full Board), Minutes, Agenda, etc. (Dec.) 1965," Trustees, UM/A.

34 Soutter, "Curriculum Vitae," p. 3; [John W. Lederle, Criteria for Dean], handwritten note, n.d., but c. Jan., 1963, in Box 45, fol. 550, "Medical School Dean, 1962-1970," Lederle; Ian Forman, "State Med School by 1966?: Opposition Lingers; Search for Dean Narrows to 15," *Boston Sunday Globe*, March 10, 1963, n.p., in Box "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol., "Newsclippings, 1951-1964," Other Campuses; all at UM/A.

35 Not everyone was impressed with Dr. Soutter at the beginning. President Lederle recalled that he had been unimpressive in his initial interview: "Well... all I can remember is Bimi didn't make the best impression during the interview. The one thing he was interested in was that they usually didn't have enough cadavers for a medical school. And at a certain point I remember Judge Fox saying, 'Don't ever mention that again. I will guarantee you that you'll have all the cadavers you want.' Well, I don't know...where he was going to get them. Fox had a pipeline to cadavers and Bimi wasn't supposed to worry about it...But this was a serious thing to Bimi." Robert J. McCartney, Oral History Interview with John W. Lederle, 1975, p, 53, Box 1, fol. 14, "Oral History Program Interview Transcript," UM/A.

36 [McCartney], Oral History Interview with John W. Lederle, pp. 52-54; Nicholas Soutter, Esq., Oral History telephone interview; "Minutes, Board of Trustees," Jan. 16, 1963 and March 11, 1963, fol. "Trustees, Minutes, Agenda, 1963 (Jan.-April)"; "Minutes, Board of Trustees," Dec. 20, 1963, Jan. 15, 1964, fol. "Trustees, Minutes, Agenda, 1963 (Sept.-Dec.)," all in Box "Minutes of Meetings of Full Board and Committee, 1962-1964," Trustees, UM/A. Also see Ian Forman, "State Med School by 1966?"

Chapter 3

"Everything but the air rights over a cemetery" Location, Location, Location...

ONCE Lamar Soutter was appointed dean of the medical school, the Trustees turned their attention to a more contentious question: where to put the new school. As one of President Lederle's top aides learned at an AAMC conference on new medical schools, the question of location would dwarf in importance and difficulty any other single issue in creating a new school. To give some idea of the intense interest in the Board's decision, let it suffice to say that by the end of their deliberations in August of 1965, 95 different locations, according to one estimate, were offered up for consideration, ranging from rural Holyoke in the western part of the state to the heart of downtown Boston. Not a week went by that Dean Soutter didn't receive an offer for some prime land out in the country, complete with barns and pasturage. According to Soutter, he was offered "everything but the air rights over a cemetery."[1] In fact, only four sites were seriously considered: Boston, Worcester, Springfield, and the UMass Amherst campus. Millions of dollars in short-term investment and long-term development would hinge on this decision, as all local stake-holders in each of the communities competing for the school knew well. But for those making the decision - the Board of Trustees - more was at stake than economic development. The choice of a site for the school - seen by one faction of Trustees as a choice between a university-based campus and a free-standing campus, while the rest of the Board saw it as a choice between rural and urban locales - turned on competing visions of the essentials of a first-rate medical education.

Three years stretched from the bill's passage in July 1962 to the Trustees'

decision in the summer of 1965 to locate the school in Worcester. In the process, the name of Abraham Flexner carried little recognition and less weight with most members of the Board, the Legislature, or the governor. In short, when it came time to decide the school's location, the ideas of professional educators held little sway. As President Lederle and Dean Soutter slowly realized, when government funding is at stake, "location" is always a matter of politics.

Anywhere but Boston

The deans and senior faculty of the existing Boston medical schools played an important, if indirect, role in the choice of sites. Although by 1962 they had learned not to oppose a state medical school outright, they continued to adamantly oppose building it anywhere near their own hospitals and schools--"anywhere but Boston."[2] As the report prepared by Dean Mary Maher and other faculty from UMass Amherst concluded in a study commissioned by President Lederle in 1960, "Existing medical school deans of New England are not opposed to the establishment of a new medical school in Massachusetts providing (a) it is <u>not</u> located in Boston, and (b) it will be of high, not merely 'acceptable', quality." When a precursor to the legislation of 1962, House Bill 3333 of 1960 called for the school to be co-located with Lemuel Shattuck Hospital in Boston, which would have been retrofitted as an academic teaching hospital, the Boston schools were not at all pleased. Another perennial suggestion was the shared use of Boston City Hospital by all the Boston schools. It soon became clear that either arrangement would run afoul of the Boston medical school deans who viewed Boston's hospitals and supply of patients as their exclusive domain. A report by Boston's mayor, who was presumably under pressure from Harvard, BU, and Tufts, "welcomed" the UMass Board to consider a Boston location at Shattuck and/or Boston City Hospitals but added that, "formal provision should be made which would give the other medical schools a voice in the operation of the medical complex." This was the proverbial poison pill, a provision which could never be accepted by UMass if the school were to survive and flourish.[3]

The leadership of the Boston schools simply did not think they could handle the competition, not for research grants or faculty, but for patients, the so-called "clinical material" on which medical education largely depended.[4] Dr. Francis Moore, a renowned Harvard surgeon, chief of surgery at Brigham and Women's Hospital, and one of the most powerful members of Boston's medical elite, began lobbying to keep the school out of Boston as soon as the Governor placed his signature on the bill to establish UMass Medical School. He made sure to attend a party given by Calvin Plimpton, a physician who would soon become the dean of Columbia College of Physicians and Surgeons but who was at the time president of Amherst College and a member of the UMass Board of Trustees. Plimpton had invited John Lederle to the gathering, and Moore viewed it as an opportunity to take the President's measure while also lobbying for a two-year medical school as a "promising beginning." Crucially, it should be located on the UMass Amherst campus. Presumably, the students would complete their last two, clinical years at various hospitals around the state. At the same time, Moore was also lobbying in Boston for a bill to give scholarship funds to medical and nursing students attending the existing schools as a way to siphon funding and prospective students away from a state school - or so Lederle and the UMass Board were convinced. Moore wrote cozily to Plimpton that he hoped Lederle "can be suitably protected from the onslaughts of the legislature."[5]

Trustee Hugh Thompson described a less genteel approach. According to minutes of a special meeting of the Board held after its vote for Worcester, he reminded his fellow Trustees that they had, "visited the Legislature many times in order to get the Medical School bill passed. He noted that deans of the three existing medical schools in the Commonwealth 'followed right after them, "buttonholing" the legislators and saying, "don't do it!"...Then we found that the only place you couldn't have the medical school was near these three medical schools - get it out in the sticks somewhere and don't bother us!'" Governor Volpe, meanwhile, was thought to be strongly influenced by the Boston medical establishment. Although he never came out and said so, and in fact he avoided being present at the Board meetings where the issue was decided, Volpe too

wanted the school to be anywhere but Boston, preferably far away in Amherst.[6]

Strange Bedfellows: Staking a Claim for Worcester

Support for Worcester as the location of the medical school was slow to surface. Early on, in the proceedings of State Senator Maurice Donahue's Recess Commission of 1961 (described in Chapter 1), Worcester's leading newspaper chided the city's leadership for its apathy. But if the city's support was not overly prompt, its lobbying –when it finally emerged toward the end of 1961 –was both forceful and persistent. Two groups usually at odds, business and labor, joined forces in support of the City. That base of support, in turn, assured that the 15 or so state legislators from central Massachusetts were strongly united behind the proposal. As John Conte, a Democratic state senator from Worcester from 1962 to 1976, understood, the city of Worcester benefited uniquely from the forceful lobbying of the central Massachusetts delegation; in this battle, Worcester had the strongest legislative support of any Massachusetts city. That would count for a lot because most commentators outside the political process had little to say, none of it flattering, about Worcester's chances.

In retrospect, Worcester seems like the logical compromise between the geographic extremes of Boston and Amherst. Lamar Soutter described the City in a 1967 federal grant application this way:

> Worcester is an industrial city of 180,000 [in] population. The number of people living within the city has declined from 210,000 in 1950...but the area around the city has gained ... by some 3.7%... Within an hour's driving distance (at 35 miles per hour) of our site live a total of 1,841,000 people excluding those living in Boston. . . The industry in the city is highly diversified, manufacturing mainly durable goods. Several companies have factories which are quite large. Approximately 45% of the labor force works in manufacturing establishments...Worcester, economically, is about at the State median, with an average annual family income of $5,804 for the year 1960.

He went on to note that Worcester was, "well governed by a city-manager system and has twice been named an All-American City" with a "very good" public school system, many colleges, and the Worcester Foundation for Experimental Biology." He wrote that the hospitals were quite good, with 61 percent of physicians in private practice. He might also have mentioned the presence of an art museum notable for the wealth of its holdings in a city of its size.[7]

This was not, unfortunately, the picture most citizens of the Commonwealth called to mind when they thought of this aging, predominantly working-class city. Prevailing opinion held that Worcester had little chance against either Amherst or Boston. Not even the presence of several high quality colleges--Worcester Polytechnic Institute (WPI), Clark University, and the College of the Holy Cross, or the Worcester Foundation for Experimental Biology (an internationally known research center responsible for developing the recently introduced birth control pill, later renamed the Worcester Foundation for Biomedical Research), held much sway with educators (or journalists) on either end of the state.

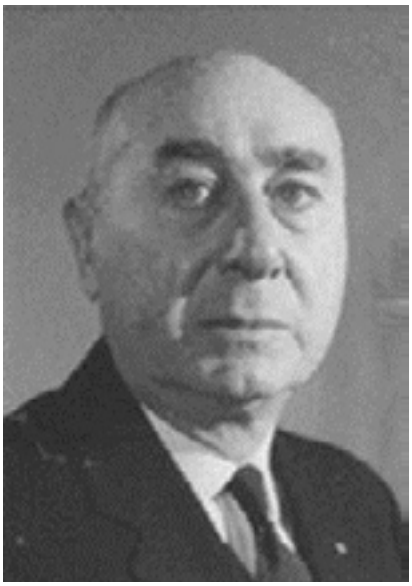
Worcester , however, wasn't listening to the nay-sayers. Although Worcester's business community cautiously refrained from lobbying the Donahue Commission during its statewide hearings in 1961, when word leaked that the Commission would soon issue a report that would recommend both creation of a medical school and the best site to place it, the Worcester Area Chamber of Commerce (WCC) preemptively issued a statement declaring the advantages of Worcester. On December 9, 1961, the WCC's president told reporters that "In the best interests of Massachusetts people...we have had no alternative but to put before the commission the superior facilities available in Worcester..." He added, "This is not a selfish power grab on Worcester's part."[8] Soon after the bill authorizing the establishment of the new medical school was signed into law, the WCC's president organized a Medical School Executive Committee, chaired by retired industrialist Lewis Wald, to lobby for Worcester under the umbrella of the Chamber of Commerce. Soon a total of 65 members of the business, industrial,

educational, medical, and political communities had been enlisted. Consisting of leaders of industry, banking, insurance, communications, small business, labor unions, Worcester city government, the Worcester District Medical Society, hospitals, Worcester's major research and teaching institutions, and the local Bishop, the committee made sure its local senators and representatives in the legislature understood the economic importance of securing the medical school for the city. They prepared a 48-page, 8" x 11" glossy booklet with impressive photographs and text to promote Worcester's many attractive features. They boasted of its central location in the state, its evolution as a "hub of New England's expanding highway network," the presence of many good hospitals and physicians, "the large supply of all types of patients so essential to the proper functioning of the Medical School," and the city's highly favorable "community attitude" toward the school. As Norman Sharfman, a prominent businessman of the period, President of the WCC in 1964, and author of the previous quotations recalled, "We estimated the creation of about 4,000 jobs."[9]

Norman Sharfman *(Photo courtesy of the Office of University Relations, University of Massachusetts Medical School)*

Wald's promotional efforts won praise from nearly everyone, and the combined efforts of business, industry, politicians, and the medical profession were described as "'an unequalled monument to cooperation in Worcester" by the City Manager, Francis McGrath. Moreover, the leadership of the WCC demonstrated a greater understanding of the political realities of the fight than most other observers. Six months before the final vote, the Chamber's new president, John Adam, Jr., told the City Council that Worcester was one

of the two top contenders, the other, of course, being Amherst. Astutely he concluded that despite Dean Soutter's preference for the campus location, the site committee could not be counted on to agree with him - otherwise the decision would have already been made. He concluded that Worcester had an excellent chance.[10]



Major General John J. Maginnis
(Photo courtesy of the Department of Special Collections and University Archives, W.E.B. Du Bois Library, University of Massachusetts Amherst)

A pivotal figure on the WCC's Medical School committee, Major General John J. Maginnis, was a much-honored veteran of World War II. The General was appointed to the UMass Board of Trustees only in 1965, a Volpe appointment made with the hope that Maginnis would favor UMass Amherst, his alma mater, in the battle for the medical school. Maginnis had graduated from the Massachusetts Agricultural College - later UMass Amherst - in 1920, having interrupted his classes for two years to enlist during WWI. In WWII, he attained the rank of Major General and played a leading role in the Allied governance of postwar Berlin.[11] General Maginnis later taught economics at UMass Amherst for a few years. He served on the UMass Board of Trustees from 1965 to 1972, and at the time of the vote to locate the medical school, he was President of the UMass Amherst Alumni Association. Maginnis, however, was playing his

cards close to the vest. Right up to the weeks before the vote, no one - whether Senator Donahue or Dean Soutter or President Lederle - knew for sure which way the General was leaning. According to one account, for example, Donahue was concerned enough about the General's pivotal vote that he called on a Worcester contact, the son of a favorite professor from Holy Cross who was now general counsel of the Paul Revere Insurance Company, one of the largest firms in Worcester, to find some way to impress on Maginnis the importance of his vote to Worcester's future. In the end, Maginnis did vote for his home town after Frank Harrington, Sr., co-founder of the Paul Revere Insurance Company, personally remonstrated with him.[12] Maginnis himself later said that he couldn't see the school located anywhere but in an urban setting. And after he had made a few discreet calls to the anti-Amherst members of the Board, he "felt sure that Worcester would survive at least two ballots." A vote for Worcester would not be a wasted vote.[13]

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City Wins State Medical School

Headline appearing in the *Worcester Telegram*, June 11, 1965 *(Courtesy of the Vite Pigaga Papers, The University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Organized Labor

Massachusetts labor leaders clearly foresaw the potential for jobs in a medical school, especially if it were to be built near Labor's preexisting power bases in the more populous, eastern half of the state. Second, they were strongly convinced that a medical school needed a deep and varied population base such as could be found only in larger cities. From early in the campaign to establish the school, as we saw in Chapter 1, representatives of organized labor representing Boston and, eventually, Worcester, visibly lobbied for the law's passage. One of

them, Hugh Thompson, was a member of the UMass Board. Another, a politically minded judge with close ties to Labor, Judge J. John Fox, also sat on the Board until 1965 and, as noted in Chapter 1, was an influential figure in its deliberations even after his term had ended. Before being named to the Bench, Fox had been Secretary to Governor Paul Dever. He was a passionate supporter of public higher education and had helped keep the question of a medical school alive even after Dever left office. As former State Senator John Conte observed, Fox was a "valuable resource" to any cause he supported. He "knew everyone - high and low." In President Lederle's words, he was "a fixer."[14]

Thus some of the strongest backers for an urban medical school site were drawn from supporters of organized labor. They were passionate about their desire to create a school where the working man's (or woman's) child could get a medical education. Hugh Thompson, for example, involved himself in support for a public medical school ever since he was assigned to the New England region by the Congress of Industrial Organizations (CIO). Thompson was an early organizer for the United Auto Workers, establishing its first affiliate in 1933. From 1937 to 1953, he was the CIO Regional Director for Western New York State working out of Buffalo, and the CIO's statewide Secretary-Treasurer. But in 1953, he was sent to Boston as the New England Regional Director and represented the CIO when it merged with the American Federation of Labor, becoming the AFL-CIO's New England Regional Director from 1955 to 1967.

From this vantage, he was a natural choice to represent organized labor on the UMass Board of Trustees starting in 1961, where he was a comfortable ally of Judge Fox. Even before that he had been appointed to the New England Board of Higher Education and was part of the group that negotiated an agreement with the University of Vermont to admit 70 Massachusetts medical students at the in-state tuition rate. (Massachusetts Governor Foster Furcolo, a Democrat who wanted his state to have its own medical school, clinched the deal by agreeing to a state contribution of $2,500 per year per student.) Thompson consistently advocated for a medical school in the Boston area both because of the jobs it would provide and because, as someone who had spent his entire career in

urban settings, he held fast to the notion that only cities could provide the varied "clinical material" that future physicians would need to prepare for medical practice. As he told the Board at a special meeting to choose the school's location, it "should be where groups of patients are diversified (age-wise, variety of ailments, etc.)."[15] For Thompson, therefore, an urban location, preferably in Boston, held the highest priority.

Hugh Thompson, far right *(Photo courtesy of the Department of Special Collections and University Archives, W.E.B. Du Bois Library, University of Massachusetts Amherst)*

Many other significant labor leaders played an important role even though they were not on the Board of Trustees. Probably the most tenacious of these, and someone who always had Worcester in mind as the site for the medical school, was a Worcester native named James P. (Jimmie) Loughlin. From 1962, when he was elected the Secretary-Treasurer of the Massachusetts State Labor Council of the AFL-CIO, Loughlin was educated, as friends, family, and detractors alike acknowledge, in the rough-and-tumble world of Worcester's blue-collar Irish

neighborhoods. His language could be, and often was, "colorful."

James P. Loughlin *(Photo courtesy of the James P. Loughlin Family papers, The University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

As one former state senator from Worcester told me, Jimmie Loughlin would "say anything to anyone." During the late 1950s and 1960s, many large employers such as Wyman Gordon and US Steel were leaving the Worcester area. As a lifelong labor leader, born in Worcester's south-side Irish section at a time when "No Irish may Apply" was a meaningful threat, Loughlin was a tough, determined labor leader who fought for his central Massachusetts home town even after he moved to Framingham and worked on Beacon Hill as one of the Commonwealth's most powerful labor leaders. Loughlin was a strong supporter of Presidents Kennedy and Johnson, and of Hubert Humphrey and Ted Kennedy. His daughter Pat recalled the family's being invited to the inauguration of both JFK and LBJ. She told me that Senator Kennedy ("Teddy") was in and out of her

father's office all the time. Local and, especially, state politicians visited their house often. In Loughlin's mind, there was never any question that the school should be located in Worcester, not only to replace all the jobs being lost but as a testimony to the solid claims of Worcester itself, the second largest city in New England. As Secretary-Treasurer of the strongest union organization in the region as well as a member of its influential Committee on Political Education (COPE), one of organized labor's more effective entities to support favored candidates, Loughlin was in a position to make his point. In the back-room dealings behind the choice of Worcester, Loughlin was never "*the* player," his son explained, but he was "*a* player."

Unlike Hugh Thompson, and perhaps contributing to some coolness between them, Loughlin got his start in union work with the AFL, not the CIO. Born in Worcester on October 28, 1910, Loughlin attended Worcester schools. He left St. Peter's High School in 1926 to work as a carpet weaver's apprentice at the Whittall Mills to help support his family. He left Whittall Mills when he realized he could double his wages by working for the Works Progress Administration (more commonly known as the WPA) as a tree surgeon. Loughlin was introduced to organized labor when, after taking a job with Brockert Brewery in 1934, the brewery was unionized. He was elected vice-president of the local AFL Brewery Workers Union in 1937. Following World War II (Loughlin enlisted in the Navy in 1942), he became a bartender at the Coronado Hotel in Worcester. This secured his ties to the local bartender's union and in 1948 he was elected Secretary-Treasurer and Business Agent for the union. He served as President and Executive Board Member of the Massachusetts State Council of the Hotel, Restaurant and Bartenders Union and was the first Vice President of the Worcester Central Labor Union. In February 1962, seven years after the merger of the AFL and the CIO, Loughlin was elected Secretary-Treasurer of the Massachusetts Labor Council of the AFL-CIO, a full-time position located on Boston's Beacon Hill, until his retirement in 1979. Loughlin moved his family to Framingham, a town located about halfway between Worcester and Boston, after he began representing union members from the entire state. By all accounts,

Loughlin never lost his sense of loyalty to Worcester.

His career propelled him toward statewide office just as the new school's location was being considered. And, like Conte, Loughlin was committed to his hometown. During the late 1950s and 1960s, as mentioned earlier, many large employers were leaving the Worcester area. Loughlin and other labor leaders looked to a new state campus not only for construction jobs, but for the long-term benefits it could bring. His daughter remembers his telling some of the school's first leaders, "Some day you could be the largest employer in Worcester!" And after all, as he and Worcester's other supporters all felt, Amherst already had the University's main campus, while Boston had just been "given" a branch campus of the University. Now it was Worcester's turn. If Hugh Thompson turned to Worcester as a second-best alternative to Boston, Jimmie Loughlin never saw Worcester as a compromise. Worcester was always his first choice. And as an influential member of COPE, with control of the campaign workers and funds to assist likeminded political candidates, Loughlin was prepared to work closely with Maurice Donahue and the central Massachusetts legislative delegation to insure that Worcester was not overlooked. After the choice finally did go to Worcester, Trustee and labor leader Hugh Thompson was straightforward about where he got the idea for Worcester as the next-best choice to Boston. He "credited [Loughlin] with being 'the first one to hit me' about locating the school in Worcester. 'When he did (shortly after the legislation establishing the school was passed), I didn't know anything about Worcester,'" Thompson confessed.[16] Other Labor leaders also played a crucial role on behalf of the city. Dan Murray, then head of the local steelworkers union (and the grandfather of Massachusetts Lieutenant Governor Tim Murray), was the state representative to the International Council of the AFL-CIO. He was acutely aware that heavy industry was in decline in his district and is remembered as a strong supporter for Worcester.

Ultimately, however, Labor's influence on the decision depended on its close ties to the leadership of the General Court, as Massachusetts' state legislature is known; especially its close working relationship to Senate Majority

Leader turned Senate President, Maurice Donahue. Indeed it is difficult to overstate the importance of legislative clout in bringing a medical school, first, to Massachusetts and, second, to Worcester.

Politics, As Usual

As noted in Chapter I, Massachusetts had long been known - *unfavorably* - for its niggardly support for public higher education. Coinciding with post-World War II pressure to accommodate returning veterans on the GI Bill, control of the lower house in the state legislature changed hands in 1948, with Democrats holding a majority for the first time in decades. Even the governorship changed hands with the election of the Democrat, Paul Dever. While this may have helped the University of Massachusetts in its transition from a state college to a university, it was not enough to overturn the state's ingrained reluctance to spend large sums on public education. Nor did it neutralize the opposition of the Boston medical deans. Governor Dever favored a state medical school, but "His recommendations were killed by the Republican controlled Senate at the request of Dean Berry of the Harvard Medical School," according to Maurice Donahue.[17] But, the Commonwealth's elections of 1958 gave the state senate a Democratic majority for the first time in memory and made both houses of the legislature Democratic for the first time in half a century. Many legislators felt sure that the time had finally come to win a medical school for the state. One such legislator, Vite Pigaga of Worcester, was first elected to the House in 1958, became a member of the Education Committee, and in 1961 was appointed to the Recess Commission on the medical school. The election of Boston's favorite son, John F. Kennedy, in 1960 signaled a new turn in national politics in keeping with trends in Massachusetts. The decade of the '60s in Massachusetts became the era of the reform spirit of JFK and Lyndon Johnson's Great Society initiatives. Nationally prominent Democratic politicians such as House Speaker John McCormack, Representative Thomas P. "Tip" O'Neill, and in Worcester, Representative Harold Donahue, thus could maintain close ties with their colleagues and backers at

home and keep their initiatives alive in Washington.[18]

One of several active members of the Worcester delegation to the statehouse during and after the fight to locate the medical school, Democratic State Senator John J. Conte was first elected in 1962, remaining in the Senate until Governor Michael Dukakis appointed him District Attorney for central Massachusetts in 1976. (He retired from that office in 2006.) Like Maurice Donahue, Conte was a graduate of The College of the Holy Cross and like Vite Pigaga, had been a history teacher before going into politics. (He strongly believes that the presence of more than a dozen Holy Cross graduates in the legislature helped neutralize doubts about Worcester's suitability to host a medical school.) Conte vividly recalled the feeling he and his colleagues carried with them into government: "promise, expectation, and turmoil." During the sixties, despite the turmoil caused by the growing divide over the Viet Nam War and school bussing, the legislature moved ahead with the creation of a community college system, a state college system, and, as noted in Chapter 1, the consolidation and expansion of the state university system. Conte remembers feeling that many of the political newcomers of the 1960s were men and women who were inspired by JFK's "attitude, his reach." They "wanted to do things," and they did.[19]

Conte is one of many who readily asserts that of all the figures who helped bring the school to Worcester, no one was more important than Senator Maurice Donahue (1918-1999). Donahue was a passionate supporter of public education who entered politics after graduation from the College of the Holy Cross in Worcester and some years as a high school history teacher. He was first elected to the Massachusetts Senate in 1950 and became the Senate Majority Leader in 1958, three years before being assigned the chairmanship of the Senate Recess Commission on the medical school. He was elected Senate President in 1964 and held that position until 1970 when he ran unsuccessfully for governor and then resigned to become a professor of Political Science at UMass Amherst in 1971.[20] Despite representing Holyoke, a town in western Massachusetts, Donahue was committed to finding an urban location. Leaders of the AAMC might try to promote the scientific benefits of a close association with university research

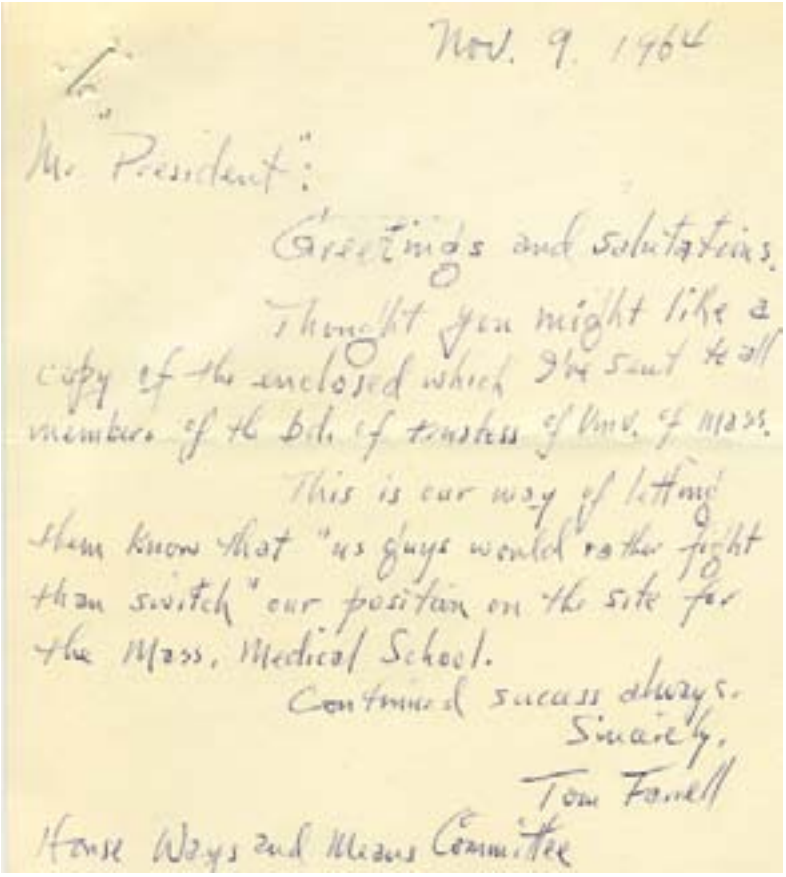
departments, but the prevailing opinion of those without graduate degrees held that to be well-trained, doctors needed a large and varied supply of "interesting" patients, the sort that only cities, they felt sure, could provide. Finally, Massachusetts had, as we have seen, no liking for large public expenditures on higher education. The earliest hopes for the medical school combined egalitarian idealism with Puritanical frugality. In short, an urban site would provide plentiful patients as well as a preexisting hospital that might be cheaply retrofitted to accommodate medical student teaching.

Donahue testified that a four-year school of "high quality" could be established at reasonable cost by locating the school in any one of the three major cities where hospital facilities already existed: Boston, Springfield, and Worcester. At the time of this testimony, March 1962, he projected the cost of such a school at ten million dollars. Since Donahue had consulted personally with the AAMC's executive director, Ward Darley, and surely knew how strongly medical educators believed in the merits of integrating medical schools with universities, the desire to save money must have been his paramount consideration in winning approval from the legislature and Governor John Volpe. Former Senator Conte believes that the need to build a wholly new, *teaching* hospital was purposely unmentioned in the first years of the medical school deliberations because of the fear that the much larger price tag would frighten off many legislators. Reading Lamar Soutter's earliest descriptions of his anticipated medical school, however, no one should have doubted that he (and Lederle) intended to build a new hospital from the beginning. But, whatever Maurice Donahue felt about building a teaching hospital, there was never any doubt that he favored an urban site for the medical campus. Fellow Senator John Conte, like other Worcester-area senators, such as Vite Pigaga of the Recess Commission, backed him up. It was Worcester's turn.[21]

If the President of the Senate was squarely on the side of an urban site, in the House, Speaker John Thompson, Democrat of Ludlow in the western part of the state and known as the "Iron Duke" for his tight control over the House, was determined to win the school for Amherst.[22] But Thompson was extremely

ill by the time the location came to a vote. He was succeeded as Speaker by Representative John Davoren, a central Massachusetts partisan who made no secret of his determination. Maurice Donahue, like Judge Fox, was closely allied with Labor's electioneering manpower and money, but Davoren held the keys to the state's budget. The influence of the legislature was not lost on several new members of the Board of Trustees, namely, the Commissioners of Public Health and Mental Health--both of whom could be expected to vote with an eye toward the concerns of the legislature by whom their departmental budgets would ultimately be scrutinized.[23]

Senator Conte readily acknowledged that Maurice Donahue and members of both houses lobbied members of the Board. As he elaborated, "a lobbying process can be interpreted in many, many ways. But basically, we'll put it at the high end. And that merely is explaining to the members of the Board why


Nov. 9. 1964

Dear
Mr. President:

Greetings and salutations.

Thought you might like a copy of the enclosed which I've sent to all members of the bd. of trustees of Univ. of Mass.

This is our way of letting them know that "us guys would rather fight than switch" our position on the site for the Mass. Medical School.

Continued success always.

Sincerely,

Tom Farrell

House Ways and Means Committee

Handwritten note from Representative Thomas Farrell, Massachusetts House Ways and Means Committee, to President John Lederle, 1964
(Courtesy of the Department of Special Collections and University Archives, W.E.B. Du Bois Library, University of Massachusetts Amherst)

Worcester would be the better site. . . . And quite honestly," he told me, "I had no compunction about talking to anybody, whether they wanted to hear me or not, quite honestly. I mean, that's part of the political process, and I don't shirk from it." But most influential was the lobbying of the Senate President, Maurice Donahue. And, in Conte's opinion, no one on the Board would have been exempt from that process, not even a Bishop. On several occasions, the entire Worcester delegation made their concerns known to the Board, as for example, in a letter telling Trustee Joseph Healey, chair of the Board's Medical School committee, in November, 1964, that "There are many, no doubt, who eagerly await your all-important decision, but please be assured that their anxiety can in no manner be compared with that of our people in the city of Worcester - the Heart of the Commonwealth." Representative Thomas Farrell of Worcester, a member of the House Ways and Means Committee, made sure to send a copy to each member of the Board. He appended a handwritten note saying, "This is our way of saying that 'us guys would rather fight than switch' our position on the site for the Mass. Medical School." In closing he added, "Continued success always."[24]

And so, as the Board of Trustees carried out their deliberations over a period of nearly two years, they were hardly operating in a political vacuum. No matter how many educational consultants the Dean and President brought before them, the financial clout of the Legislature, shadowed by the political influence of organized labor, could never be discounted. And neither Labor nor the state's leading politicians was happy about locating the medical school in Amherst on the University campus. It was no secret that Dr. Soutter and President Lederle both favored a University site. Almost half the Trustees were willing to follow their lead. And so, for a year and a half the Board was deadlocked, leaving the legislature increasingly frustrated. Eventually, the administration of the University of Massachusetts did realize the importance of their dealings with the legislature. Leo Redfern, Provost, told an interviewer years later that the choice for Worcester from a legislative point of view, "was about as good a choice as any; I'm not talking about the logistics or the academics of it; but politically it suddenly gave [the Trustees] a bloc of Worcester delegation votes in the

Legislature."[25]

How the deadlock was broken is the subject of the rest of this chapter.

Joseph P. Healey, Chair, University of Massachusetts Board of Trustees (*Photo courtesy of the Department of Special Collections and University Archives, W.E.B. DuBois Library, University of Massachusetts Amherst)*

"You can't learn to play the piano, unless you have a piano."[26]

The cost of a medical education and its accessibility to the sons and daughters of working-class citizens were not the clinching concerns behind Labor's and many Legislators' opposition to the Amherst campus. Rather, they genuinely were wedded to the belief that the best medical education could only be had in an urban setting. Thus, one must ask what factors in favor of an urban site weighed in the balance with a majority of Board members.

Initially the matter was left in the hands of an Ad Hoc Committee for the Medical School, consisting of Joseph Healey, chair, President Lederle, Judge Fox, and Commissioners Alfred L. Frechette (Public Health) and Harry Solomon (Mental Health), with Lamar Soutter in attendance. But, after about six months, it was clear that the committee could not reach unanimity. Soutter and Lederle

began to advocate openly for an Amherst site, Fox, Frechette and Solomon wanted Boston, while Healey, tending to the urban side, nevertheless maintained that he was "personally still listening."[27] Signs of the committee's deep divisions surfaced early. For example, Judge Fox left a Board of Trustees meeting in the middle of a presentation on the merits of university-campus locations for medical schools by William Willard, a national expert on medical education and Dean at the University of Kentucky Medical School. Willard had been invited by Lamar Soutter. Fox would prove adamant in support of an urban site, and he was part of a Board majority, albeit a very close one, that held fast. At bottom, the various commissioners, Judge Fox, labor leader Hugh Thompson, and other Boston-area Trustees could not imagine a medical school in a rural location like Amherst; neither could Senator Donahue who thought that, "they had no sick people there and the 'notch' was a dangerous road in snowy weather." On the other hand, if the urban-location faction could have had their first choice, the vote would have gone to Boston. Judge Fox told the Board, "it will take decades to build a great medical center, but it will be built by the people of Massachusetts and should go where growth is greatest and patient clinical material is greatest - which is in Boston." Besides, he cautioned, "When will we take our first student if we try to push [an] Amherst site through the legislature..." Joseph Healey, one of the most influential members of the Board, told President Lederle early on that the school would "never be in Amherst." As Lederle remembered it, Healey told him flatly, "'You don't have the votes.'"[28]

At this point, Soutter (with discreet support from Lederle) began digging in his heels and lobbying hard for his dream of a university-based medical school. In the spring of 1964 the Board requested that he formally set out his reasons for advocating a campus site. His report to the Board, presented in May, stressed the importance of collaborative basic and social science research, the advantages of the existing School of Nursing at UMass Amherst, the advantages of building upon a preexisting library, other potential opportunities for centralized administrative costs, the desirability of locating away from the existing medical schools in Boston, and the likely lower cost of constructing the school on campus.

Finally he stressed how much harder it would be to receive full accreditation at a location distant from the main campus, citing the near unanimous opinion of deans from top schools such as Johns Hopkins, the University of Chicago, Columbia, and Cornell, as well as the strong recommendation of the principal members of the Liaison Committee on Accreditation of Medical Schools, Drs. Walter Wiggins and Ward Darley. He wrote, underlining his words for emphasis, "The most important considerations in the location of a School are academic ones." His recommendation clearly reflected his deepest hopes for the kind of university campus-based medical school he believed to be the best model for academic excellence. He pulled no punches about the advantages for recruitment of good faculty, and the economies of administrative and other costs at a campus site: "If we want a good medical school at the earliest possible time, there can be no doubt about where to put it."[29]

A closed session of the Board, called by Joseph Healey for December 1964 so that everyone could take a "'pot shot'" at the location question after the Ad Hoc Committee found itself unable to reach consensus, displayed all the differing perspectives. Dr. Soutter began, as requested by the Board, with an extended statement of why the school "should go where there is a center of graduate and undergraduate education." His arguments echoed those of the major figures in medical education of the 1960s, as described in Chapter 1, but also attempted to address fiscal concerns. First, he emphasized how helpful the University presence would be in recruiting good faculty, stressing the value of cross pollination with [UMass] Amherst research programs." He also stressed the need for a 400-bed teaching hospital, informing the Board that of all medical schools constructed since 1950, only two had not built hospitals. Thus, not only did the campus afford a likelihood of much cheaper construction costs than in a city, but it offered the expansive acreage that the teaching hospital would require. Neither in Boston nor in Worcester would so much land be available - regardless of the cost. A campus location would eliminate costly duplication of systems, such as library facilities. Finally, "In Boston, all available medical talent [is] taken up already by the three existing schools." With regard to the availability of patient referrals, the

so-called "clinical material" of concern to the Boston contingent, Soutter believed that the referral patterns would be no different in Amherst than anywhere else. Most important, he told the Board that, we "need to be additive in our function... In Boston we would be a 'trade school,' not a professional school. We must work hard to have a first class school wherever we go, so [we] might as well start off with as few handicaps as possible." With that, he told the Board, he hoped "we go to Amherst."[30] And these were not idle hopes. Soutter had even scouted for a suitable site and, according to persistent rumors which - decades later - his son still credited, he had put a down payment on a house somewhere nearby. It's not clear which weighed heaviest on the new dean - Amherst's small-town ambience and lovely setting in the Connecticut River Valley (known as the Pioneer Valley), the prospect of a brand-new hospital (something potentially unavailable in any of the cities under consideration), or the sheer relief of starting fresh and far from the competitive shadow cast by the Boston medical establishment, a consideration both his son and wife, Mary, emphasized.

At this point, Joseph Healey re-took the floor. His only recorded comment was, "Personally, I'm still listening." Knowing where the votes were likely to go, he remained publicly noncommittal. He wisely sat back and allowed the "pot shots" to begin. President Lederle, who was squarely behind his Dean in the matter, knew an Amherst location would give an unimagined boost to the main campus, bringing personnel, money, and prestige. He had been persuaded early on by his own faculty that collaborative work with a medical faculty would be a boon to both the natural and social sciences; the School of Nursing, too, was fully behind the idea. In the past year and a half, he had been "educated." He quickly stepped forward to support Dr. Soutter. Besides claiming that patients could as easily be brought into Amherst for referrals as they could to Boston or Springfield (no one on the Board except for Dr. Edmund Croce, president of the Worcester District Medical Society, was considering Worcester at this point), Lederle added that they would attract "better basic science people in Amherst." He found the economic argument for Amherst compelling: construction costs would probably be lower, and operating expenses would "<u>certainly</u> be less in

Amherst. Consider computer[s]...a large one [will] be available in Amherst." Also, Western Massachusetts had by far the greater need for an influx in medical facilities. Finally, he pointed to the "interesting experiments" currently underway in combined bachelors and doctoral programs in medicine such as, although he did not mention it, the six-year program started by Soutter at BU. Such programs were only feasible on the Amherst campus.[31]

Others on the Board were unconvinced. Dr. Solomon, Commissioner of Mental Health, began the counter charge in favor of Boston diplomatically: "[We are all] proud of [our] Dean," he began. "On [the] assumption that Amherst is the best choice, the rationale developed is fine." But he "doubted some of the assumptions as stated..." For one, the "problems in Massachusetts are different," from those in Florida or Kentucky (the exemplars offered by Drs. Willard and Soutter). The preclinical, basic science faculty slots, he believed, would be few in number and not hard to fill. But, "Physicians are not anxious to go to Amherst." Asking what we want in a "good" medical school, he pointed to Columbia, Johns Hopkins, and Cornell - schools with excellent parent universities but, more to his purpose, located in large urban centers. A "good school," he continued, "is that which has physical facilities to give good training, erudition of [its] staff, competence of students, etc. Such a facility could be anywhere." But if he had to choose between a site on a university campus *or* in a sizable city, he would choose the urban site. He objected, in other words, to Soutter's one-sided presentation. Soutter had presented the negatives of the urban sites, but not the positives. For example, he made no mention of the possibility of the large tract of land available at Worcester State Hospital, land that already belonged to the state and therefore would cost them nothing.[32]

Commissioner Frechette, too, felt unsatisfied with Soutter's presentation. As an advocate for public health, he was attuned to the needs of outpatients more than inpatients. He could not imagine that Amherst, still a relatively small community, could supply enough patients either for the physicians or for educational purposes for the students. He anticipated that the need for outpatient care in Boston, on the other hand, would soon be "very severe." Since, presciently,

he wanted the curriculum to emphasize "routine ambulatory cases rather than the usual accident case involving special treatment," Boston was his clear preference. Bishop Christopher J. Weldon of Springfield remained undecided at this meeting, but as someone with a constituency that was decidedly urban, he soon became a crucial "swing vote." In the meantime, Ad Hoc Committee chair Joseph Healey reported to the Board that they were "not in full agreement concerning the designation of a site."[33]

Bishop Christopher J. Weldon of Springfield *(Photo courtesy of the Department of Special Collections and University Archives, W.E.B. Du Bois Library, University of Massachusetts Amherst)*

Given the strong division of opinion even among members of the Ad Hoc committee, Healey realized that the full Board would never simply rubber stamp their decisions. Moreover, the Ad Hoc committee was unlikely to vote unanimously for any site. Also, in the background, Healey likely was aware that the Boston medical school deans were becoming seriously concerned about the new competition that seemed to be on their horizon. Healey therefore decided to end separate deliberations by his committee and bring the proceedings back to the full Board. Not long after, Governor Volpe - always sensitive to the needs of his powerful supporters – made two changes to the UMass Board. The terms

of Judge Fox and Professor Victoria Schuck, of Smith College, both strong supporters of the Boston option, were due to expire. Volpe chose two Board members as their successors who were reputed to be supporters of Amherst as the medical school site. Volpe was correct about one of those new members, Caroline C. (Mrs. George) Rowland but, as discussed earlier, not about retired General John J. Maginnis, of Worcester. Despite Maginnis' strong ties to UMass Amherst, in the end local pressure from the Worcester business community brought him around.[34]

Given the Board's inability to make up its mind and the urban-site faction's discomfort with Lamar Soutter's advocacy for a campus location, Joseph Healey acted like a good politician - he called for a new study. In January 1965, he told the Board that the Ad Hoc Committee, "needed further consultant service to present the case for an urban location, and that a medical expert would not be involved." Instead, they would hire a management consultant firm such as Arthur D. Little or Booz, Allen, and Hamilton, Inc. (BAH) to "present affirmatively as a protagonist, the case for an urban location." He expected the report to take approximately one month. He probably hoped to get the advice the urban site advocates wanted - and needed - to avoid charges of mere political expediency. Although the Ad Hoc committee wasn't dissolved until March, it became, in effect, little more than a screening committee for the consultant's report that would be brought before the full Board.[35]

Healey had hoped to wrap up the decision by the end of March. As it turned out, the Board did not even come together for a vote until June 11, 1965. The choice of a consultant was itself ensnared in politics, because Booz, Allen, and Hamilton, Inc., resisted the request to only consider urban sites. Several weeks after meeting with the Board, BAH presented its list of "Objectives and Criteria" for a medical school. They were based on interviews with AAMC officials, deans, and department chairs of medical schools with whom they had worked in the recent past, major reports such as the Coggeshall Report and the Donahue Report, and the state's authorization bill of 1962. Criteria for the UMass medical school, they concluded, must satisfy the general objectives of

the Commonwealth and of the University of Massachusetts as well as the basic criteria of achieving excellence in education, patient care and research. Further, the school must be located where administrative services could be provided easily, where faculty and staff could be attracted and retained, where the "number and variety of patients required" to achieve the medical school's curricular objectives could be acquired, where there would be enough room to develop necessary facilities, where all this could be achieved at manageable cost, and where the school could maintain good relationships with local, state, and national civic and professional bodies.[36] In short, BAH's first draft report demonstrated the same biases as Lamar Soutter's report - its criteria gave great weight to factors that only a university campus site could satisfy.[37]

The consultants then polled all the Board members about how to weigh each criterion. Not surprisingly, resistance coalesced around the very points at issue from the beginning. Bishop Weldon once again emphasized that the school's prime duty was to teach. Thus, it must be placed in a setting central to a varied and large population. He told the Board, "In order to learn to play a piano, you must have a piano."[38] The Commissioner of Public Health, Alfred Frechette, insisted that the curriculum must allow students to learn about the health needs of large population groups; hence, the school should be located in an urban setting. Hugh Thompson, Labor's voice on the board, feared that heavily weighting a criterion focused on interdisciplinary research tilted the report toward Amherst. He also questioned the consultants pointedly about the state's need for what he termed "General Practice." He didn't see enough to indicate that this was a priority. His objection elicited one of the more interesting dialogues of the meeting because it presaged a major point of contention between Dean Soutter and the Legislature in later years. Here is an excerpt from unofficial minutes:

> Thompson - "Are you going to emphasize General Practice here - or what?"
>
> Wilsey [from BAH] - "Yes - How can we provide the best family care and make this field attractive to students.

> The term G.P. too often has connotation of minimum preparation."
>
> Soutter - "We should make 2 efforts:
> 1. Expose students to family practice
> 2. "Influence med prof as best we can to see to it that climate for Family Practice is improved in the communities. In some towns, for example, the general practitioner cannot admit his patients to the hosp. We should do our best to improve this situation. [GPs] "may be called 4 year "undifferentiated physicians" 20 years hence."
>
> Frechette - "Would be a mistake to commit ourselves now to G.P. term as such."[39]

Unofficial minutes of Board meetings during the spring of 1965 suggest that tempers were beginning to fray; the Board members sound edgy, almost curt. Senator John Conte of Worcester had begun proposing legislation to require that the Board make its decision by April 15. Although Senators Conte and Donahue agreed to keep a "lid on" the bill, the press soon learned of it and began to put pressure on the Board to make a decision.[40] Moreover, as President Lederle admitted at the Board meeting of March 31, "Much of my other difficulty [legislating] UMass bills flows from our failure to come to a decision on [the] med school." Trustee Healey reminded them of the need to come together and make a decision soon. "We are under the guns as never before . . . the Press, the Governor, and the Legislature [are] now after us," he reminded them. In fact, some on the Board were beginning to think that Lamar Soutter, as much as they respected him, had contributed to their troubles by his "one-sided approach," leaving them feeling "inept" and lacking the "full picture." How could they make a rational decision? Worse, Bimi Soutter's many public statements in favor of Amherst were creating a misleading impression in the papers. At one closed-door meeting during this period, a meeting to which Soutter was not invited, Weldon complained about leaks to the Springfield newspapers that were causing him, the Bishop of Springfield, great embarrassment. It was the Bishop who came right out and said they must, somehow, "Shut Bimi up."[41]

In the end, a revised ranking system did little to alter the ratings of the five possible locations, including in order of the report's preference, Amherst, Springfield, suburban Boston, Worcester, and Boston. It did rank the need for an ample and diverse patient population much higher than previously. The criteria were listed as follows:

> 1. Potential for meeting broad medical school objectives
> 2. Capabilities for providing comprehensive instructional programs
> 3. Feasibility of attracting and retaining faculty and employed staff
> 4. Capability of attracting the desired number of patients
> 5. Capability of attracting the desired variety of patients
> 6. Feasibility of providing required facilities
> 7. Feasibility of obtaining ample land
> 8. Feasibility of constructing facilities of appropriate size, layout, design and justification.

To the consternation of the urban-site faction, Booz, Allen, Hamilton's final report unequivocally favored locating the school on the Amherst campus. It concluded that,

> An outstanding medical school that would best serve the requirements of the Commonwealth in the decades and century ahead could be planned and developed to its fullest potential most effectively and rapidly if located on the campus of the University of Massachusetts at Amherst...

For the short term, the report allowed that Springfield's hospitals could be utilized for the clinically-based third and fourth years of medical education until a university hospital was constructed. Unsurprisingly, Boston was declared the worst choice, but Worcester came in next to last:

> Developing a medical school in Worcester would, in spite of the many advantages and resources of the community, be the fourth best choice among those available. Since there is no present or planned

> University of Massachusetts campus in Worcester, the medical school could not work with the other components of the university to their mutual benefit as effectively as would be true on campuses in Amherst or in suburban Boston.

On a rating system with five rankings, Worcester was rated in the highest category only twice, in its capability to attract the number and the desired variety of patients. When the Report was leaked to the Boston Herald, it ran a prominent story declaring that, "UMass Medical School Expected to be in Amherst."[42]

At this point, members of the Legislature weighed in using the only weapon at their disposal - the threat to withhold funding. Speaker of the House John F. X. Davoren, a Democrat representing the Worcester suburb of Milford whose words carried the full weight of his influence over state funding, told a "social gathering" of fellow legislators and businessmen from the Worcester region that he would "do what he can to block location of the state medical school in Amherst." Considering that the Booz, Allen, Hamilton report's revised criteria for choosing a location stated that it should be the one where, "the medical school can best attract and retain the resources the school will need to meet requirements for health care and prepare young men and women to become practicing physicians," placing this criterion nearly at the top of the list, any Trustee with ties to the Legislature would have taken Davoren's thinly veiled threat with utmost seriousness. As Worcester's Chamber of Commerce later acknowledged, without the central Massachusetts legislative delegation's undivided support - backed up by the power of Senate President Donahue, no amount of business or union lobbying would have made a difference. And as if this were not enough pressure, someone leaked to the press the results of an informal poll by Hugh Thompson of legislators' preferences for the new school's location: Out of a total of 137 responses, only 22 chose Amherst. As unscientific as the survey surely was, it clearly showed that Amherst was not running strongly with the folks on Beacon Hill.[43]

The Vote and its Aftermath

When the Trustees finally met on June 11, 1965, they knew that the vote would not be unanimous. But, they lay down a set of ground rules for an orderly, if secret, ballot. First, they decided to vote on five different choices, Amherst, Worcester, Springfield, suburban Boston (in deference to the new UMass campus soon to be built somewhere near the city), and Boston itself. The site with the fewest votes in each round would be eliminated. They also agreed that the vote would be secret and that the entire Board would support it solidly. From the perspective of outsiders who had learned about the BAH report but not the nuances of many Board members' political alliances, Worcester looked to be the least likely site to be chosen. Those who credited the power of Boston's established medical schools, on the other hand, would have thought Boston the least likely location for another medical school.

In the end, the balloting ran to five rounds. And in the first round of the five, Worcester showed what one reporter called "surprising" strength, winning 7 votes to Amherst's 9. Springfield received 3, the Boston suburbs 2, and Boston 1. (Governor Volpe did not attend the vote.) Once Worcester's potential showed itself, Boston's supporters gave the city their votes. By the second round, Worcester outpolled Amherst, 10 to 9, with Springfield's 3 supporters apparently holding the balance of power. It took three more ballots for Worcester to edge out Amherst 12-10, with Bishop Weldon having cast his lot with Worcester by Round 3. In Round 4 the two cities were tied, 11 to 11, but in the last ballot, one voter changed his or her mind and switched to Worcester. General Maginnis later claimed to have won over that unnamed voter by stoking his irritation over some slight by the University. And Trustee Robert Gordon from Lincoln, Massachusetts, who was thought to be a pro-Boston voter, did say later that he was glad he had switched his vote. President Lederle later told his interviewer that, "Two past presidents of the alumni association voted against their alma mater as to the site. One was Bob Gordon, the other was Maginnis. Now Maginnis

I can understand as long as Worcester was in the running. He cast the votes for his home town, although he had told me he would go for Amherst." Gordon, on the other hand, was expected by most observers to vote for Boston. We will never know who supplied the last-round Worcester vote by switching from Amherst. Bishop Weldon, although he is often credited with the change, publically stated his support for an urban choice throughout the months of deliberation. He switched to Worcester after Round 2.[44] Gordon, however, must have been undecided between the one remaining urban choice, and his alma mater. His vote for Worcester clearly surprised President Lederle and would fit with General Maginnis's claim to have "turned" the final vote for Worcester from Amherst.

We can be fairly sure, however, that for most of the Board, their votes hinged on their preference for a university or an urban site. Dr. Edmund Croce, Trustee and physician from Worcester, later said, "'It's a matter of educational philosophy...On-campus schools are strong in turning out excellent research scientists and staff members for medical schools, but this does not solve the problems of those who are needed to actually go out into practice.'" As one reporter wrote, "The city boys beat the country boys in five ballots of tight voting...A block of university trustees who had favored the Boston area right up to the moment of decision swung over to Worcester when it became obvious Boston couldn't win . . . Most bitterly disappointed was Dr. Lamar Soutter, dean of the new school, who left Amherst, without comment, for his home in Dedham, immediately after the vote." A decade later, when Soutter stepped down from his post at the medical school, President Lederle wrote him that there had been many times when he was sure Bimi would resign. This surely must have been one of them. Lederle recalled talking to Soutter soon after the vote. "Bimi...was very upset about the decision as was I, and [I said] to him, 'Bimi, I hope you won't quit. Because we're going to build a great medical school in Worcester and we're going to build a university around a medical school." Yet, Soutter was not unprepared for this outcome. His son recalled that during the battle over the decision, his father would come home and say, in effect, "It might just be Worcester - these Worcester people are very determined." Moreover, one week

after the vote, Soutter was ready to negotiate about a site in Worcester, with a clear preference for land transferred from Worcester State Hospital's capacious grounds. Trustee Harry Solomon, Commissioner of Mental Health had made the suggestion even before the site vote in June, and by June 18, Soutter was fully engaged in making the medical school a reality - even in Worcester.[45]

Headlines suggest how little prepared, unlike Soutter or Lederle, were UMass Amherst supporters for the decision. "Worcester Chosen Site of State Medical School in Surprise Board Vote," and "Bulletin! It's Worcester for Medical School," and, from the *Boston Herald*: "Medical School Fiasco," convey the mood from around the state. The *Herald's* reporters complained at length that "the University of Massachusetts is a public institution. Its Trustees are appointed by the governor and thus are subjected to political pressures...If the Legislature was so adamant on an urban site, it should have said so from the start..." But they did not stop there. In a series of jabs at the winning city, Worcester, they contended that, according to Booz, Allen, Hamilton, "it will be far more difficult to attract a first-rate professional and medical faculty to Worcester than either to Boston or Amherst...Worcester is neither fish nor fowl. It has neither the cultural attractions of Boston nor the university association of Amherst. Its public-school system and those of surrounding communities are not of the caliber needed to entice highly qualified professionals with school-age children." A writer for the UMass Amherst campus paper minced no words:

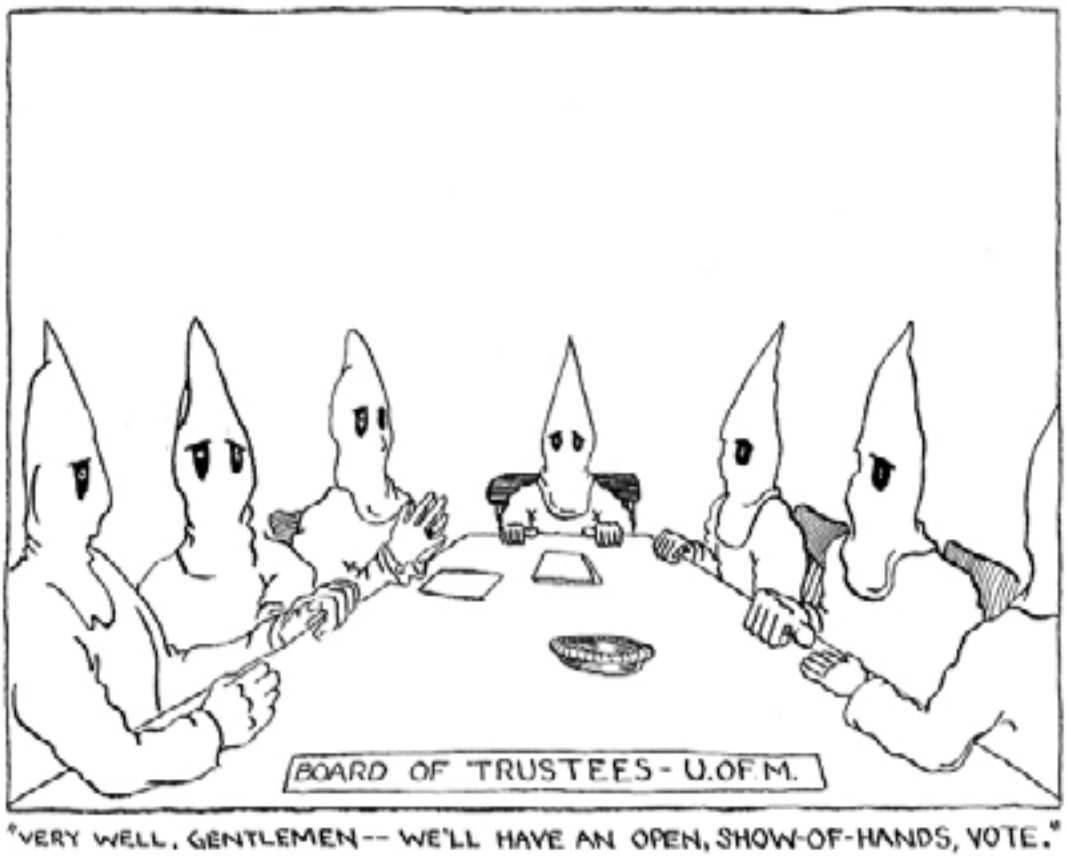
> Anyone of a stature suitable to be a professor of medicine or any student of a calibre suitable to attend a first-rate medical school would without hesitation prefer to do his work in the garden setting of Amherst with its higher saturation of sophistication, intelligence and the amenities of life than in or about the city of Worcester. Undoubtedly the drabbest, dullest, most mediocrity-impregnated communities in the country are its medium-sized cities. Even though Worcester is well above average in this category it cannot escape that curse.

One letter from a resident of the western Massachusetts village of Turners Falls to Frank Boyden, UMass Board President and headmaster of Deerfield Academy, summed up the general impression that, "...now it is too late and we are all stuck with your pork barrel Worcester solution." Boyden received so many complaints that he began sending pre-printed postcards in reply.[46]

Some of the bitterest responses were sent by faculty at the main campus. One poignant letter, from the Assistant Dean of Men, wrote to the Trustees that,

> As an administrator and teacher employed by the University of Massachusetts I consider my main mission to be that of developing in students the capability of making decisions based upon sound research, objectivity and integrity. Further, I feel my task is to infuse in them the sacred commitment to stand openly by their decisions so reached...How now in the shadow of your Medical School decision can I face my students? In the future, how can I expect them to hold their trust in me when I act as an agent of this university?

An astonishing 150 faculty members attended a special meeting of the UMass Amherst faculty senate to plan a counterattack. Accusations spread of improper political influences over some of the Board's members, especially the five State Commissioners. In one newspaper cartoon, members of the Board are shown sitting around a table headed by the Chair who is saying, "Very well, Gentlemen - we'll have an open, show-of-hands vote." The illustration shows all the trustees wearing Ku Klux Klan-style hoods and gowns.[47]



"We'll have an open show-of-hands..." (*Reprinted with permission of the Department of Special Collections and University Archives, W.E.B. Du Bois Library, University of Massachusetts Amherst)*

On July 28, Trustee Fred Emerson of Agawam, a town near Springfield in western Massachusetts and a Springfield supporter, called for reconsideration of the decision and a second round of voting. The Board agreed to hear petitions from a select set of speakers at a special meeting, and then to vote on whether to hold a recount. The show-down was set for August 4. Representatives of the Faculty Senate and the Council of Academic Deans at UMass Amherst, of the City of Worcester, and of the state AFL-CIO were permitted to make presentations to the Board. Dean I. Moyer Hunsberger, for example, accused the Board of improperly holding a secret vote, and predicted that placing the school in Worcester would lead to a 10-year delay in winning the resources necessary

to achieve a high-quality institution. (His prediction came uncannily close to the truth.) The Deans' petition went even further: "We believe that this decision, if allowed to stand, will go down in the history of the University as the beginning of the death of the institution..." Board members Hugh Thompson and Robert Gordon hotly defended the decision itself and the integrity of the decision-making process, with Thompson insisting, "'I want it made clear that I am not controlled politically...I have never been politically controlled and I don't think the majority of the board was.'" A delegation from Worcester representing the major corporate, educational, research, cultural, medical, and political sectors of the city made sure to testify in person to what they had already elaborated in their lobbying materials, namely, that Worcester was far from the gritty and downtrodden city being depicted by supporters of Amherst. In fact, its close association between business and academic leaders made it an exceptionally fruitful environment for research. The director of the Worcester Art Museum informed the meeting that, "As the second city in the Commonwealth, [Worcester] long ago determined to be independent of Boston. [The city contains the] oldest music festival in the U.S., [the] Worcester Light Opera, the Players Club, the Antiquarian Society, the Craft Center, the Worcester Science Museum; nearby is Sturbridge Village. [The Worcester Art Museum was] called by *Time* one of best in America..." But the most powerful statement was made by Dr. Hudson Hoagland, Executive Director of the Worcester Foundation for Experimental Biology, who "cited his own experiences in recruiting scientists from throughout

Hudson Hoagland, 1968 *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

the world," thus refuting the suggestion that Worcester was an "'intellectual desert,'" that made faculty recruiting an uphill battle.[48]

The Citizens' Committee on the Medical School Site in Amherst brought in outside medical education experts who reiterated what Deans Soutter, Willard, and others had told the Board from the beginning. The unofficial minutes reveal a frustrated and disbelieving Provost of Cornell Medical College asking:

> Has Board been misled by the 19th Century concept that Med Ed is just lecturing and apprenticeship[?] Even in old days, great European Universities were in small towns.
> Great opportunity here to develop a great State U. Hospital in Mass. Should be a model. Another function of a good hospital should be training investigators...A computer center...is an absolute essential. Most medical schools today are permitting students in second and third year to do some research...A fallacy is that a medical school cannot be good unless it has a lot of trauma cases...

After the strenuous rehearsal of their year of deliberations, the Board set the open vote on reconsidering their earlier site selection for August 4. The outcome was unchanged: 12-10 in favor of Worcester.[49]

Against the general outcry from western Massachusetts, Worcester was defended by an Amherst native, now a resident of Worcester and the wife of one of the city's leading citizens. Martha Allis Cowan (Mrs. Fairman Cowan) wrote to the *Amherst Record*, "I have been astonished at the violent opposition to having the medical school in Worcester....Having moved to this city from a Boston suburb ten years ago, with a somewhat provincial approach, I can understand this ignorance..." After describing the research and teaching that could be found at the Worcester Foundation for Experimental Biology and Worcester's five hospitals, she went on to directly address the numerous direct and indirect imputations of the city's general unattractiveness to the families of upper middle class professionals:

> Are [these critics] familiar with the teaching and research being done at Clark University, Worcester Tech, Holy Cross, Assumption College, and Worcester State College or with the lectures, courses and concerts open to the general public at these institutions? Have they ever visited the Worcester Art Museum or the Craft Center, or the new public library, or the Antiquarian Society? Do they come to the century-old Worcester Music Festival in October? ...We have lived in the city for ten years, and our three boys have all attended public schools in Worcester...

In truth, the widespread criticism of Worcester as, in effect, a gritty, uncouth, working-class town that was unsuited to such an elite operation as a medical school was a criticism that has taken decades to soften, if not wholly erase. Despite its many institutions of learning and culture, its Westside neighborhoods of leafy hills and prosperous houses, Worcester was (and is) demographically a predominantly blue collar city. And that, in the end, was one reason it won such loyal support from many politicians and labor leaders who quickly abandoned Boston for Worcester when it was clear that Boston was not a viable choice.[50]

Amherst's supporters were not reconciled to the decision. Dr. Paul Dudley White, a Boston-based, "nationally known heart specialist," had been vocal in support of a campus location for the school for months. Now that the Trustees had voted conclusively for Worcester –clearly the wrong choice, in his view –he enlisted as honorary co-chairman of the Citizens' Committee on the Medical School Site in Amherst, a group campaigning for reconsideration of Worcester as the choice. From August through the fall of 1965, this group, apparently representing the Massachusetts Medical Society, the Boston medical establishment, and deeply unreconciled legislators from western Massachusetts such as Representatives David Bartley from Holyoke and Anthony Scibelli from Springfield and the Chair of the Ways and Means Committee, campaigned against Worcester. The Committee produced a series of "Bulletins" updating all interested parties in the travesty of rational decision-making represented by the Board's vote. "Bulletin #10," for example, informed Commonwealth citizens that,

"The medical school and its hospital in Worcester will be, at best, a local service operation of no distinction." Just as bad, the separation of the medical and main campuses would "cripple" the development of the main campus and cost taxpayers millions more dollars.[51]

President Lederle and the Board, however, had moved immediately after the first vote to consider sites in Worcester. Dean Soutter began meeting with City Manager McGrath, Trustee Solomon, and the Director of Worcester State Hospital. In the end, he was quite pleased with the State Hospital site; his attitude toward Worcester changed completely once he knew the school would not be locked into the old and geographically limited site at City Hospital, as presumed by the original Donahue Report. In contrast, the State Hospital site, formerly a large farm, sat attractively on a slope overlooking Lake Quinsigamond and conveniently abutted Route 9, then the most direct east-west route between Worcester and Boston. Route 290, a highway being built at the time to connect the Turnpike, south of Worcester to the northeast corner of the state, would have an exit close to the new campus, adding to its centrality and accessibility for central and northeastern New England. With approval from the Dean and encouragement from the City Manager and local legislators, the Trustees proposed that the governor ask the Legislature for funding as soon as possible to buy several small parcels needed to square off the Worcester State Hospital site and to pay for architects' fees to begin the planning process.[52]

Francis J. McGrath *(Photo courtesy of the Office of University Relations, University of Massachusetts Medical School)*

At this point, further delaying tactics ensued. On November 9, Dr. Paul Dudley White and Edward Weeks, editor of the *Atlantic Monthly*, became the first two signatories of a lawsuit brought by the Massachusetts Taxpayers' Committee for Quality Medical Education, a suit charging that the trustees violated their responsibilities by approving plans for a second-rate school. The suit asked for an injunction against further development of the Worcester site, a move designed to forestall the legislature from approving budget requests for the school from Governor Volpe. White gave his reasons in a private letter to state senator Conte. They included his genuine belief in the benefits of a campus-based medical school for both the medical and the liberal arts campuses, but they went further. White apparently believed that a medical school in Worcester was the Trojan horse for developing an entire state university campus in Worcester as well. He believed the expense and delays involved in such a complex project would doom the medical school to an unnecessarily protracted launch. About a week later, Representative Scibelli, made it known that funds would not be appropriated for the University of Massachusetts Medical School in Worcester until "more serious study and consideration" was given to the site." In response, Dan Murray wrote in a Worcester labor union newsletter of Labor's outrage at any attempt to stop the school: "A ridiculous and shameless attempt is being made to nullify [the] decision of the Trustees of the University of Massachusetts in choosing Worcester as the site of the...medical school." He firmly reminded his readers of why organized labor was so determined to establish the school. "The Massachusetts Labor Council, AFL-CIO, and for once all its affiliates," he continued, "made it their business, because...there is an acute shortage of [doctors] ... Secondly, the cost of a Medical education in the established schools is beyond the reach of the son or daughter of the average working man...and the public, the needy, and sick were denied utilization of great talent. Organized Labor is rightfully proud of its part in bringing about enactment of this legislation."[53]

In fact the Governor proposed his budget amendments just over a

week after the lawsuit, requesting $1.75 million bond issue for planning and authorization for the transfer of land from Worcester State Hospital to the University of Massachusetts. And the legislature came to the rescue. On December 10, the Senate, with strong urging from Vite Pigaga and John Conte of Worcester and likely behind-the-scenes support from Maurice Donahue, passed an amendment to the pending state budget bill that added two words, "*in Worcester*," to the budget line of $100,000 for employment of a dean, other personnel, and some supplies. As reported all over the state, such wording appeared to "guarantee" that the school would be built in Worcester, regardless of the outcome of the Taxpayers' Committee case. Finally, in January 1966, Governor Volpe signed into law two more bills to allow the start of tangible work on the school. One approved the $1.75 million bond issue to pay for site studies and architectural planning on the Worcester State Hospital lands; the second authorized transfer to the University of 133 acres of state-owned land

Governor Volpe signs legislation for Worcester location, 1965 *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

at Worcester State Hospital, lands overlooking Lake Quinsigimond that for more than a century had been used as agricultural lands for WSH. The bills were passed on the very last day of the 1965 legislative session, only hours before the

entire battle would have been forfeited for another year. Even then, legislators from western Massachusetts tried to filibuster, but the vote in the House exceeded - just barely - the two-thirds majority needed for a bond issue. The process of winning financial approval from the legislature now seemed to have passed a crucial hurdle. As we shall see, Soutter immediately presented the Board with concrete plans for construction and hiring. Once more, unpleasant surprises awaited him on Beacon Hill.[54]

University of Massachusetts President John Lederle and Dr. Lamar Soutter *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

NOTES

CHAPTER THREE

1 "Achieving a Dream, A Commemorative," University of Massachusetts Medical Center, Worcester, 1982, pamphlet, n.p., Office of Public Affairs Collection, University of Massachusetts Medical School Archives, Worcester, Massachusetts [hereafter, PA/UM/W].

2 These words are a direct quotation from Paul Loughlin, son of James P. (Jimmie) Loughlin, one of the state's powerful labor leaders and a big booster for Worcester. Personal communication with Mr. Paul Loughlin by Ellen More, March 4, 2010. For more on James Loughlin see below.

3 "I am speaking today in strong support of House Bill 1796 for the establishment of a two-year medical course at the University of Massachusetts at Amherst..." typescript fragment, n.d., Box 43, fol. 533, John W. Lederle Papers, Archives and Special Collections, UMass Amherst, Amherst, Massachusetts [hereafter, Lederle, UM/A]; "University of Massachusetts Medical School [Boston] Report, July/1964," n.p., pamphlet, Box "Other Campuses, Medical School, Worcester, 1962-, R-Si," fol. "Report, UMass Medical School, 1964," RG 55-2, "Other Campuses - Medical School, Worcester, 1962 - ," UM/A [hereafter, Other Campuses, UM/A].

4 Looking back many years later, Sen. Maurice Donahue thought they were also worried about the availability of cadavers. Lamar Soutter, too, mentioned the need for cadavers during his interview (see n. 35, Chapter 2 above). On Donahue's recollections, I have relied on handwritten notes taken by retired state senator Ed Burke during a lecture given by Donahue on Feb. 18, 1988 in Burke's health policy class at Regis College. My deep appreciation to Sen.. Burke for making them available. The Boston medical schools' need for more hospital beds also was a problem. At the time of the vote on a location for UMass Medical School an article appeared in the *Boston Globe* in which their deans actually denied that they were engaged in a "power grab" for control over Boston City Hospital to assure that it was not deeded over to the state's new medical school. "Denial by School Heads Seen on City Hospital 'Power Grab,'" *Boston Globe*, May 25, 1965; John Langone and Loretta McLaughlin, "UMass Medical School Expected to be in Amherst," [Boston] *Traveler*, June 10, 1965, n.p., both in Box "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol. "Medical School - Newsclippings, 1965 (1 of 5)," Other Campuses, UM/A.

5 Francis D. Moore to Calvin Plimpton, March 29, 1963, Box 46, fol. 569; Mary A. Maher et al., "Medical Schools and Medical Education: A Survey of Facts and Opinions Relative to Factors Involved in the Establishment of a New Medical School, A Staff Study Prepared at the Request of the Provost of the University of Massachusetts," July 22, 1960, quotation, pp. ii-iii, Box 46, fol. 571, both in Lederle, UM/A.

6 "[Handwritten, unofficial] Minutes of Special Meeting of Board of Trustees," Aug. 4, 1965, p. 5, Box "Minutes of Meetings of Full Board and Committee, 1965 (Jan.-Sept.)," fol. "Trustees,
Minutes, Agenda, etc. (Full board), 1965 (Aug.)," RG 2-1, UMass Board of Trustees Papers, UM/A [hereafter, Trustees, UM/A].

7 "Application for Joint Construction Grant, 7/24/1967," quotation, p. 28, Box "Other Campuses, Medical School, Worcester, 1962- A-D," fol. "Application for Joint Construction Grant, 1967, and Site Visits," Other Campuses, UM/A.

8 "The Medical School Issue," *The Evening Gazette*, March 7, 1961, p. 6, PA, UM/W; "Chamber of Commerce Makes its Bid for Worcester: 'Facilities for a Medical School Here are Best Available,'" *The Evening Gazette*, Dec. 9, 1961, p. 9, Box 1, fol. 1, Vite Pigaga Collection, UM/W [hereafter, Pigaga, UM/W].

9 Norman L. Sharfman, "Statement," Worcester Area Chamber of Commerce, Medical School Committee [Lewis Wald, Chairman], "Medical School Report," April 1964, Box "Other Campuses, Medical School, Worcester, 1962-, R-Si," fol., "Report, Medical School--Worcester Area Chamber of Commerce, Medical School Committee," Other Campuses, UM/A.

10 Billings B. Kingsbury, "Forces Behind Med School Victory Hailed at C.-Sponsored Congratulatory Dinner," *Worcester Daily Telegram*, June 23, 1965, n.p., Box 1, fol. 1, Pigaga, UM/W; Also see, Edward McHugh, "Chamber Head Sees City as 1 of 2 Top Contenders for Medical School," *Worcester Daily Telegram*, Jan. 18, 1965, n.p.; "City Urged as Site for Medical School," *The Evening Gazette*, Sept. 3, 1963, n.p.; "University of Massachusetts Medical Center Annual Report," 1986, pp. 4-5, all in PA, UM/W.

11 "Med School Site Choice May be Made Tomorrow," *Worcester Telegram*, June 11, 1965, Box, "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol. "Medical School Newsclippings, 1965 (1 of 5)," Other Campuses, UM/A. On the General's war service, according to D. M. Giangreco, in "Casualty

Projections for the U.S. Invasions of Japan, 1945-1946: Planning and Policy Implications," *Journal of Military History*, 1997, 61 (July), pp. 521-82, n. 56, Maginnis "headed the first Allied Military Government detachment in Normandy after the invasion of France, was chief of military government operations in the Berlin districts of Schoneberg and Friedenau, and Chief of Staff, Berlin District Headquarters, representing U.S. interests in the Four-Power Kommandantura governing occupied Berlin." Accessed online at https://web.archive.org/web/20150810193456/http://www.endusmilitarism.org/casualty_projections_Giangreco.html

12 Personal communication with the late John Spillane, Esq., Worcester, Massachusetts, April 13, 2007. My great appreciation to Kelsa Zereski, formerly of the UMass Memorial Foundation, for facilitating my interview with Mr. Spillane. In 1965 Spillane was corporate counsel for Paul Revere Insurance, and knew Harrington well. He also had personal and political ties to Maurice Donahue cemented by their shared ties to the College of the Holy Cross, the Knights of Columbus, and other common interests. Spillane told me that he stood next to Harrington while the latter phoned Maginnis and invited him to lunch at the Worcester Club for a talk. Two years after the vote for Worcester, Harrington wrote a note to President Lederle in which he went out of his way to mention how supportive everyone in Worcester is of the coming medical school. He couldn't resist flaunting the power of local ties in politics, adding that, "our Company enjoys its association with General Maginnis, who serves as a member of the Board of Managers of the Accumulation Fund of our new Paul Revere Variable Annuity Insurance Company," Frank L. Harrington, Jr. to J.W. Lederle, Oct. 3, 1967, Box 43, fol. 537, Lederle, UM/A. Former State Sen. Vite Pigaga, who represented Worcester during the medical school location battles, also considered Maginnis's vote to be one of the two crucial swing votes. Oral History interview with Vite Pigaga by Ellen More, Aug. 12, 2008, Worcester, Massachusetts, Oral History Collection, UM/W.

13 "How Worcester Won the Medical School," UMass Medical Center, *Annual Report*, 1986, pp. 2-3, in PA, UM/W.

14 Quotations taken from Conte and Lederle interviews videotaped by Peter Castaldi. See Peter Castaldi, raw footage of videotaped interview of John J. Conte and John W. Lederle, in Peter Castaldi Collection, UM/W.

15 "[Unofficial, handwritten] Minutes, Special Meeting of Board of Trustees," Aug. 4, 1965, pp. 5-7, fol. "Trustees, Minutes, Agenda, etc. (Full Board), 1965

(Aug.);" "[Unofficial, handwritten] Minutes, Special Meeting of Board of Trustees," March 31, 1965, fol."Trustees, Minutes, Agenda, etc. (1965, Jan.-March)," p. 18, both in Box "Minutes of Meetings of Full Board and Committee, 1965 (Jan.-Sept.)," Trustees, UM/A. At this meeting Hugh Thompson described his long history of involvement in bringing a state medical school to Massachusetts, dating back to his membership on the New England Board of Higher Education in the 1950s. For Thompson's earlier labor organizing, see "Invitation, Testimonial Dinner in Honor of the retirement of Hugh Thompson," 1967, Loughlin Family Papers, UM/W [hereafter, Loughlin, UM/W].

16 Oral history interviews by Ellen More with Ms. Patricia Grignard (Feb. 23, 2010), Ms. Gail Hines (March 1, 2010), and Mr. Paul Loughlin (March 4, 2010), children of the late James P. Loughlin, as well as his granddaughter, Ms. Annette Grignard (Feb. 9, 2010). I am immensely grateful to the generosity of the Loughlin family and their willingness to be interviewed. I am also very grateful to Robert Phillips, M.D., Ph.D., Professor of Medicine, UMass Medical School and Senior Vice President and Director, Heart and Vascular Center of Excellence, UMass Memorial Healthcare, for generously contacting the Loughlin family on my behalf. And - he took us all to lunch. For Hugh Thompson's acknowledgment of Loughlin's role behind the scenes, see Howard F. Angione, "Trustees Defend Stand on Medical School Site," *Worcester Telegram*, Aug. 28, 1965. Thompson was addressing a lunch meeting of the Worcester Labor Council.

17 Maurice A. Donahue to Robert Z. Nemeth, Editorial Page Editor, *Worcester Sunday Telegram*, March 1, 1996, Box 1, Pigaga, UM/W.

18 Oral History of Vite Pigaga, Aug. 12, 2008 (n. 12 above); "Thomas Phillip, Jr. (Tip) O'Neill (1912-1994)," in *Biographical Dictionary of the United States Congress*, accessed online at https://web.archive.org/web/20150804194151/http://bioguide.congress.gov/scripts/biodisplay.pl?index=o000098 on Nov. 17, 2010. O'Neill, a Democrat, was first elected to the Massachusetts House in 1936, becoming Majority Leader in 1949. In 1952 he was elected to Congress, serving from 1953 to 1986. On Rep. Harold Donahue, see Ellen More, "Notes on telephone interview with Mrs. Patricia Grignard, daughter of James P. Loughlin," Feb. 23, 2010. Pat Grignard emphasized that her father was born in the same house on Worcester's South Side as Harold Donahue.

19 Oral history interview with former Sen. and retired Worcester County District Attorney John J. Conte, by Ellen More, Oct.. 25, 2010, Worcester, Massachusetts. Quinsigamond Community College in Worcester, for example, was founded in

1963.

20 "Biographical Note," Finding Aid to Maurice A. Donahue Papers, Special Collections and University Archives, UM/A, accessed online at https://web.archive.org/web/20150804194749/ http://asteria.fivecolleges.edu/findaids/umass/mums311.html on Nov. 17, 2010.

21 [J. W. Lederle], "Comments on House No. 3333," Oct. 4, 1960, Box 43, fol. 533; "Abstract of Testimony at hearing on S 627 to Establish a Medical School as part of the University of Massachusetts, Wed., March 14, 1962," Box 43, fol. 535; "I am speaking today in strong support of House Bill 1796," Box 43, fol. 533, Lederle, UM/A; Oral history interview with John Conte; Lamar Soutter, "A Modern Medical School," n.d. but cf. Trustees "Minutes," Dec. 21, 1964 where Soutter mentions having presented it to them in July, 1964. Typescript, Box 43, fol. 533, "Medical School, 1960," Lederle, UM/A.

22 "Iron Duke" Thompson featured prominently in a *Time Magazine* article from 1964 titled "Massachusetts: Corruption is Commonplace," that reported his indictment for bribery and conspiracy along with 25 others - including the recently suspended state police chief. *Time Magazine*, May 15, 1964, accessed online at https://web.archive.org/web/20150810201330/http://content.time.com/time/magazine/article/0,9171,871019,00.html on Aug. 1, 2011. Thanks to Kristine Reinhard for locating this reference.

23 "Abstract of Testimony at hearing on S 627"; "School Plan Launched Over 20 Years Ago," [n.d., c. Feb. 1969], Box 43, fol. 539, both in Lederle, UM/A. Robert Baram, "Your Statehouse," [*Boston Globe?*], Aug. 26, 1965, Box, "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol. "Medical School - Newsclippings, 1965 (4 of 5)," Other Campuses, UM/A.

24 Robert Baram, "Your Statehouse;" Representatives Thomas F. Farrell, Vite J. Pigaga, Joseph D. Early, Anthony J. Burke, Albert A. [G---?], Jr., Leo J. Reynolds, Robert J. Bohigian, Charles J. Buffone, Representative-elect Andrew Collara and Senators William D. Fleming and John J. Conte to Joseph P. Healey, Ad Hoc Committee Chair, Nov. 2, 1964 [signed by hand]; Representative Thomas Farrell, to President John Lederle, Nov. 9, 1964, both Box 46, fol. 562, "Medical School Location, Oct.-Dec., 1964," Lederle, UM/W. By saying they'd rather "fight than switch," the letter refers to a popular advertisement for Tareyton cigarettes, showing a man with a black eye after he's been challenged to change his brand: "Us Tareyton smokers would rather fight than switch!"

25 John Conte introduced a bill in April, 1965 to force the decision, which at the least, startled the Board. See Conte Oral History interview; John Lederle to Sen. James F. Burke, Chairman, Senate Ways and Means Committee, April 16,1965, Box 43, fol. 537, Lederle, UM/W; [Robert J. McCartney], Oral History Interview with Leo Redfern, 1970 quotation, p. 10, in Oral History Series II, Box 3, fol. "Leo Redfern," UM/A.

26 "UMass Trustees Are Glad Issue Finally Resolved," [June 12, 1965], undated newsclipping in John Conte Collection, Box 1, fol. 14, unprocessed, Conte, UM/W.

27 "[Unofficial, handwritten] Minutes, Board of Trustees [Dec. 29, 1964]," p. 5, misfiled in Box "Board of Trustees, Minutes of Full Board and Committee, 1965 (Jan.-Sept.)," fol., "Trustees, Minutes, Agenda, etc. (Committees) (Sept.) 1965," Trustees, UM/A.

28 Emphasis in original. "Minutes, Board of Trustees Meeting, May 22, 1964," Box "Minutes of Full Board and Committee, 1962-1964," fol. "Trustees Minutes, Agenda, 1964 (Jan.-June);" "[Unofficial, handwritten] Minutes, Board of Trustees [Dec. 29, 1964]," misfiled in Box "Board of Trustees, Minutes of Full Board and Committees, 1965 (Jan.-Sept.)," fol. "Trustees, Minutes, Agenda, etc. (Committees) (Sept.) 1965," all in Trustees, UM/A. Also see, Donahue to Nemeth, March 1, 1996 (n. 17 above); [Robert J. McCartney], "Oral History Interview with John W. Lederle, 1975," typescript, in Box 1 fol. 14, Oral History Program Interview Transcripts, UM/A.

29 Lamar Soutter ("Bimi") to John Lederle, July 20, 1964, Cover letter plus "Accreditation and Site," typescript, Box 46, fol. 561, "Medical School Location, Jan.-Sep., 1964"; Lamar Soutter, "A Recommendation to the Trustees of the University of Massachusetts as to the Location of the Medical School," typescript, esp. pp. 1-3, 5, Box 46, fol. 562, both in Lederle, UM/A; "[Unofficial, handwritten] Minutes of Meeting of Board of Trustees," April 26, 1965, Box "Minutes of Meetings of Full Board and Committee, 1965 (Jan.-Sept)," fol. "Trustees, Minutes, Agenda, etc. (1965, April-May)," Trustees, UM/A.

30 "[Unofficial, handwritten] Minutes, Board of Trustees [Dec. 29, 1964]," pp. 4-5 (see n. 27).

31 "[Unofficial, handwritten] Minutes, Board of Trustees [Dec. 29, 1964]," p. 7,

ibid.

32 The Worcester State Hospital option became Soutter's first choice after the Trustees decided on Worcester in 1965. See below. Cf. "[Unofficial, handwritten] Minutes, Board of Trustees [Dec. 29, 1964]," p. 6; "[Unofficial, handwritten] Minutes of Meeting of Board of Trustees," April 26, 1965, p. 15, Box "Minutes of Meetings of Full Board and Committee, 1965 (Jan.-Sept.)," fol. "Trustees, Minutes, Agenda, etc. (1965, April-May)," both in Trustees, UM/A.

33 "Minutes, Board of Trustees, Dec. 16 1964," Box "Minutes of Meetings of Full Board and Committee, 1962-1964," fol. "Trustees, Minutes, Agenda, 1964 (July-Dec.);" "[Unofficial, handwritten] Minutes, Board of Trustees [Dec. 29, 1964]," p. 9, both in Trustees, UM/A.

34 Herbert Black, "Harvard Backs Amherst for Med School," *Boston Globe*, Nov. 1, 1964, Box 46, fol. 562, "Medical School Location, Oct.-Dec., 1964," Lederle, UM/A; "Minutes, Board of Trustees, Dec. 16 1964," Box "Minutes of Meetings of Full Board and Committee, 1962-1964, fol. "Trustees, Minutes, Agenda, 1964 (July-Dec.), Trustees, UM/A;" Lederle, Oral History Interview, p, 64 (see n. 28 above). Also see Frank L. Harrington, Jr. to J.W. Lederle, Oct. 3, 1967 (see n. 12 above); "Med School Site Choice May be Made Tomorrow," *Worcester Telegram*, June 11, 1965, Box, "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol. Medical School Newsclippings, 1965 (1 of 5), Other Campuses, all at UM/A.

35 "Minutes, Board of Trustees Meeting, Jan. 20, 1965," Box "Minutes of Meetings of Full Board and Committee, 1965 (Jan.-Sept.)," fol. "Trustees, Minutes, Agenda, etc. (1965, Jan.-March)," Trustees, UM/A.

36 Booz, Allen, and Hamilton, Inc., "Objectives and Criteria for Location for the Medical School, University of Massachusetts," March 23, 1965, pp. 40-57, Lamar Soutter Collection, UM/W. Cf. "A Chronicle of Events Relating to the Selection of a Site for the University of Massachusetts Medical School, July 27, 1962-Nov. 9, 1965," pp. 4-5, Box "Other Campuses, Medical School, Worcester, 1962- A-D," fol. "Background Info - 'A Chronicle of Events, 7/27/1962-11/9/1965'," Other Campuses, UM/A.

37 Booz, Allen, and Hamilton, "Report, Summary of the Evaluations of Possible Locations for the Medical School, Exhibit XXVI," Box "Other Campuses, Medical School, Worcester, 1962--, O-P," fol. "Proposed Location - Booz, Allen, Hamilton

Report [1965]," Other Campuses, UM/A.

38 Although he wasn't quoted in the official Trustees' Minutes, Bishop Weldon was quoted by Trustee Robert Gordon in one of the official records. See "Appendix V, Final Report: Justifications of Worcester as the Site of the University of Massachusetts Medical School, presented by Trustees Hugh Thompson and Robert Gordon at a meeting of the Board of Trustees held on 4 Aug., 1965, and Recorded with the Minutes of that Meeting," p. 3, Box "Other Campuses: Medical School, Worcester, 1962-; O-P", fol. "Proposed Location - Ad Hoc Committee, 1965," Other Campuses, UM/A. President Lederle also remembered Weldon's comment and quoted it with a slight variation in wording in his 1975 Oral History, p. 59 (see n. 28 above).

39 "[Unofficial, handwritten] Minutes of Special Board Meeting," March 31, 1965, p. 27, Box "Minutes of Meetings of Full Board and Committee, 1965 (Jan.-Sept.)," fol. "Trustees, Minutes, Agenda, etc. (1965, Jan.-March)," Trustees, UM/A.

40 Conte Oral History; "Conte Wants Site Set by April 15," *Worcester Gazette*, March 12, 1965, Box 1, fol. 10, Conte, UM/W; "[Unofficial, handwritten] Minutes of Meeting of Board of Trustees," April 26, 1965, Box "Minutes of Meetings of Full Board and Committee, 1965 (Jan.-Sept.)," fol. "Trustees, Minutes, Agenda, etc. (1965, April-May)," Trustees, UM/A.

41 "Minutes, Special Meeting of the Board of Trustees," March 5, 1965; "[Unofficial, handwritten] Minutes, Special Board Meeting," March 31, 1965, both in Box "Minutes of Meetings of Full Board and Committee, 1965 (Jan.-Sept.)," fol. "Trustees, Minutes, Agenda, etc. (1965, Jan.-March)," Trustees, UM/A.

42 Worcester's ratings (in bold) were:

"Potential for meeting broad medical school objectives - **Well**

Capabilities for providing comprehensive instructional programs - **Well**

Feasibility of attracting and retaining faculty and employed staff - **Neither well nor poorly**

Capability of attracting the desired number of patients - **Extremely well**

Capability of attracting the desired variety of patients - **Extremely well**

Feasibility of providing required facilities - **Well**

Feasibility of obtaining ample land - **Neither Well nor Poorly**

Feasibility of constructing facilities of appropriate size, layout, design and

juxtaposition - **Well**."

Booz, Allen, and Hamilton, Report, Section VIII, "Summary of the Evaluations of Possible Locations of the Medical School," p. 2, emphasis in original, Box, "Other Campuses: Medical School, Worcester, 1962-; O-P," fol. "Proposed Location - Booz, Allen, Hamilton Report [1965]," Other Campuses, UM/A. John Langone and Loretta McLaughlin, "UMass Medical School Expected to be in Amherst," [*Boston Herald*], June 10, 1965, n.p., Box "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol. "Medical School Newsclippings, 1965 (1 of 5)," Other Campuses, UM/A.

43 "Davoren Says He'll Fight If UMass Gets Med School," *Worcester Daily Telegram*, June 11, 1965, Box 1, Pigaga, UM/W; "Med School Site Choice May be Made Tomorrow," *Worcester Telegram*, June 11, 1965; Langone and McLaughlin, "UMass Medical School Expected to be in Amherst," both in Box "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol. Medical School Newsclippings, 1965 (1 of 5), Other Campuses, UM/A. Also see Michael de Sherbinin, "Trustees Urged to Reconsider," *Amherst Record*, June 24, 1965, which reported accusations that, "threats by House Speaker Davoren that budgets would have a hard time in the Legislature if Amherst were picked, had influenced the Trustees." Both in Box "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol. "Medical School - Newsclippings, 1965 (1 of 5)," Other Campuses, UM/A. Booz, Allen, Hamilton, "Revised Objectives and Criteria for the Location of the Medical School, University of Massachusetts," typescript, May, 1965, Box "Other Campuses, Medical School, Worcester, 1962-, R-Si," fol. "Revised Objectives and Criteria for Location of the Medical School, 1965," in Other Campuses, UM/A. "[Unofficial, handwritten] Main Board Minutes, June 4, 1965," Box "Minutes of Meetings of Full Board and Committee, 1965 (Jan.-Sept.)," fol. "Trustees, Minutes, Agenda, etc., 1965 (June)," Trustees, UM/A.

44 "Showdown Battle being Prepared on Medical Site," *Springfield Union*, July 13, 1965, Box "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol. "Medical School - Newsclippings, 1965 (3 of 5)," Other Campuses, UM/A.

45 "[Unofficial, handwritten] Special Meeting of Board of Trustees, June 11, 1965," Box "Minutes of Meetings of Full Board and Committee, 1965 (Jan.-Sept.);" [Lamar Soutter], "Prospective Sites in Worcester," June 18, 1965; "[Unofficial, handwritten] Minutes," June 18, 1965, both in Box "Minutes

of Meetings of Full Board and Committee, 1965 (Jan.-Sept.)," fol. "Trustees, Minutes, Agenda, etc., 1965 (June)," Trustees, UM/A; Lederle Oral History, transcript, pp. 58, 61, 64, all at UM/A. Nicholas Soutter, Esq., Oral History telephone interview with Ellen More, July 3, 2008. Edmund Croce was quoted in Howard F. Angione, "Trustees Defend Stand on Medical School Site," *Worcester Telegram*, Aug. 28, 1965, Box 1, fol. 4, Loughlin, UM/W.

46 "Medical School Goes to Worcester, 12-10," *Springfield Union*, June 12, 1965; "Worcester Chosen Site of State Medical School in Surprise Board Vote," *Amherst Daily News*, June 11, 1965, pp. 1, 9; Herbert Black, "Worcester Gets Medical School," *Boston Globe*, June 12, 1965, pp. 1, 2, fol. "Medical School -- Newsclippings, 1965 (2 of 5);" "Medical School Fiasco," *Boston Herald*, June 14, 1965, fol. "Medical School-- Newsclippings, 1965 (3 of 5);" all in Box, "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965, Other Campuses; William "Bill" R. Wagenknecht to Frank L. Boyden, July 29, 1965, Box 46, fol. 564, Lederle; Winthrop S. Dakin, "Pill Pedlar's [sic] Plight," *Massachusetts Collegian*, June, 1965, Box, "Other Campuses: Medical School, Worcester, Newsclippings, 1966, fol. "Medical School - Newsclippings" [5 of 5]," Other Campuses, all at UM/A.

47 The text of Boyden's postcard read: "Recently, many personal as well as organizational letters have been received in connection with the future location of the State Medical College. I assure you this widespread interest in the work of the University is greatly appreciated...I wish I could reply to you directly, but the number of letters involved makes this impossible. I hope that you will receive this announcement as a personal acceptance of your letter;" William H. Burkhardt, Jr., Asst. Dean of Men, to Board of Trustees, July 1, 1965; "Abbreviated Minutes of the Special [UMass Faculty] Senate Meeting of June 25, 1965," all Box 46, fol. 564, Lederle, UM/A. Also see "A Chronicle of Events Relating to the Selection of a Site for the University of Massachusetts Medical School, July 27, 1962-Nov. 9, 1965," Box "Other Campuses, Medical School, Worcester, 1962-, A-D," fol. "Background Info - 'A Chronicle of Events, 7/27/1962-11/9/1965';" untitled cartoon, n.d., Box, "Other Campuses: Medical School, Worcester, 1962-, O-P," fol. "Proposed Location - Miscellaneous," both in Other Campuses, UM/A.

48 Among those in the delegation for Worcester were Mr. H. Ladd Plumley, President and Chairman of the Board of State Mutual Life Insurance Company and recent past president of the U.S. Chamber of Commerce, Dr. Hudson Hoagland, principal founder of the Worcester Foundation for Experimental Biology, Dr. Hiram Heller, president of the Worcester District Medical Society,

and John Adam, Jr., President of the Mutual Fire Insurance Co. and current president of the Worcester Chamber of Commerce. See "A Chronicle of Events," and "Extracts from Petition of Council of Academic Deans to Board of Trustees for Reconsideration of the Site of the University Medical School," n.d., both Box "Other Campuses, Medical School, Worcester, 1962-, A-D," fol. "Background Info - 'A Chronicle of Events, 7/27/1962-11/9/1965';" Dorothy Burke, "Sound Reasons Only Basis for Reconsideration, Say Trustees," *Amherst Record*, July 15, 1965, Box, "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol. "Medical School – Newsclipping, 1965 (1 of 5);" "Appendix V of Final Report: Justifications of Worcester as the Site of the University of Massachusetts Medical School, presented by Trustees Hugh Thompson and Robert Gordon at a meeting of the Board of Trustees held on 4 Aug., 1965, and Recorded with the Minutes of that Meeting," Box, "Other Campuses: Medical School, Worcester, 1962-, O-P," fol. "Proposed Location - Ad Hoc Committee, 1965," all in Other Campuses; David Gitelson, "Med Site Reconsideration: Next Week?" *The Massachusetts Summer Collegian*, *1*:12 (July 29, 1965), Box 46, fol. 564, Lederle; "Minutes of Meeting of Board of Trustees," July 7, 1965; "[Unofficial, handwritten notes] Special Meeting, Board of Trustees," July 28, 1965, both in Box "Minutes of Meetings of Full Board and Committee, 1965 (Jan.-Sept.)," fol. "Trustees (Full Board), Minutes, Agenda, etc., 1965 (July)," Trustees; all at UM/A. For Hudson Hoagland comments, see Angione, "Trustees Defend Stand on Medical School Site," see n. 45 above.

49 "[Unofficial, handwritten notes] Special Meeting, Board of Trustees," July 28, 1965, Box "Minutes of Meetings of Full Board and Committee, 1965 (Jan.-Sept.)," fol. "Trustees (Full Board), Minutes, Agenda, etc., 1965 (July);" "Minutes of Special Meeting of Board of Trustees, Aug. 4, 1965," Box "Minutes of Meetings of Full Board and Committee, 1965 (Jan.-Sept.)," fol. "Trustees, Minutes, Agenda, etc. (Full Board), 1965 (Aug.)," all in Trustees, UM/A.

50 The Editor appended a reply reading, "Certainly Worcester has its attractions and advantages. However, experts on medical education regarded it as fourth-ranking of the sites considered." In "Come on Over to Worcester! Letter to the Editor from Martha Allis Cowan, 48 Berwick Street, Worcester," *Amherst Record*, [1965, n.p.]. A cartoon in the *Massachusetts Collegian*, Oct. 4, 1965, showed a "Political Plum tree" from which a cigar-chomping Worcester politician is picking a plump piece of fruit labeled "Mass. Med. School." Both in Box "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol. "Medical School --Newsclippings (5 of 5)," Other Campuses, UM/A.

51 "Dr. White Aids Fight for School Site Shift," *Boston Herald*, July 6, 1965, Box, "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol. "Medical School--Newsclippings, 1965 (1 of 5);" "Information Bulletin #10," n.d.; "Information Bulletin #11," Nov. 19, 1965, Box "Other Campuses, Medical School, Worcester, 1962-, A-D," fol. "Citizens' Committee on the Medical School Site in Amherst," Other Campuses, UM/A.

52 Howard S. Knowles, "Suit May Alter Plans for Medical School Start," *Worcester Gazette*, Nov. 17, 1965, Box 1, fol. 32, Conte, UM/W. "[Unofficial, handwritten] Minutes of Board of Trustees," Sept. 10, 1965, Box "Minutes of Meetings of Full Board and Committee, 1965 (Jan.-Sept.)," fol. "Trustees, Minutes, Agenda, etc. (Full Board), 1965 (Sept.)," Trustees, UM/A.

53 "Med School Fight Said Not Ended," [?] *Daily News*, Nov. 18, 1965, Box, "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol. "Medical School-- Newsclippings, 1965 (2 of 5)," Other Campuses, UM/A; "Paul Dudley White, M.D. et al., Petitioners v. Trustees of the University of Massachusetts" [Petition to the Supreme Judicial Court for Injunction Against Worcester Location], Nov. 9, 1965, Box 46, fol. 565, Lederle, UM/A. All trustees were named in the suit which charged them with abrogating their responsibilities to make the main campus "the chief site of scholarship and higher education in the state..." Cf. "Med School Funds Delay Seen," *Worcester Telegram*, Nov. 24, 1965; "Hearing set on medical school site," *Christian Science Monitor*, Nov. 13, 1965; Dan Murray, "Desperate Effort to Stop Medical School," *Labor News (Worcester)*, Nov. 19, 1965; all in Box "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol. "Medical School-- Newsclippings, 1965 (2 of 5)," Other Campuses, UM/A. "Bay State News Briefs, *Providence Journal*, Nov. 19, 1965; Paul D. White to Sen. John Conte, Dec. 21, 1965; Box 1, fol. 33, 37 respectively, Conte, UM/W.

54 *Massachusetts Acts and Resolves, 1966*, Chapter 281, Section 9, p. 215. The 1966 tally for the bond issue was 161-53. "Senate OKs Budget Clause Specifying City as Med Site," *Worcester Telegram*, Dec. 11, 1965; "Medical School Bill is Amended: City Specified," *Worcester Gazette*, Dec..11, 1965; "Senate Adds Key Words to Medical School Bill," *Springfield Union*, Dec..11, 1965; Paul D. White to Sen. John Conte, Dec. 21, 1965; all Box 1, fol. 34-37, Conte, UM/W. John Conte interview transcript, see n. 19; "Gov. Volpe Clears Way For Med School Start," *Worcester Telegram and Gazette*, Jan. 5, 1966, in Pigaga; "House Passes Bills to Start Med School," *Worcester Telegram and Gazette*, Jan. 4, 1966, PA, UM/W.

Chapter 4

A "Sort of Schizophrenia": What Makes a Medical School "First-Class?"

ONCE the medical school site was chosen, it didn't take long for Dean Soutter to bring his vision for the school straight to the public.[1] Eventually, he learned to communicate directly with Beacon Hill and Washington. The dean was determined that the legislature feel the pressure of public expectations. But he was not prepared for legislative second-guessing. The public supported the creation of additional opportunities for young people in Massachusetts to become physicians and it surely supported their staying in state after they began to practice. But, it took Soutter months to realize, few of his fellow citizens - and certainly few Massachusetts politicians - supported paying for young doctors to become academic researchers or specialists. Academic physicians like Lamar Soutter and early recruits to the faculty such as surgeon H. Brownell ("Brownie") Wheeler, considered designing a medical school to produce nothing but primary care doctors as tantamount to declaring one's school second-rate from the outset. Even as Soutter proudly and without disingenuousness insisted that medical education at UMass would teach students to understand the needs of their communities, he refused to create a so-called "community" medical school that did not offer the full spectrum of medical training. The dean didn't mince words about it either. As Dr. Wheeler, his principal confidant among his colleagues, put it, "Dr. Soutter kept saying that if you did things in a second-class way, within - to use an inelegant expression - spitting distance of Boston, that it would be

an embarrassment and a failure, that the only way an academic health center in Worcester could succeed in competition with Boston was to be as good as Boston."[2]

A long interview with a reporter for the Worcester *Sunday Telegram* gave Dr. Soutter the chance to start a dialogue with the public. He described at great length his background in Massachusetts, his war experiences, and his philosophy of medical education. Soutter described himself as a reluctant medical student until his first contact with patients during his third year at Harvard Medical School. "'Most of the science courses in the first two years I didn't like at all. I didn't find them interesting or even terribly relevant,'" he told the reporter. As a result, the goals of the school represented much more than abstract ideals for Soutter. He held very definite ideas about medical education. It must, "'train very good practitioners. I think that if you're starting [a medical school] from scratch you can say alright, let's get this science of medicine very firmly rooted in the students' minds - but then let's take them back to the bedside and make them much better practitioners and much more interested in taking care of human beings even though they are making full use of laboratory procedures and scientific advances.'" He carefully articulated the social obligations of the physician as a core element in the new curriculum. In words that echo emerging trends in medical education nationwide and pioneered to some extent at (Case) Western Reserve Medical School, Soutter insisted that, "'The doctor we train must also see himself in relationship to the rest of society - to other agencies for health and welfare - and fulfill his obligations to society on a very broad basis.'" In other interviews from the same period Soutter also emphasized the study of community medicine to educate medical students about the health needs of vulnerable populations and communities, problems of "environmental health and the relation of non-medical problems to sickness."[3]

Soutter was sincere in these hopes, but they tell only part of the story, a part designed to reassure legislators at a time when funding for the new school still was not firmly committed. All the major decisions about land acquisition in Worcester, campus design, and personnel hinged on the type of school UMass

Med would be. A so-called "community" medical school dedicated largely to turning out primary care doctors, as we have seen in Chapter 1, would not require its own teaching hospital. Nor would it demand major resources to incubate a serious, high-powered research enterprise at the level of an "academic" medical center. Rather, it would emphasize the production of practitioners, especially in primary care, and would utilize the better local hospitals and specialists for community-based clinical education. This vision, while compatible with the goals of the school's political and labor allies, was diametrically opposed to Lamar Soutter's intentions. True, a Worcester campus could not follow the model advocated by leading medical educators - given its geographic separation from the main campus, it could not become a closely integrated component of the university. Nevertheless, a "community" medical school stood for something less than first-rate in Soutter's mind, and he would have no part of it. As Nick Soutter vividly recalled, "If you wanted to get [my father's] hackles up, just suggest that this medical school was going to be anything less than the other major medical schools in the country." To get an idea of his intent, one need only read his description of the role of the University hospital: "The hospital needs to be connected to the medical science building so that patients are readily accessible to students and faculty...Administratively it is completely under the control of the university. The variety of patients within it depends on its location, ideally it should be sufficiently remote from other general hospitals not to compete with them, but instead acts as a referral center for the more difficult and complicated problems." This description from 1964, admittedly part of Soutter's campaign for an Amherst location, underscored the idea that UMass Medical School must have its own hospital, one built for the most advanced techniques and technologies available. For more routine work - Soutter used family medicine, obstetrics, and psychiatry as examples - medical students and patients could always go to the "good, small" or specialized hospitals in the community.[4]

Unfortunately, now that a new medical school had been approved by the state, the Legislature was faced with the need to pay for it. As they slowly realized the intended scope of plans, including a teaching hospital and extensive research

facilities, and the potential costs, they began to balk. The hurdles to winning legislative approval for the school and its location in Worcester were at least equaled in difficulty by the battle to win funding for its construction; opposition to building a teaching hospital almost scuttled the school itself. The very legislators, like Maurice Donahue, who ardently supported the school were also those most opposed to the imposition of, in their view, a regressive state sales tax to pay for it. It didn't help that the bills for many other "Great Society" initiatives, such as the expansion of community and state college systems, were coming due at the same time as medical school construction costs. But Soutter was not apt to back down; he told an interviewer, "'There seems to be a sort of schizophrenia here. Everybody demands that the medical school be the best, and then they refuse to give me the tools to make it the best possible. And this is where I get unreasonable!'"[5]

Soutter began preparing the Board for obstacles they would have to surmount months before Worcester was chosen as the site. The first involved winning preliminary accreditation. He explained, "Obtaining preliminary accreditation is one of the most serious problems we face" because it was a prerequisite for any application for federal construction matching funds under Public Law 88-129. Until the United States Commissioner of Education received notice from the Liaison Committee on Medical Education (the LCME comprised leaders from both the AMA and the AAMC) that they had awarded UMass Med such preliminary accreditation, no letter of "reasonable assurance" of accreditation would be granted. (The full accreditation would not occur until the first class graduated.) Winning such assurance would require a site visit from LCME representatives to determine whether the chosen site was appropriate, whether the surrounding community was supportive, and whether the overall educational plan, including faculty recruitment, was sound and likely to succeed. The LCME, especially, would need to be convinced that the state was sufficiently committed to the project to put up the necessary share of the costs.[6]

The LCME's expectations were no mystery. In 1961, the U.S. Public Health Service (PHS) published an influential medical school planning document,

"Medical School Facilities: Planning Considerations," which was written in collaboration with the of leaders of both the AMA and AAMC, several of whom were among those who conducted UMass Medical school's preliminary accreditation site visit in 1966. The report noted, among other essentials, that the optimal class size would be 100 students with a faculty-to-student ratio of 100:135. It also declared an adequate medical library to be "essential." In the near future, it predicted, the typical collection will contain 100,000 books and 1000 periodicals. The report also noted the direct correlation between the size of the medical library budget and a medical school's research budget, since researchers require more library resources, including staff. With regard to clinical education, it mentioned, approvingly, that some schools had begun to bring clinical teaching into the curriculum in the first two years. In addition, "The development of comprehensive care clinics for teaching of the clinical sciences reflects a growing concern with the problems of the patient as a person and as a family member, as distinct from the study of cases of a particular disease...In some schools, they are conducted in separate clinics especially equipped to provide family health services."[7]

Soutter was well versed in these standards, using federal requirements to win support during battles with the Legislature over funding and fiscal autonomy. Thus, three days before the Board of Trustees chose the Worcester State Hospital site, Soutter and Lederle orchestrated the presentation of a series of next steps in a planning memorandum to the Board's Buildings and Grounds committee. First on the list was the need to lift the salary ceiling for Massachusetts state employees in the case of medical school faculty and top administrators. As Soutter informed the committee, typical first-rate faculty and administrators, especially department chairs, earned between $25,000 and $35,000 per year, whereas the state salary ceiling topped out at $21,300. Lederle strongly agreed that they must try to work this request through the Legislature. Without even a building to show prospective faculty, how could they possibly draw in recruits with such sub-standard salaries? Soutter also requested hiring up to 16 "core" faculty and staff to aid with planning and recruitment. Third, they must quickly

hire architects with experience in designing medical schools and teaching hospitals. The full Board readily consented, but it took another year for the Legislature to agree.[8]

Soutter's list of personnel to be hired as soon as possible included a professional hospital director to start work immediately and be part of the planning team, and three clinical faculty to be hired part time as planning consultants until the buildings opened; they would then become professors and department chairs of Medicine, Surgery, and Pathology. Soutter also requested three full-time preclinical chairs to work at the University itself until the school facilities were ready. These would become heads of Anatomy, Physiology, and Biochemistry. The Library, too, was a centerpiece of his planning and a Medical Librarian was among those he hoped to recruit immediately. The USPHS planning guide for medical schools emphasized the recent growth of master's, doctoral and postdoctoral programs attached to medical schools in what were then called the "basic medical sciences" (between 1956 and 1960, 77 medical schools sponsored such programs and the number of students enrolled jumped by 50%). Soutter, however, did not integrate a graduate school into the plans for the medical school and hospital. It would come, but not for another decade. At this early stage, his ideas about doctoral research were governed by different assumptions. For one, he assumed that the School of Public Health at UMass Amherst would come under the Medical School's administrative control; second, that the biological science departments at the Amherst campus would also be closely involved in the programs of medical students who wanted to become researchers.[9]

Scandalous Designs

The biggest challenge faced by President Lederle and Dean Soutter proved to be designing, constructing, and - especially - paying for the buildings. Lamar Soutter's plans were nothing if not ambitious. They incorporated Lederle's informal promise that a university campus later would be built around the

medical school, a compensatory (if unrealistic) vision sure to raise Bimi's spirits. Soutter thus called for a three-stage process: "During the first we would construct the medical science building, the University teaching hospital, and housing. The second would be that in which such appendages as other schools in the health sciences, hospitals and clinics might be built, and the third, would be at some distant time in which a variety of other elements might be added to form a graduate and undergraduate educational center for medicine, biology, and related sciences." Besides envisioning Worcester as the site of a University health sciences campus, Soutter also gave consideration to the way that design of the medical school itself could enhance the education of students. He told a reporter that he would like, "the hospital and medical school to be part of one building with the library in the center so that the main focus of the institution is on learning.'" He admitted the idea, according to the reporter, was "new to this part of the country...By putting library, lecture halls, and auditoriums in the center, accessible to students, faculty, and the hospital, the student can be introduced at the very earliest stage to patients," Soutter believed. He hoped to build in a way that made future expansion cost effective and as minimally disruptive as possible. Thus, the university teaching hospital would be built for 440 beds but have the flexibility for expansion to a 1000-bed capacity. Ideally, too, a "motel-like facility" would be included for patients traveling long distances to the hospital for diagnostic testing. The medical school would be designed for an initial class size of 100, but with the capacity to expand to 150 students per class. The Dean also envisioned student housing as part of the first stage of construction, with dormitories to house 250 students of whom, "30 might be female." Finally, he hoped to see apartments for 300 married students, residents, and postdoctoral fellows. Unfortunately, by the time these plans were distilled into a grant application, ambition collided with a new federal budgetary landscape marred by war spending and rapid inflation.[10]

The initial planning moved deceptively fast. Dean Soutter had a list of preferred architects to show the Board within a week of the vote to choose the Worcester location, a list based on the advice of the Dean of Architecture at

MIT. Soon after the Worcester State Hospital site was identified, the Trustees agreed informally that the school be designed as an integrated campus complex of buildings including the 400-bed teaching hospital," despite knowing that the actual letter of the law empowered them to create only a "school." The Board also voted to choose Ellerbe Architects of St. Paul, Minnesota and their associates, Architects Collaborative of Cambridge, to design the structure. Since this was a state building project, the President's office communicated its decision to the Commissioner of Administration and Finance for appointment, along with a second choice, Campbell, Aldrich and Nulty of Boston. They all hoped the design phase could begin promptly, but these hopes soon were dashed in what became a serious scandal for the Volpe administration - the Governor, it was alleged, ignored the Board's choices in favor of a firm apparently willing to work with a local partner who, again allegedly, was favored because of his contributions to Governor Volpe's political campaigns.[11]

A letter from one of the trustees sums up the reaction of the Board, the President, and Dean Soutter: "As Chairman of the Buildings and Grounds Committee of the Board of Trustees of the University of Massachusetts, I am shocked to learn that another firm, not on the list submitted to you, is being considered for appointment as architect of the medical school without an agreed consultation with the Trustees."[12] In choosing their top two candidates for designing the school, Soutter and the Trustees had been advised by the Dean of the School of Architecture at MIT as well as faculty and deans of other medical schools. As Soutter told a special committee of the Legislature after the matter had become a serious problem for the Governor, they all advised him to choose a firm with experience building medical institutions but especially a firm that had successfully shepherded clients through the application process for federal matching funds. Second, they strongly advised choosing someone who was based nearby. These were the criteria used to choose the combination of Ellerbe, who had extensive experience, and Architects Collaborative, a local partner with experience working with Ellerbe. On October 13, 1965 President Lederle sent a letter to John J. McCarthy, state Commissioner of Administration and Finance,

listing the recommendations, their two alternate choices, and two other firms who were interviewed but not recommended. He also gave a detailed account of the criteria and how each firm ranked according to those criteria. Two weeks later, at a lunch with Lederle, the Governor, Commissioner McCarthy, his Deputy Commissioner Walter O'Connell, several Trustees, and the University Treasurer, Soutter discussed these choices and the criteria used in making them. The Governor then told McCarthy, "'Go ahead and appoint them.'" The appointments were never made. By the beginning of January 1966, Lederle and Soutter heard from Ellerbe that things had taken an unexpected turn. In a meeting with McCarthy and O'Connell, the Ellerbe architects were asked to replace Architects Collaborative of Cambridge with a Boston firm, Ritchie Associates, or, it was implied, they would lose the entire contract. When Ellerbe declined to do so, the Commissioner instead chose the Trustees' second choice, Campbell, Aldrich and Nulty (who had done work at UMass Amherst) to work with Ritchie Associates on the medical school design. Ritchie Associates alone was awarded the contract to design the hospital. Ellerbe was appointed merely as a "consultant," but was paid a suspiciously large sum of $500,000. Lederle and Soutter were furious, and word quickly spread.[13]

None of this sat well with the legislature, especially those members who had opposed the school in the first place. Unhappily for the Governor, an investigation turned up $1,500 in contributions by Donald Ritchie to Governor Volpe's 1962 and 1964 gubernatorial campaigns. Even worse, another state official, Horace Chase, Director of the Bureau of Building Construction (BBC), testified that the governor's brother, head of the family construction company, had been informally advising the governor on state construction appointments. Peter Volpe was highly enthusiastic about the Ritchie firm and said so - at a meeting with Commissioner McCarthy and Horace Chase. And so Dean Soutter found himself being grilled under oath by a special Senate committee to investigate the choice (and cost) of the architects. In his account of the lunch with Governor Volpe, the Dean did not pull any punches. Commissioner McCarthy had told the committee two weeks earlier - also under oath, "'At no time did the

governor indicate in any way during the lunch hour that he would tell me whom to select.'" Lamar Soutter's account clearly diverged from McCarthy's. When both UMass Treasurer Kenneth Johnson and President Lederle confirmed the dean's story, pressure began to build on Commissioner McCarthy and rumors began to circulate that he would soon resign.[14]

While such skirmishes surely helped Bimi Soutter in the eyes of the state's Democratic politicians - who never shirked their responsibility to discomfit a Republican administration, they did nothing to ease the trials of working with Horace Chase and the BBC. Soutter had hoped for fairly rapid progress in the construction of the campus once the legislature approved the site and agreed to preliminary financing. He even hoped to cut six months off the planning phase after consulting with the Ellerbe architects. He had told the Board in the fall of 1965 that if the architects were appointed and funds appropriated by December, the school and hospital could be completed by April 1970 and students admitted by the fall of that year. In January 1966, he still held out hope of making this goal, telling a reporter, "If we are to get the school fast and well, we need experience." But, interference in the choice of architects was only the first episode in a seemingly endless period of political meddling, whether by Republicans, Democrats, or a combination of both. Chase, whose office was uncomfortably interdependent with political appointees such as the Commissioner of Administration and Finance, was caught in the cross-fire and had no easy time of it either. Nor did he work comfortably with Dr. Soutter. The result was a seriously muddled planning process and significant delays in the start of construction. Ultimately, these delays and the dire effects of rapidly rising inflation took a toll. Two years lost in the choice of site and architects for the school cost the state dearly in escalating construction costs. It almost, as we will see, cost it the teaching hospital, so vital to the dean's hopes for academic excellence.[15]

"Progress and Problems"

The promised lifting of the state salary ceiling for senior medical school

faculty and administrators did not go smoothly. Soutter expected to begin faculty recruiting early in 1966, assuming that legislation exempting senior medical school personnel from the salary ceiling would be passed quickly. He needed a Medical Librarian to help organize purchases of books (he hoped to purchase around 40,000 volumes to start) and journals and - with some urgency - he needed an experienced hospital administrator to help plan the teaching hospital. However, Massachusetts House Bill H324, which would allow the University of Massachusetts to lift the salary ceiling for senior administrators and department chairs - the first step toward lifting the ceiling on all academic positions - languished in the House of Representatives for many months, impeding Soutter's recruitment efforts. Worse, it threatened the new school's ability to win preliminary accreditation. As President Lederle wrote to Speaker of the House, Rep. John Davoren, "the Accreditation Team made a big point of House 324. They pointed out how absurd it would be to think that we could build a good Medical School with a salary ceiling on the staff." He couldn't resist commenting that, "You can well imagine that the present controversy over the architects preceded by the controversy over the site for the Medical School has done nothing to promote the idea that Massachusetts is prepared to support a first-rate Medical School. Everything we do seems to become quickly involved with 'politics' and controversy." The bill was finally brought out of committee, passed by the House and Senate and signed into law in September 1966. In its final form the Trustees were empowered to designate the salary for senior administrators and department chairs at both the University and the medical school, but not exceeding one percent of the total faculty and administration of the institution. Not until 1968 was the ceiling lifted for all medical school faculty. In the meantime, while Lamar Soutter tried to recruit chairs for the new school, he found that "prospective heads of departments are hesitant about coming to us because they are fearful that they will be unable to obtain a good staff to work with them." Based on a 1966 survey of U. S. medical schools, he concluded that UMass Med would be unable to compete for high-quality faculty with 93 percent of the other schools, at least not on the basis of salary. He could understand a

prospective professor's reluctance: "Most prospective faculty members interpret a ceiling on salaries as a deliberate effort of the government to restrict and control their activities." This was not an unreasonable fear. The supplementary budget, passed during the same week as the salary ceiling bill, nearly left out an appropriation for hiring faculty because the House Ways and Means Chair, Anthony Scibelli, Democrat of Springfield, thought that without an actual building, medical school professors would just "'stand around doing nothing.'"[16]

Despite the Dean's misgivings, the Medical School, after a site visit in May, did receive its preliminary accreditation in the fall of 1966.[17] A month after the visit, the Dean submitted a report to the Board summing up where they stood. Part I was titled "Progress and Problems," and the latter far outweighed the former. For one, the school's budget was cut almost by two-thirds in fiscal year 1966, leaving just enough to hire a hospital director on a consulting basis, a plant engineer, and an administrative assistant to assist with planning.[18] Besides an urgent need for working capital from the state, Soutter was most concerned to complete the planning for the physical plant and submit a proposal for federal funding before November 1, 1966. For this, he needed the architects to supply "preliminary plans" to accompany the application. The application, he hoped, would be approved in March 1967, and without delays due to changes in congressional appropriations, they could begin construction in June, 1968. He still planned to open the school in the fall of 1970 in its new building.[19]

Although the Dean consistently mentioned the school's future need for expansion to include schools of dentistry and nursing, by 1966 he was realistic enough to agree that the school should be designed with no overt mention of the other schools; in fact, he now favored requesting funds from HEW for the school and library alone, submitting an application for the hospital only at the next round of funding. Ellerbe Architects, in their role as consultants, began work in April. By mid June they had already produced three separate "space programs," or a translation of the needs of the school into actual square feet of space [and] about 15 diagrams to show possible internal arrangements of the various parts of the buildings." Soutter transmitted the last of the space programs and the

diagrams to Campbell, Aldrich and Nulty, the firm overseeing the architectural work.[20]

At this point, however, nothing seemed to go right. It is unclear from existing records what or who was really to blame - the Dean's overly ambitious hopes for the new school; the Ellerbe Architects' unwise encouragement for a plan with spacious research quarters for faculty; the Board's acquiescence; or, simply the botched execution of the building plans by the state-appointed architects in concert with the state's Bureau of Building Construction. Soutter's overly optimistic space planning, encouraged by advice from Ellerbe, is suggested by an early discussion at a Board meeting in June 1966. Soutter wanted to get their go-ahead to expand the space allocations for faculty research using a "faculty-research space formula" suggested by Ellerbe of 720 square feet per faculty. Trustee Owen Kiernan, Commissioner of Education and a supporter of the Worcester site asked for an explanation of the figures. Soutter admitted that the "NIH Guide Book gives less space than we provided for; but the basic recommendation is increasing. Ellerbe came up with 720 [square feet] based on work they are doing in other schools. We have preliminary support [and] commitment from NIH people who will have to pass on approval for [Federal] fund support. But when we get going full blast we'll have to add to it."[21] Dr. Wheeler, soon to become founding Chair of Surgery, explained that the guidelines they worked with seemed quite inadequate to the goal of building a first-rate school. For example, Dr. Wheeler explained that the "total surgical faculty was not supposed to exceed 21 for a school of 100 students per class. And if you break that down into all the various [surgical] specialties, you end up with two of this or even one of that, and it becomes very difficult to provide coverage in [the case of] absence or illness..." Luckily, they "discovered that the government, in its infinite wisdom, had decided that ...every faculty member was allowed to have a lab." Naturally, he and Dr. Soutter decided they should designate a lab for all 21 surgical faculty members knowing that some of those would, in fact, be used as offices for additional surgeons.[22] Although the Board routinely questioned Dr. Soutter closely, they simply were in no position to challenge his technical

judgment. The Dean was building for the future. As John Stockwell, the Dean's choice to become hospital director, told the Board, the "criteria supplied to the architects included the necessity to provide for expansion and flexibility to adapt to the needs of the future." Unhappily, by this time, the federal government was unwilling to fund such ambitions, and from the start, reviewers for the proposal sent up numerous red flags.[23]

The legacy of troubles over the choice of architects also bequeathed months of poor communication, delays, and unhelpful working relationships among Soutter, the architects, and the Bureau of Building and Construction bureaucracy. For example, a letter from Dr. Soutter to Nelson Aldrich, lead architect on the medical school, library, and power plant, described a "dress rehearsal" presentation to HEW in Washington that was "far from satisfactory." They had already been informed that they must reduce the size and scope of their plans - and, in particular, reduce the size of the library from 50,000 to 35,000 square feet and from four floors to three - but the plan presented to Soutter on the eve of the trip showed a library of 40,000 square feet on four floors. Nor had his team received final estimates of the new cost projections. As a result, they had to insert figures into the plans at the last minute, resulting in a proposal that looked "sloppy," and a team that appeared unprepared. Indeed the NIH deferred acting on the application until after a second site visit to Worcester to determine the level of local support for the school as well as the kinds of research prospective faculty intended to undertake due to what seemed like outsized projections for lab space. Soutter was sufficiently worried that he arranged for community leaders in Worcester as well as state senator John Conte to attend a lunch at the State Mutual Life Assurance Company.[24]

Despite these signs of misgiving from NIH, the Dean and President were shocked when they received word in November 1967 that their request for $17, 424,871 had been rejected. One strike against the proposal, it was conjectured, was the apparently lukewarm support given the school by the Massachusetts legislature. The fact that in May 1967, state funds had been committed for medical school construction, but only "contingent upon the prior approval by

the proper federal authorities and assurance by such authorities that the federal allocation will be not less than twenty-two million five hundred thousand dollars," that is, approximately half the expected cost, did not indicate strong local support for the school to the authorities in Washington.[25]

Officials from HEW told UMass that they deemed the proposed design "unnecessarily generous" and duplicative in its allocations for educational space. The design for the library appeared "inefficient and inflexible," as well as too large. Also viewed as a gratuitous expense was a provision for dual cafeterias; instead, only one should be created, serving both the hospital and the school. Most serious, the clinical sciences wing was not connected directly to the hospital to maximize efficiency for faculty. (They had designed it in the form of a "T" with a central wing for labs and lecture halls, the two horizontal wings for clinical and basic sciences.)[26] Federal officials objected to the long separation that would be created between faculty labs and the hospital, which would only connect at the base of the education stem of the building. The HEW urged them to resubmit an application as soon as possible, however, and, if possible, in conjunction with their application for hospital construction funds. Then - another blow: their $7, 361, 832 million proposal for the research wing of the building was also rejected because "the planned amount of research space [was considered to be] excessive." The reviewers suggested, mystifyingly, that the university prepare "a new proposal which reflects more realistically the research space requirements for the first few years of the school's operation. The research space should be keyed closely to firm faculty staffing projections and should request the amount needed to recruit this faculty." Soutter told the press that, while some of the reasons for the applications' rejection were reasonable, some were due to the current "austerity" in federal spending due to the escalating costs of the Viet Nam War.[27] Had the application been submitted a year earlier, he had been told, it would have "gone right through." In a post-mortem meeting with federal officials and the meeting's organizer, Senator Edward Kennedy, Lederle and Soutter also learned that the chances of funding in the coming year might be even worse because only $82 million was available for medical school construction overall,

and because some existing schools were in trouble and might receive higher priority. Yet, Kennedy told reporters that the meeting had cleared up many of the misconceptions clouding discussion of the application. In his view, the school's chances had become much stronger.[28]

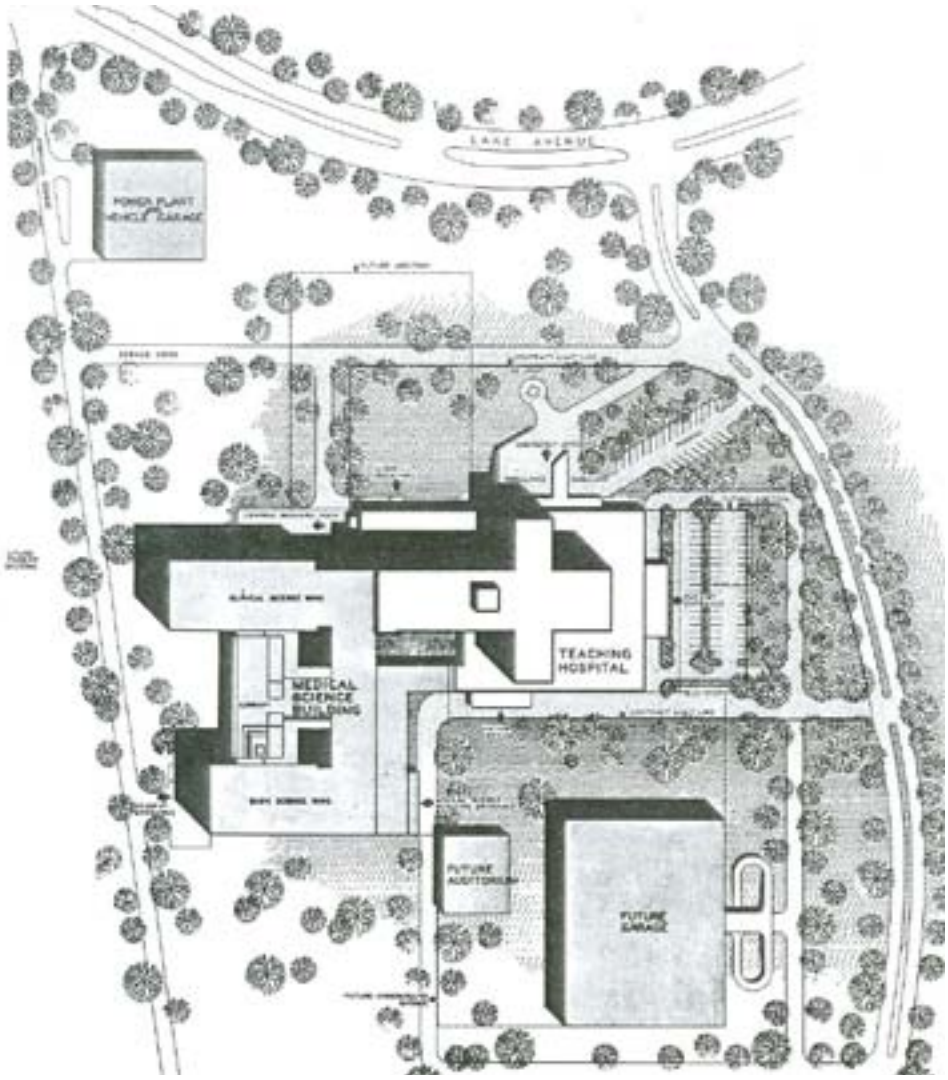
In the winter of 1968, in a gesture of resignation over the extra years construction was likely to take, the University purchased a small building for $550,000 on the edge of the medical school property -- a former warehouse for wholesale cigars, cigarettes, tobacco and confectionaries.
Owned originally by the H. E. Shaw Company and still known today as the "Shaw Building," the building would be renovated to include classrooms, teaching

Shaw Building, 1968. Sign in window reads "University of Massachusetts Medical School Office Will open here February 1968" *(Photo courtesy of the Department of Special Collections and University Archives, W.E.B. Du Bois Library, University of Massachusetts Amherst)*

labs, minimal office space, and a library – all in time for the first small class of 16 students to begin their studies in the fall of 1970. The new medical sciences building, meanwhile, would now open no earlier than 1972.[29]

Dean Soutter was determined to complete the suggested revisions and submit the new proposals by the next deadline, March 1, 1968. Despite Horace Chase's indignation at the "drastic" changes required, the new application followed the reviewers' suggestions, eliminating an entire wing that would have contained additional lecture and conference space. Under the revised design, the school would look something like the top half of an "H" with one wing making up the basic science and medical education departments, the other, the

clinical sciences. The design called for as much correlation as possible between clinical and biological departments, for example placing anatomy and surgery on the same floor. The crossbar would contain units such as student labs and administrative offices. The hospital would be designed to elongate the clinical sciences wing, with the clinical science departments linking to the relevant patient-care floors.[30]



Architectural drawing of Medical School and teaching hospital, 1968
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

The revised proposals for the medical education, library, and research components of the school were approved in the spring of 1968. University officials, however, soon learned that success might be more apparent than real.

The head of NIH informed U. S. Speaker of the House John W. McCormack (at the time, the senior legislator from Massachusetts), that due to budget cuts and a backlog of 100 million dollars' worth of medical school funding, Massachusetts might not receive the money for at least another two years. At that point, Massachusetts deployed all of its political muscle - not only Speaker McCormack, but Senators Edward Kennedy, Edward M. Brooke, and Representatives Harold Donahue and Silvio Conte all made sure Secretary Wilbur Cohen, head of HEW, knew of their concern. Senator Kennedy, in particular, "indicated his strong interest in this matter." On Beacon Hill politicians sympathetic to the school such as Maurice Donahue and John Conte also contacted their friends in Washington. In addition, the Democrats' strong allies, organized labor, strongly supported medical education in the election platform proposals they presented to both political parties prior to the presidential election in 1968. Finally, both President Lederle and Dean Soutter stayed in constant touch with the Washington congressional delegation. Despite Dean Soutter's fear that the war in Viet Nam

Speaker John McCormack, U.S. House of Representatives *(Photo courtesy of the National Archives and Records Administration, Washington, D.C.)*

had drained most of the available funds from the federal budget, with a close Presidential race in the offing, a faithfully Democratic state like Massachusetts saw its pleas rewarded by a Democratic administration. The first installment of $13.8 million, intended for the medical education building and the library, was awarded in early September 1968. Representative McCormack sent President Lederle a telegram with the good news. Lederle's office sent thank-you notes to the entire Massachusetts congressional delegation, as well as to state leaders such as Maurice Donahue and chairs of both the House and Senate Ways and Means committees, testaments to the extremity of the need and the depth of the gratitude.[31]

Unfortunately, money for the research wing of the medical school building was deferred indefinitely when Congress cut the budget for the Health Research Facilities branch of HEW. Because of the need for any first rate medical school to include research facilities for faculty, Lederle and Soutter urged the Trustees to allow them to move ahead with bids for the construction, and received reassurances from HEW that going forward with state money on the assumption of retroactive payment from federal funding would not jeopardize their chances of receiving it. They did not finally receive the money until the winter of 1969.[32]

"A Long, Hard Look"

The hospital, always a core component of Lamar Soutter's vision of excellence, was yet to be funded. UMass officials submitted the application for federal hospital construction funds on June 14, 1968; a site visit was conducted two weeks later. The University hoped to receive $13 million of the expected total cost of $38.8 million from the Health Manpower Administration; they sought an additional $450,000 through the Hill-Harris hospital construction act. In December, President Lederle's office learned that the hospital grant proposal had received approval from an advisory council, the first rung of the ladder, albeit with an approximately 30 percent reduction in requested funds, down to about $16 million dollars. Unfortunately, this potentially good news

from Washington was offset by three larger developments: the ascendance of a Republican administration in Washington; a resultant change in personnel in the Massachusetts governor's office; and rising inflation related to the war in Viet Nam leading to startling increases in construction costs. Soon after Richard Nixon's election to the Presidency in 1968, he nominated Massachusetts Governor John Volpe to be Secretary of Transportation. When the moderate Republican Lieutenant Governor Francis W. Sargent moved into the Governor's office in 1969, he learned that the costs to build the medical school complex had risen dramatically - from a projected $70 million to $124 million. Sargent was quick to express his - entirely understandable - alarm.[33] On top of that, with the inauguration of President Nixon, the political and fiscal landscape in Washington changed completely. Dr. Wheeler vividly remembered the situation:

> The funds were actually appropriated under the Johnson Administration. Unfortunately, President Nixon was elected, and did not fare well in the election in Massachusetts. And he reaped his vengeance. The Boston Naval Shipyard was closed, and NASA's Electronic and Research Center in Cambridge was closed. A lot of other federal projects that brought money into Massachusetts went down the drain. And the funds appropriated for the university hospital by the Johnson Administration were never - were basically impounded by the Nixon Administration, so obviously no money was coming from the federal government to help build the hospital. With that being the case, the Legislature wondered whether they could afford to build the hospital...It was a sort of touch and go battle...[34]

The Worcester papers closely followed the battle, not only for the hospital, but for the school itself. They were quick to report the changing tides of political feeling for the project. The first sign of trouble arose when Donald Dwight, Sargent's Commissioner for Administration and Finance, mentioned the need to appraise the entire project's "economic feasibility." Dwight's perspective is captured in a study completed several years later for the Kennedy School of Government. It notes that the original authorization "recommended a 'medical

science building' with a cost of $10 million." However, even before a site had been selected, "Soutter began expanding the existing construction plans. By 1968 [the school] had grown into a medical complex with a price tag of $80 million." Faced with a potential fiscal shortfall partly due to the state's newly increased responsibility to cover Medicare costs, Governor Sargent immediately announced the need to consider raising taxes and to take a "long, hard look" at building a state medical school and hospital.[35]

Journalists soon began referring to the school's "long, battle-scarred history" and wondering –in print - whether it was doomed. At these signs of apparent vulnerability, the deans of the three medical schools in Boston (of whom Tufts and BU were experiencing their own budget crises and rumors of imminent closure), as well as the medical deans at the University of Vermont and Dartmouth promptly let it be known, first, that no first-rate school could be built without a teaching hospital. Second, given the prohibitive costs of doing so, the state would be better off granting subsidies to existing schools to accept Massachusetts students. Finally, if their own schools were to survive, they must

Massachusetts Governor Francis W. Sargent
(Photo courtesy of the Department of Special Collections and University Archives, W.E.B. Du Bois Library, University of Massachusetts Amherst)

"receive additional money," presumably from the state. Lamar Soutter met this return to the debates of 1962 with outright dismissiveness, noting that the state constitution actually forbade public funds going to private educational institutions. Although the Governor acknowledged that BU and Tufts were in some financial difficulty, their backhanded bid for state subsidies won little or no support. The Governor assured Worcester that the school - if built - would be built nowhere else but Worcester. However, through Commissioner Dwight, he also commissioned a study of the matter by Professor Leon S. White, a professor in the School of Management at MIT, so that Sargent could make a "careful, speedy, but not hasty" decision.[36]

In the meantime, however, all work on designing the buildings was officially halted when the project ran out of money. Not only that, the Governor's budget for the coming fiscal year, the year the medical school was expected to be "tooled up to open" as Soutter put it, allotted only $530,000 to hire faculty and buy equipment and furniture for the Shaw building so the school could open on schedule in 1970. Soutter told reporters the governor's administration "really slit our throats," adding that for the past five years the school had been "miserably financed...We've been crippled by this."[37] Such frankness to the press might seem a risky ploy for a dean without funding for an un-built medical school. President Lederle saw it differently:

> [At] first I didn't think Bimi was cutting it with the Legislative leadership, and we needed their support in order to get large sums of money that...would be required ...And then things began to fall into shape. The Governor had a succession of Commissioners of Administration who were taking negative views. Practically asking the question: 'Should there be a Medical School?'...even though the Legislature had voted it. This really stirred up Legislative hackles and Judge Fox's hackles...
>
> Well, Bimi, under these circumstances - and I encouraged him in this although some presidents would not have - would blast off about critics taking a long, hard look and a dirty look and stuff like this. Some of his phraseology was just terrific and it was headline-getting. . . The Democratic legislative leadership,

> which didn't like to spend the money, found that Bimi was becoming better in attacking Republican administration footdragging than they were themselves. Bimi became rehabilitated.

Brownie Wheeler, whose career will be discussed in Chapter 6, recalled how, "Lamar Soutter lobbied long and hard up and down the offices and corridors of Beacon Hill, and knocking on every door, and soliciting support from every legislator who was available." Again, President Lederle: "They [the state legislators] now began to rally around Bimi and be his friend and give him support. I won't say they ever loved him, or that Bimi ever felt happy walking around the halls of the State House; but he was my kind of dean."[38]

Once again, Worcester's local supporters mobilized, "reorganizing" the medical school committee of the Chamber of Commerce to lobby the Governor. At a Chamber meeting, for example, where the Governor was the featured speaker, most of Worcester's municipal, state, and national politicians appeared as did major labor leaders such as James Loughlin. Local union leaders lobbied hard, writing directly to Governor Sargent. Salvatore Camelio, Hugh Thompson's successor as President of the Massachusetts State Labor Council, AFL-CIO, "disclosed that the Council by unanimous consent 'wishes to reaffirm its strong support for the ... Medical School...'" The Governor was clearly feeling the heat over the matter - he admitted that he had even heard from Cardinal Cushing, "a supporter of the state medical school," on the subject. Again, a Democratic legislature came to the school's rescue. In a startlingly bold maneuver by Representative Joseph Early (supported by the House Democratic leadership including Representative David Bartley, Speaker of the House), a bill was successfully introduced from the floor of the House, bypassing all committees, to increase financial support for the school to cover the increased costs of construction. This would allow the architects to continue work (they had been working without pay since December). At the same time, the bill lowered the amount of federal funding required by the state before its own monies could be allocated, in light of the lesser amounts actually forthcoming from Washington

compared with the state's original expectations in 1968.

State Senator David M. Bartley
(Photo courtesy of the Department of Special Collections and University Archives, W.E.B. Du Bois Library, University of Massachusetts Amherst)

The legislation was widely seen as a red flag signaling the legislature's anger over the governor's implied threat to halt work on the school. When the bill came up before the State Senate, it passed overwhelmingly. Even more important, with heavy lobbying by Worcester state senators Dan Foley and John Conte and the firm support of Senate President Maurice Donahue, the Senate turned back an attempt to eliminate mention of the teaching hospital from the bill, thereby insuring that the entire medical center concept could go forward. Even many Republican legislators voted for it. Sargent, who was a distant relative of Dr. Soutter, had already heard privately from influential supporters of the dean about the need for a teaching hospital to insure that the school was "first class," and these personal contacts likely helped persuade him. When even the Republican floor leader in the Senate publicly testified for the school, saying of Soutter that he had come to "know and admire this man," Sargent must have

seen little advantage in opposing the bill. Delays would only increase its ultimate cost. Finally, Worcester-based Representative Joseph Early assured that the governor's $250,000 cut from the school's budget allotment would be reinstated and that the additional $436,000 necessary for equipment and books would also be available in 1970. Even the students at UMass Amherst, among the bitterest opponents of Worcester back in 1965, weighed in with a resolution by the Student Senate to support the school against the governor.[39]

State Representative Joseph D. Early *(Photo courtesy of the Collection of the U.S. House of Representatives, Photography Collection)*

Construction of the school was assured. Yet Sargent and others were unconvinced that the next phase of the project - building a teaching hospital - could be justified. In light of Worcester's many existing hospitals, weren't enough beds already available? Some Democrats agreed. In a statement that predicted his outlook six years later when he took office as governor, Representative Michael S. Dukakis, Democrat from Brookline, testified that he thought Worcester had been chosen for the school on account of its preexisting hospital beds. He accused University trustees of trying to "out-Harvard Harvard" by trying to create a research and specialty-oriented

institution at Worcester rather than emphasizing primary care, as lawmakers had always expected. The Governor, ever-cautious, allowed the MIT study of the need for a teaching hospital to continue, with a due date of June. He also let it be known that he might still block the bidding for construction contracts in June because of the state's financial shortfall. Senator Kennedy, too, publicly questioned the drastically elevated cost projections.[40]

Senator Edward M. Kennedy, (D)-Massachusetts
(Photo courtesy of the U.S. Senate Historical Office)

When the White study finally appeared, it represented everything the medical school's supporters had feared - seemingly a hatchet job. White, working closely with Commissioner Donald Dwight, no fan of the Worcester project, did not advocate a particular course of action, but merely laid out the possibilities. The most original of these - the "community medical school" concept - would have called for creation of a basic sciences building on the UMass Amherst campus for the first two years of medical school and then the adaptation of existing hospitals into teaching sites for primary care medicine. Faculty - apart from the basic sciences - would consist of part-time teachers drawn from the

ranks of local physicians. White believed that this would hold down costs but also provide the greatest number of physicians - implicitly, primary care doctors - for Massachusetts. Most important, this approach obviated the need to build a teaching hospital.[41]

The report was truly Dr. Soutter's worst nightmare - proposing a school explicitly limited to generalist medicine and with no apparent commitment to innovation or excellence. Coming at the very time that proponents of the "family physician" concept were still struggling to win recognition for the new specialty as a worthy successor to the old-fashioned "g.p," it is not difficult to understand Dr. Soutter's chagrin. Once again, the Dean did not hold back his scorn. He told reporters that the White Report showed the Governor taking not a "long, hard look" at the question, but a "dirty look and an unfair report." He was furious that his own figures had not been taken into account resulting in, he charged, a deliberate under-estimate of the numbers of graduates the school would produce for Massachusetts. Moreover, by the time community hospitals in Worcester, Springfield, and other cities would be renovated according to such a plan, the costs would be at least as much as to build a single teaching hospital in Worcester. More damning, the apparent motive for the report seemed to be a desire to scrap the costly state school entirely and give some state funds to BU and Tufts, an unconstitutional use of state money. Many legislators were convinced that, in the words of state senator John Conte, "the governor has fallen to pressure from Harvard, Boston University, and Tufts Medical Schools." A typical headline ran with the words, "Soutter Says School Report Part of Plot." (The dean of Tufts Medical School felt it necessary to "categorically" deny any attempt to "block" the opening of the state medical school, while the dean of Dartmouth Medical College offered UMass his support.)[42]

All the public bickering took a toll. Two of Dr. Soutter's early senior staff appointees, a hospital director and the chair of the biochemistry department, announced their imminent departure even before the school was opened. They had been on the state payroll for about a year and a half. The departing department chair told a reporter that the school was "in limbo," and that others

were likely to quit too. He was sure the state would never build the school. The last straw for him was the Governor's decision to bring in a panel of outside medical experts to review the White Report. He was sure the school would be ceaselessly delayed. Another more serious threat emerged when the leading hospital in the region, Memorial Hospital in Worcester, ordered a study of future needs for hospital beds in the region and the potential impact of a new academic teaching hospital on the hospital market. In earlier discussions with the Central Massachusetts Regional Hospital Planning Council in 1967, Dean Soutter emphasized the medical school's dependence on local hospitals to give students a "community-oriented education." Soutter had also publicly pledged to keep the new UMass Hospital true to its mission of tertiary care, that is, cases that are referred by other hospitals; the one exception, of course, would be emergencies brought directly to its doors, which it would be obligated to accept. In private, none of the early clinical leaders at the school were fooled by this, given that a teaching hospital needs enough patients to supply its many medical students, residents, and faculty. Now it appeared that a major local player in Central Massachusetts health care doubted the dean's pledge, and was willing to say so publicly. Further, a recent study by the Central Massachusetts Regional Hospital Planning Council showed "no evidence" of need for additional beds in the county. On the other hand, a new study by the Department of Public Health in Worcester did show an increased need for beds. The picture was unclear. Regional health planning was a new phenomenon, one which has, even today, never been fully integrated into the economics of health care in the U.S. At a time of increasing inflation and budget tightening, this could have been the moment when the idea took hold in Massachusetts, dooming the plan for a brand new teaching hospital. That was the context for Professor White's strictly theoretical study. If the planning, funding, and political commitment to a first-rate state medical school had not already taken hold, the school might not have gotten its hospital. The dean, however, quickly renewed his public assurance that University Hospital would primarily accept referrals. "What we will do is get the patients Worcester-area doctors are now referring to Boston hospitals - especially the elderly ones."

That left only the Governor as a "roadblock." When even the Governor's out-of-state experts acknowledged that going forward was the best plan of action, the Governor had no choice but to agree.[43]

On July 2, 1969, Governor Sargent announced to the UMass Board of Trustees that he would drop his objections to building a state medical school and teaching hospital - an outcome greeted by Dean Soutter as "an absolutely thumping victory." Within days, local newspaper coverage portrayed the dean as "relaxed and ebullient." The medical school now was portrayed as an economic "transfusion" for the region: The anticipated hiring of 2,000 faculty and staff for the school and hospital, many of them from Worcester itself, and the purchase of fuel and supplies from local companies would obviously give the city's economy a boost. Worcester began to prepare itself for the "face-lifting" the new institution would bring to its eastern gateway by fixing access roads. Soutter felt confident that his now-resumed faculty recruiting (halted when the school briefly ran out of money), a tight but viable budget, and the scheduled start of renovations for the Shaw building in November, would allow the definite opening of the first medical school class in September 1970. It would consist of 16 students.[44]

The groundbreaking did not occur until October 23, 1969. For the ceremony, held on a brisk day in late October, the President's office along with the Dean made sure to invite the full range of city, state, and organized labor dignitaries with any claim to having helped bring the school to Worcester. The officers and Board of Directors of the Worcester Chamber of Commerce, many of whom were directors of the city's major manufacturing, business, and corporate enterprises, received invitations as did the members of the Chamber's Medical School Executive Committee (who included the City Manager, the head of the Worcester Labor Council, and Richard C. Steele, the publisher of the city's newspapers), and the city's political, religious, medical, and educational leaders. All of these men (and a handful of women) had actively lobbied for their city. From the governor to local state representatives for central Massachusetts, dozens of politicians were invited. Members of the University's Board also attended. Photographs show first-term Governor Francis Sargent, state Senate

President Maurice Donahue, Speaker of the House David M. Bartley, Worcester mayor John M. Shea, Worcester city manager Francis McGrath, James P. Loughlin, Secretary-Treasurer of the Massachusetts State Labor Council, and Joseph P. Healey, Chair, UMass Board of Trustees, brandishing broad smiles and ceremonially engraved shovels with President Lederle and Dean Soutter. At last, the medical school seemed to be moving off the drawing board and out into the fields of Worcester. It would not be ready for another three years, but at least the bulldozers could be expected soon.[45]

Groundbreaking, October 23, 1969, (l-r) University of Massachusetts President John W. Lederle, Worcester City Manager Francis McGrath, Senate President Maurice Donohue, House Speaker David M. Bartley, Governor Francis Sargent, Worcester Mayor John M. Shea, Massachusetts Labor Council Secretary/Treasurer James Loughlin, President of UMass Board of Trustees Joseph P. Healey, Dean Lamar Soutter *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

NOTES

CHAPTER FOUR

1 "Medical School Planning Sought: Soutter Requests a Start," [*Worcester Telegram*], Jan. 5, 1966, n. p., in Public Affairs Newsclipping Collection, UM/W [hereafter, PA, UM/W].

2 Transcript, Oral History interview with H. Brownell Wheeler, M.D., Part 1, interview by Ellen More, Aug. 21, 2006, South Portland, Maine, p. 24, in Oral History Collection, UM/W [hereafter, Oral Histories, UM/W].

3 Martha Mason, "Dr. Lamar Soutter: The Chest Surgeon Turned Dean Whose Job It Is To Put The Medical School On Its Feet," *Worcester Sunday Telegram*, June 26, 1966, pp. 3-7, in PA, UM/W; Howard F. Angione, "Med Courses to Stress 'Totality'," *Worcester Sunday Telegram*, Oct. 17, 1965, Box "Other Campuses: Medical School, Worcester, Newsclippings, 1951-1965," fol. "Medical School Newsclippings, 1965 (2 of 5)," RG 55-2, "Other Campuses," UM/A [hereafter, Other Campuses, UM/A]. Western Reserve [now, Case Western Reserve] Medical School began revising its curriculum as early as 1950, and became a model for many others. Cf. Lester J. Evans, M.D., Executive Associate, Commonwealth Fund to Dr. T. Ham Hale, Aug. 7, 1950, Records of the Committee on Medical Education, School of Medicine, Record # 24FM1, Box 1, fol. 2, Case Western Reserve Archives, Cleveland, Ohio.

4 Oral History telephone interview with Nicholas Soutter, Esq., by Ellen More, July 3, 2008; [Lamar Soutter], "A Modern Medical School," typescript, n.d., in Box 43, fol. 533, "Medical School, 1960;" Lamar Soutter, "Memo to Board of Trustees," Dec. 21, 1964, Box, 46, fol. 562, "Medical School Location, Oct.-Dec., 1964," both in Lederle Papers, UM/A.

5 Martha Mason, "Dr. Lamar Soutter," p. 7.

6 Soutter did emphasize the need for close integration into the larger university as a way in assure preliminary accreditation, but this part of his argument, as we have seen, fell on deaf ears. Lamar (Bimi) Soutter to John W. Lederle, July 20, 1964, cover letter and "Accreditation and Site," typescript, Box, 46, fol. 561, "Medical School Location, Jan.-Sept., 1964," Lederle, UM/A.

7 "Medical School Facilities: Planning Considerations," PHS Publication No. 874 (Washington, DC: Public Health Service, 1961), pp. 2, 4, 13, Box 46, fol. 567,

Lederle, UM/A. The 56-page document was prepared by the Ad Hoc Committee on Medical School Architecture of the AAMC and the Council on Medical Education and Hospitals of the AMA, with the USPHS. Dean William Willard was one of the study's authors.

8 President Lederle's long-term objective was to use the medical school to "spearhead" the same changes for the rest of the University. "Medical School Planning Sought;" University of Massachusetts President's Office, "Plans for the Development of the Medical School and Recruitment of Faculty," Sept. 7, 1965, Box "Minutes of Meetings of Full Board and Committee, 1965 (Jan.-Sept.)," fol. "Trustees, Minutes, Agenda, etc. (Committees) (Sept.) 1965," Trustees, UM/A. The problem was no less serious for the other faculty where mid-range salaries even for lower paying medical specialties like Pediatrics and Psychiatry stood somewhere between $1,500 and $3,000 above the state ceiling. See "University of Massachusetts Medical School: [Average Salaries] at U.S. Medical Schools," typescript, Box 1, John Conte Collection, UM/W [hereafter, Conte, UM/W].

9 University of Massachusetts President's Office, "Plans for the Development of the Medical School and Recruitment of Faculty," *ibid*; "Medical School Facilities: Planning Considerations," p. 16, Box 46, fol. 567, Lederle; "Application for Joint Construction Grant, July 24, 1967," p. 18b, Box "Other Campuses, Medical School, Worcester, 1962-, A-D," fol. "Application for Joint Construction Grant 1967 and Site Visits," Other Campuses, both at UM/A.

10 Lamar Soutter, MD, Dean, "Architectural Needs of the School of Medicine," Aug. 31, 1965, Box 44, fol. 542, "Medical School Architecture, 1965-June '66," Lederle, UM/A; Mason, "Dr. Lamar Soutter," p. 7.

11 "[Unofficial, handwritten] Minutes, Board of Trustees Buildings and Grounds Committee," June 18, 1965, fol. "Trustees, Minutes, Agenda, etc., 1965 (June);" "Minutes, Board of Trustees Meeting," Sept. 10, 1965, fol., "Trustees, Minutes, Agenda, etc. (Full Board), 1965 (Sept.)," both in Box "Minutes of Meetings of Full Board and Committee, 1965 (June-Sept.);" "Informal Meeting of Board of Trustees, Dec. 11, 1965," pp. 2-9, Box "Board of Trustees, Minutes of Meetings of Full Board and Trustees, 1965 (Oct.-Dec.) and 1966 (Jan.-Mar.)," fol. "Trustees (Full Board), Minutes, Agenda, etc. (Dec.) 1965," all in Trustees, UM/A.

12 John W. Haigis to Commissioner McCarthy [Western Union Telegram], Nov. 11, 1966, Box 44, fol. 545, Lederle, UM/A.

13 University of Massachusetts Medical School, "Teaching Hospital Application for a Joint Construction Grant," June 14, 1968, p. 2a, Box 45, fol. 559a, Lederle, UM/A.

14 John W. Lederle to John J. McCarthy, Oct. 13, 1965, Box 44, fol. 545; "Dean's Testimony: Governor Said 'Appoint Them'," *Boston Globe*, May 6, 1966; S. J. Micciche, "UMass Pair Support Dean's Story: 2 Agree Volpe O.K.'d Choice," *Boston Globe*, May 6, 1966; Timothy Leland, "UMass Architect Dispute Widens," [*Boston Herald?*], April 15, 1966; Thomas C. Gallagher, "M'Carthy May Resign, Blasts 'Interference,'" *Boston Herald*, April 15, 1966, all in Box 44, fol. 544, Lederle, UM/A.

15 "Minutes, Board of Trustees Meeting," Nov. 9, 1965, p. 5, Box, "Board of Trustees, Minutes of Meetings of Full Board and Trustees, 1965 (Oct.-Dec.) and 1966 (Jan.-Mar.)," fol. "Trustees (Full Board), Minutes, Agenda, etc. (Nov.) 1965," Trustees, UM/A. Cf. photocopied fragment, Jan. 26, 1966, Box 44, fol. 545, Lederle, UM/A, presumably notes taken by Dr. Lederle's secretary: "Mr. Chase called...He got your message...He is going to contact Dean Soutter and he is going to talk with ELLERBE if he is willing to talk with him <u>without</u> Dean Soutter." Cf. "Medical School Planning Sought: Soutter Requests a Start," Jan. 5, 1966, n. 1 above.

16 The efforts of Worcester-area state senators Vite Pigaga, John Conte and James Kelly, Jr. restored the money in the Senate. "Minutes, Board of Trustees," Nov. 9, 1965, Box "Board of Trustees, Minutes of Meetings of Full Board and Trustees, 1965 (Oct.-Dec.) and 1966 (Jan.-Mar.)," fol. "Trustees (Full Board), Minutes, Agenda, etc. (Nov.) 1965," Other Campuses, UM/A; John W. Lederle to Hon. John F. X. Davoren, June 1, 1966; "An Act authorizing the Trustees of the University of Massachusetts to establish salaries of certain officers and members of the professional staff of the University, Approved Sept. 4, 1966," Commonwealth of Massachusetts, *Acts and Resolves*, Chap. 659; Lamar Soutter, "Reasons for Requesting the Removal of the Ceiling on Salaries for the University of Massachusetts Medical School at This Time," May 18, 1967; Lamar Soutter to Dean Leo Redfern, Feb. 13, 1967; Sen. William D. Weeks to Fred Emerson, May 10, 1967, all in Box 46, fol. 568, Lederle, UM/A. Cf. Brian S. McNiff, "Legislators Open Nonstop Session," *Worcester Gazette*, Sept. 2, 1966, PA, UM/W.

17 On Sept. 23 the AMA Council on Medical Education, and, on Oct. 24, 1966, the AAMC Executive Council voted to grant provisional accreditation to UMass Medical School. Lamar Soutter to John W. Lederle, May 13, 1966; Walter S.

Wiggins, MD, Secretary, Council on Medical Education, AMA and Robert C. Berson to Mr. George Howe, Commissioner of Education, Department of Health, Education and Welfare, Nov. 9, 1966, both in Box 43, fol. 537, Lederle, UM/A.

18 John Stockwell, Hospital Director, was hired full time in Feb. 1967, and continued at UMass for more than a decade. Lamar Soutter to Provost Oswald Tippo, Oct. 26, 1967; Lamar Soutter to Provost Oswald Tippo, Nov. 7, 1967; Lamar Soutter to Provost Oswald Tippo, Jan. 16, 1968, all in Box 46, fol. 568; "Chronology of Medical School Appropriations, May 11, 1966," Box 44, fol. 544, all in Lederle, UM/A. The one line item for the medical school in the legislature's initial appropriations bill allocated $200,000 to purchase books and journals for the Medical School Library. Commonwealth of Massachusetts, *Acts and Resolves*, 1967, Chap. 682, Section 2, Item No. 8068-61.

19 Lamar Soutter, "Report to the Trustees from the School of Medicine," June 1966, pp. 1-12, Box "Other Campuses, Medical School, Worcester, 1962-, R-Si," fol. "Report to the Trustees from the School of Medicine, June 1966," Other Campuses, UM/A. "Medical School Planning Sought: Soutter Requests a Start," Jan. 5, 1966, n. 1 above.

20 Soutter, "Report to the Trustees from the School of Medicine," June 1966, p. 3, *ibid*. The Board briefly worried over their authorization to build a hospital at all, given that the enabling legislation called for a "medical *school*," not a "medical *center*." Cf. "Informal Meeting of Board of Trustees, Dec. 11 [1965]," Box "Board of Trustees, Minutes of Meetings of Full Board and Trustees, 1965 (Oct.-Dec.) and 1966 (Jan.-Mar.)," fol. "Trustees (Full Board), Minutes, Agenda, etc. (Dec.) 1965." But the legal niceties were not, in the end, as problematic as the sheer cost of building the hospital. See below. "Minutes of Joint Meeting of the Committee on Buildings and Grounds and the Committee on Faculty and Educational Policy," April 21, 1966, Box "Board of Trustees, Minutes of Meetings, Full Board and Committees, 1966 (April-Aug.)," fol. "Trustees (Committees), Minutes, Agenda, etc., April - 1966," both in Trustees, UM/A.

21 The architect even suggested designing the garage to be "wrapped around the hospital and for an auditorium to be located on the roof of the garage." The garage might cost 2 million dollars, but "the consultants think it's a good idea." See "[Handwritten] Minutes of closed meeting of members of Board of Trustees," June 30, 1966, Box, "Board of Trustees, Minutes of Meetings, Full Board and Committees, 1966 (April-Aug.), "fol. "Trustees (Full Board), Minutes, Agenda, etc., June - 1966;" "Minutes of Buildings and Grounds Committee, Sept. 8, 1966,

" Box "Board of Trustees, Minutes of Meetings, Full Board and Committees, 1966 (Sept.-Dec.)," fol. "Trustees (Committees), Minutes, Agenda, etc., Sept. - 1966," Trustees, UM/A.

22 Transcript, Oral History Interview with H. Brownell Wheeler, M.D., Part 1, pp. 14-15, in Oral Histories, UM/W.

23 "Minutes, Board of Trustees Meeting, Nov., 1967," Box "Board of Trustees Minutes of Meetings of Full Board and Committees," Aug. [sic: July]-Dec., fol. "Trustees (Full Board), Minutes, Agenda, etc., Nov., 1967," Trustees, UM/A; Mary Ann Magiera, "UMass Board OK's Med School Drawings," *Worcester Telegram*, Aug. 15, 1967, PA, UM/W.

24 Henry T. Cram to Kenneth W. Johnson, May 29, 1967; Lamar Soutter to John J. Conte, July 7, 1967, both in Box 1, Conte, UM/W. Cf. Katherine Schaef, "Federal Officials Very Impressed With Support for Medical School," *Worcester Telegram*, Aug. 18, 1967; "Poor Application Blamed for Medical School Lag," *Worcester Telegram and Gazette*, Aug. 19, 1967, PA, UM/W.

25 Commonwealth of Massachusetts, *Acts and Resolves*, 1967, Chapter 276, Sections 2-9, Item 8067-98, pp. 153-154, in Box 1, Conte, UM/W. The act was approved May 22, 1967.

26 "Minutes, Board of Trustees," Aug. 14, 1967, Box, "Board of Trustees Minutes of Meetings of Full Board and Committees," Aug. [sic: July]-Dec. 1967, fol. "Trustees (Full Board), Minutes, Agenda, etc., Aug., 1967," Trustees, UM/A.

27 Federal officials, perhaps touchy about the growing strength of the anti-war movement, quickly rebutted Soutter's charge. Cf. "Federal Official Asserts War No Factor in Med School Cuts," *Worcester Telegram*, Nov. 22, 1967, Box 1, Conte, UM/W.

28 Lamar Soutter to Nelson W. Aldrich, Feb. 3, 1967; Frank W. McKee to Kenneth Johnson, Nov. 15, 1967; "A Statement by the University of Massachusetts in Reply to the Letter from Dr. Frank W. McKee, HEW, Nov. 17, 1967;" David Tilson to Kenneth Johnson, Dec. 12, 1967; Lamar Soutter to Frank W. McKee, Dec. 21, 1967; Horace M. Chase to John Lederle and Kenneth Johnson, Dec. 22, 1967; John W. Lederle to Charles E. Shepard, April 11, 1968; all in Box 44, fol. 543, Lederle, UM/A. Florence Niles, "Medical School Delay Predicted Long, Costly," *Worcester Gazette*, Nov. 18, 1967; Mary Anne Magiera,

"U.S. Rejects 16-Million Bid For Medical School Funds," *Worcester Telegram*, Nov. 18, 1967; Katherine A. Schaef, "Med School Impasse Puzzle," *Worcester Telegram*, Dec. 3, 1967; Theodore Mael, "City Med School to Get Low Priority," *Worcester Telegram*, Dec. 15, 1967; Matthew V. Storin, "2-Year Wait Seen Likely for Med Building Funds," *Worcester Telegram*, Dec. 16, 1967, all in PA/UM/W. And, Carl D. Douglass, Ph. D. to Dr. Lamar Soutter, June 22, 1967; Frank W. McKee to Hon. Harold D. Donahue, Dec. 13, 1967; Frank W. McKee to Hon. Harold Donahue, Dec. 6, 1967; "Notes on Meeting of Nov. 29, 1967 regarding Planning Library," n.d ; "Notes on Meeting Dec. 9, 1967 regarding Research Application," all in Box 1, Conte, UM/W.

29 *Worcester City Directory*, 1948, p. 1047, lists the company at an earlier location on Mechanic Street in downtown Worcester. By 1968, when the State bought the building for the medical school, the Shaw Company was out of business. Faculty and students from the first class claim that the smell of tobacco was still noticeable in 1970. "Medical School's Opening Definite," *Worcester Telegram*, Dec. 19, 1967, Newsclippings, UM/W. "Minutes, Board of Trustees Meeting, Jan., 1968, Box, "Board of Trustees Minutes of Meetings of Full Board and Committees, Jan. - March, 1968," fol. "Trustees (Full Board), Minutes, Agenda, etc., Jan. 1968," Trustees, UM/A.

30 My great thanks to Dr. H. Brownell (Brownie) Wheeler for clarifying the designers' intentions. H. B. Wheeler to Ellen More, personal communication (email), April 6, 7, 2011. Cf. Leo Redfern to President Lederle, Trustee Plimpton, Dean Soutter et al., "Memo," n.d., Box 45, fol. 556, Lederle, UM/A; "Med School Unit Gets First OK," *Worcester Gazette*, Sept. 30, 1968, PA, UM/W.

31 John W. McCormack, Speaker of the House, to Dean Lamar Soutter, July 26, 1968; "The AFL-CIO Platform Proposals, presented to the Republican and Democratic National Conventions, 1968" (pamphlet); John W. McCormack to Wilbur J. Cohen, Aug. 26, 1968; Lamar Soutter to Maurice Donahue, Aug. 28, 1968; John W. McCormack to John W. Lederle (telegram), Sept. 5, 1968; Frank W. McKee to Kenneth Johnson, Sept. 6, 1968; all in Box 45, fol. 557, Lederle, UM/A. Thank you letters to the following are also included in this file: Senate President Maurice Donahue, James Burke (Chair, Senate Committee on Ways and Means), House Speaker Quinn, Representatives Robert Cawley, Anthony Scibelli (Chair, House Ways and Means Committee), and Paul Murphy (Vice Chair, House Ways and Means).

32 "$13 Million Granted for Medical School," *Worcester Telegram*, June 27,

1968; "Medical School Gets $4.9 Million," *Worcester Gazette*, July 2, 1968; "Back Funds Sought for Medical School," *Worcester Telegram*, Sept. 13, 1968, PA, UM/W. Lamar Soutter to the Hon. Maurice A. Donahue, Aug. 28, 1968; David Tillson to John McCormack, Feb. 7, 1969, both in Box 45, fol. 557, Lederle, UM/A; "Worcester Area Chamber of Commerce Officers and Board of Directors," "Medical School Executive Committee," "Medical School General Committee," all in Box "Medical School, Worcester, 1962, E-N (except Newsclippings)," fol. "Groundbreaking," Other Campuses, UM/A.

33 Soutter to Donahue, Aug. 28, 1968, *ibid*; Matthew V. Storin, "Hospital Funds Given Approval," *Worcester Telegram*, Dec. 6, 1968; Howard S. Knowles, "Med School Costs: New Estimates Jump $54 Million," *Worcester Gazette*, Dec. 26, 1968, PA, UM/W.

34 Transcript, Oral History Interview with H. Brownell Wheeler, M.D., part 1, p. 25, Oral Histories, UM/W.

35 Kennedy School of Government, "The Massachusetts Medical School," 1975, typescript, 110 pp., quotations, pp. 3, 5 in PA, UM/W. This case was prepared under the supervision of Professor Graham Allison. Cf. S. J. Micciche, "Governor Asks 14% Surcharge, End to U.S. Deduction;

Message Tells 'Plain Truth'...The State is in Trouble," *Boston Globe*, Jan. 23, 1969, cited in "Kennedy School," p. 5.

36 Carl M. Cobb, "N.E. Medical Deans Say UMass School Needless," *Boston Globe*, Feb. 5, 1969; *idem.*, "Cash Crisis Hits 2 Med Schools," *Boston Globe*, Feb. 17, 1969; "Dartmouth Dean Advocates 4-Year Mass. Medical School," *Worcester Sunday Telegram*, Feb. 16, 1969, in Box 1, all in Conte, UM/W. Howard S. Knowles, "Medical School Costs," *Worcester Gazette*, Dec. 26, 1968; "UMass Med School - A Case History," *Worcester Gazette*, Jan. 23, 1969; Mary Anne Magiera, "City is Assured of Med School," *Worcester Telegram*, Feb. 6, 1969; "Action Expected Soon on Med School Funds: Architects' Pay Problem," *Worcester Gazette*, Jan. 14, 1969; Theodor Mael, "Soutter Predicts City Will Get Med School," *Worcester Gazette*, April 23, 1969, all in PA, UM/W.

37 "Action Expected Soon," *Worcester Gazette*, Jan. 14, 1969; Florence R. Niles, "Sargent 'Slit Our Throats'," *Worcester Gazette*, Feb. 13, 1969; Brian S. McNiff, "Sargent Assures City on Med School 'Site'," *Worcester Gazette*, Feb. 5, 1969; "Medical School Loan Hike Backed," *Worcester Gazette*, March 7, 1969, all in PA,

UM/W.

38 [Robert McCartney] Oral History Interview with John W. Lederle, 1975, typescript fragment, p. 68, John Stockwell Papers, UM/W. Original in Box 1, fol. 14, "Oral History Program Interview Transcripts," UM/A; Transcript, Oral History Interview with H. Brownell Wheeler, M.D., Part 2, p. 3, interviewed by Ellen More, Oct. 23, 2006, Worcester, Massachusetts, Oral Histories, UM/W.

39 Massachusetts State Labor Council, AFL-CIO, "For Immediate Release," March 20, 1969, Box 43, fol. 540, Lederle, UM/A. Also see, McNiff, "Sargent Assures City," Feb. 5, 1969; "C. of C. to Press Sargent for Medical School, *Worcester Telegram*, Feb. 22, 1969; Lamar Soutter, "The Case for the Medical School," *Worcester Telegram*, March 4, 1969; Howard S. Knowles, "House Boosts Outlay for Medical School," *Worcester Gazette*, March 7, 1969; Howard S. Knowles, "Medical School Future Appears Brighter," *Worcester Gazette*, March 26, 1969; "Move Beaten to Cut Out Hospital Plan," *Worcester Telegram*, March 26, 1969; Albert B. Southwick, "Why the Medical School Costs So Much," *Worcester Telegram*, March 31, 1969; "Sargent Signs Bill," *Worcester Gazette*, April 8, 1969; Rep. C. Vincent Shea, "Letter to the Editor," *The Evening Gazette*, May 28, 1969, all in PA, UM/W. Frank V. Saulenas and Malcolm Foss to Governor Francis W. Sargent, Feb. 20, 1969; "Action Taken by the University of Massachusetts Student Senate - March 12, 1969 - Passed Unanimously," typescript, Box 1, Conte, UM/W. On Soutter's relationship to Gov. Sargent, see Transcript, Oral History Interview with H. Brownell Wheeler, M.D., Part 2, pp. 2, 3, in Oral Histories, UM/W.

40 Roger J. Bulger, "The Medical Center: University of Massachusetts," pp. 125-146, in *New Medical Schools at Home and Abroad: Report of a Macy Foundation Conference*, John Z. Bowers and Elizabeth F. Purcell, ed. (New York: Josiah Macy, Jr. Foundation, 1978), quotation, p. 129.

41 Howard S. Knowles, "Legislative Leaders Assail Med School Restudy Plan," *Worcester Telegram*, June 10, 1969; Howard S. Knowles, "Lesson for Governor Sargent in Medical School Fiasco," *Worcester Telegram*, July 6, 1969. Also see "Sargent Signs Bill," *ibid.*; "MIT Expert Conducts Medical School Study," *Worcester Telegram*, April 18, 1969; Theodore Mael, "Soutter Predicts," *Worcester Gazette*, April 23, 1969; "Kennedy is Disturbed by Med School Cost," *Worcester Gazette*, May 17, 1969, all in PA, UM/W.

42 Family Medicine did not become a board-certified specialty until 1969.

Cf. Ellen More, Heather-Lyn Haley, and Robert Vander Hart, "The People's Medicine Comes to Massachusetts," accessed at https://web.archive.org/web/20150810135847/http://library.umassmed.edu/omha/fmch/index.cfm on March 22, 2011, esp. "A Specialty for Generalists." Cf. Knowles, "Legislative Leaders Assail," *ibid.*; Knowles, "Plan Would Scrap Big Med School," *The Evening Gazette*, June 10, 1969; Howard S. Knowles, "Sargent Appoints Med School Panel," *Worcester Gazette*, June 13, 1969; Theodore Mael, "Sargent Chided on Med School," *Worcester Gazette*, n.d.; "Soutter Says School Report Part of Plot," *Worcester Gazette*, June 14, 1969; "Tufts Dean Denies Med School Block," *Worcester Gazette*, June 18, 1969, all in PA, UM/W.

43 "Med School Relations to Hospitals Discussed," *Worcester Telegram*, Oct. 20, 1967, Box 1, Conte, UM/W. Also see, David T. Turcotte, "2 Key Aides Quit Posts On Staff Here," *Worcester Telegram*, June 19, 1969; Theodore Mael, "Study Will Analyze Effect of Med School Hospital in Area," *Worcester Gazette*, June 24, 1969; "Medical School Clarification," *Worcester Telegram*, June 27, 1969; Mary Anne Magiera, "Med School: A Transfusion Carrying Gold to City's Economic Heart," *Worcester Sunday Telegram*, July 6, 1969, in PA, UM/W.

44 Howard S. Knowles, "Sargent Rules Med School to Be Built in City," *Worcester Telegram*, July 2, 1969; "'Thumping Victory,' Says Dean Soutter," *Worcester Gazette*, July 2, 1969; Magiera, "Med School: A Transfusion, July 6, 1969; Mary Anne Magiera, "Med School Work to Start on Sept. 3," *Worcester Telegram*, Aug. 12, 1969; Harry T. Whitin, "Med School Work Begins Next Week," *Worcester Telegram*, Sept. 27, 1969; "Med School Pact Awarded for $529,367," *Worcester Telegram*, Jan. 22, 1970, all in PA, UM/W.

45 "University of Massachusetts Medical School Groundbreaking" photograph and caption, in Box "Medical School, Worcester, 1962, E-N (except Newsclippings)," fol. "Groundbreaking," Other Campuses, UM/A; Albert B. Southwick, 100: The Telegram Story, 1884-1984 (Worcester, MA: Worcester Telegram and Gazette, 1984), p. 17.

Chapter 5
University Hospital: 1976 - 1998

For Lamar Soutter and H. Brownell (Brownie) Wheeler, two veteran surgeons and the unquestioned founders of UMass Medical School, teaching hospitals represented the keystone of the arch of medical education, the apex of the development of modern medicine. During the entire twentieth century, hospitals had been the physician's workshop, the medical student's clinical classroom.[1] This chapter will describe how the University Hospital was won and how, 22 years later, it was lost; the struggle to build it, and the indisputable reasons for giving it up.

Background

The legislation that established the University of Massachusetts Medical School in 1962, described in Part 1 of this book, made no mention of a hospital. Many legislators who voted for the bill assumed that an existing municipal hospital in Boston, Worcester, or Springfield would serve the school's purpose well enough. But the early leaders of UMass Medical School – particularly Dean Soutter and his principal confidant, the surgeon Brownie Wheeler – never doubted that the medical school would include a new teaching hospital, which indeed opened in 1976. There were solid reasons for their insistence on building a teaching hospital, both financial and educational. The 1960s, the years during which UMMS was legislated, coincided with the construction of dozens of medical schools, most of which also built – or affiliated with – academic teaching hospitals. By 1980, approximately two-thirds of all state medical schools were associated with academic teaching hospitals. Particularly after Worcester was chosen as the school's location in 1965, the Trustees, too, came to believe an academic hospital would be necessary to effectively compete with the teaching hospitals in nearby Boston.

Just as important, however, the advent of Medicare in 1965 provided general hospitals with an unprecedented infusion of money for services that many patients previously were unable to afford. As historian Rosemary Stevens has written, hospitals built or expanded to meet this new patient demand could even recoup the capital expense of borrowing through increased – but reimbursable – charges to patients.[2] As late as 1971, a study of projected cost recovery from the UMass teaching hospital estimated that 90% of construction costs would be "recovered on cost-reimbursement contracts" with such payers as Medicare, Medicaid, and Blue Cross/Blue Shield.[3] The '60s and early '70s were, in short, a period of bullish growth for hospitals. And, especially given Soutter's and Wheeler's own Harvard training in cardiothoracic and vascular surgery, respectively, the medical school's leadership firmly believed in the educational need for a tertiary care hospital through which UMass students could be exposed to high-quality medical care in every specialty.[4]

By the 1980s, as we will see, the financial landscape for academic teaching hospitals had become far more barren. For one thing, the steep rise in American health care spending fueled by Medicaid, Medicare, and higher labor and technology costs, had begun to attract unfavorable attention. Already in 1974, the Stanford economist Victor Fuchs called for a five-year moratorium on hospital construction and expansion. Historian Kenneth Ludmerer writes, "Concern about health-care costs had been growing for many years, but in the 1980s cost consciousness finally began to dominate the health care debate."[5] The growing presence from the 1980s of health maintenance organizations (HMOs) and federal and state measures to control rising medical costs portended the challenges teaching hospitals would face. In Massachusetts, the University Trustees began expressing dismay over the hospital's deficits as early as 1991, a mere 15 years after its opening. When the University President and Trustees finally privatized University Hospital in 1997-1998, they were convinced this was a rational response to the threat of financial liability the hospital represented to its parent body, the University of Massachusetts. University Hospital's history thus mirrors the fate of many teaching hospitals across the U.S.

This chapter will examine the rising and falling arc of University Hospital's association with the Medical School, including the budget battles that dogged its construction, and in consequence, forced the resignation of Dean Lamar Soutter; the faculty's reaffirmation of a commitment to primary care education as the justification for the hospital; the hospital's years of growth and rising importance to central Massachusetts; and finally, the period from the late 1980s when cost pressures overtook revenue growth and the threat of massive fiscal overruns convinced the University's Trustees to divest the hospital.

Construction Budget Battles: 1967-1972

As Chapter 4 suggested, Massachusetts legislators never expected to fund the full cost of the hospital. Medical school officials submitted an initial – unsuccessful – request for federal funding for the hospital in 1967. It called for a 400-bed facility that could be expanded to accommodate 800 with a limestone exterior and a wrap-around covered garage; federal officials had no trouble turning it back on the grounds that it was simply too big. The final, successful plan called for a more compact, economical structure, with a separate, covered garage "under consideration" but not integral to the building. The façade now was to be granite, not limestone.[6] Even so, by the time the $16.5 million UMass proposal for federal funding was approved in 1969, the Nixon administration had impounded further spending authorized by the Health Professions Educational Assistance Act of 1963. UMass was too late. Its proposal may have been approved, but the funding had evaporated.[7] Despite lobbying by the UMass system president Robert C. Wood, by Dean Soutter, and by the Massachusetts congressional delegation, a teaching hospital – especially for the state of Massachusetts – stood at the bottom of the Nixon administration's list of priorities.[8] Besides, construction costs were much higher by 1970. To get some idea of the gap between initial expectations and the ultimate outlay for the hospital, compare the estimated cost in 1964 of using Worcester City Hospital, $20,360,300 with the estimate of $95,000,000 for construction and financing

costs of a new 400-bed building in 1971. With funds from Washington no longer an option and Republican Governor Francis Sargent dismayed by the hospital's ballooning construction costs, only the Legislature could secure the necessary funding.[9]

The state, however, was facing its most daunting financial crisis of the post-World War II era. As the bills came due on the many new state initiatives of the Kennedy-Johnson years in Massachusetts – a new community college system and an expanded state college system are just two examples – the need to control the state budget and minimize tax increases loomed much larger to Governor Sargent than the obligation to bail out a new teaching hospital. Although the legislature approved spending $53 million for the hospital in 1971, the Governor delayed signing it for another five months.[10] In an effort to at least reduce the state's rising health care costs, the Sargent administration signed a new bill in November 1971 that required the Massachusetts Department of Public Health (DPH) to approve any hospital construction costing more than $100,000. Such measures were not unique to Massachusetts. In 1966, the federal Comprehensive Health Planning Act (PL 89-749) established the Certificate of Need process, but it included no strong enforcement mechanism. Between 1966 and 1972, the year Massachusetts' Certificate of Need program went into effect, a total of 19 states had established the process. In central Massachusetts, the new requirement spurred the creation of the Comprehensive Health Planning Council of Central Massachusetts, or CHPCCM. The Commission, a "quasi-public nonprofit corporation organized under the laws of the Commonwealth and supported in equal measure by federal and private funds," was chaired by Robert D. Cope, a local attorney.[11]

University Hospital, having been established by state law, was not subject to the Certificate of Need requirement. Nevertheless, the new mandate did complicate matters for UMass. In 1972, Worcester was rife with excess hospital beds in the eyes of the state DPH. Seven community hospitals currently operated in or around the city: Memorial, St. Vincent, City, Hahnemann, Fairlawn, Doctors', and Holden Hospitals – not counting Burbank Hospital in Fitchburg or

Worcester State Hospital, a psychiatric facility. With the possible exception of the latter, their leaders all were mindful of the potential threat posed by the soon-to-be-built medical center hospital. The rationale for University Hospital rested on the lack of a tertiary care facility in Central Massachusetts. Yet as soon as plans for the hospital became public, the leading community hospitals in Worcester announced expansion plans for various tertiary care units of their own. Memorial Hospital, for example, announced a $13 million construction project for, among other things, a neonatal intensive care unit (NICU). Similarly, City Hospital proposed a burn unit and trauma center, and at St. Vincent, plans for centers for radiation oncology, chemotherapy, open-heart surgery, and a new maternity wing quickly materialized. Burbank Hospital in Fitchburg also requested permission to expand. From the perspective of the DPH, the threat of redundancy and serious overbedding in Worcester seemed both realistic and intolerable.[12]

State officials made it clear that, "Since we apparently have no control over the UMass hospital, all new [hospital] projects in the Worcester area will have to be measured against the impending reality of the teaching hospital... We will not permit existing institutions to modernize, expand or change services if that need would be met by the UMass hospital." The new Certificate of Need requirement thus threatened to drive a wedge between UMass and the leaders of Worcester's other large hospitals at a time when Dean Soutter was negotiating with them to allow UMass medical students and, eventually, residents, onto their wards for clinical rotations. Soutter was politically astute enough to understand that he would gain much more in the long run if he supported Worcester's other hospitals' claims. After all, even a tertiary care hospital with an eye on patient referrals from across the state would need referrals from local physicians. It would also need numerous local physician volunteers for clinical teaching at the school. Soutter told reporters that the potential rejection of other hospitals' expansion plans was "capricious and arbitrary." He stressed that the new hospital would not compete with local hospitals. "Think of it as a referral hospital," he reiterated.[13]

Yet the overbedding concern persisted even after Soutter assured

local hospital officials that only 20-30% of UMass patients would come from Central Massachusetts. The CHPCCM managed to broker a deal signed by UMass President Robert Wood and Robert Cope in 1972. In order to minimize competition between the teaching hospital and local community hospitals, the agreement required that any new UMass "facility, service or program of medical care" be reviewed by the Council. Further, UMass agreed to limit its maternity and pediatrics inpatients, the two specialties shown to have low utilization rates in the region. Memorial, St. Vincent, and Burbank hospitals agreed to reduce their proposed expansion. With such concessions from all parties, on March 2, 1972, Governor Sargent approved the proposals for the three local hospitals as well as University Hospital.[14] With that, hospital construction began in earnest. Soutter hoped to see the building open by the end of 1974. As had happened repeatedly over the past decade, such optimism proved unwarranted.

Dean Soutter vs. President Wood

At this juncture, internal divisions began to complicate an already complex process. Dean Soutter and UMass President Wood could not seem to work together. After a long and excellent working relationship with John Lederle, the UMass president who had hired him in 1963 and had seen him through the grueling process of opening the school in 1970 (see Chapters 1-4), Bimi Soutter was disappointed in Bob Wood, Lederle's successor in 1970. Wood, a political scientist by training, had been the Secretary of Housing and Urban Development in the Johnson administration; he was much more a politician than either Lederle or Soutter. Soutter, plainly put, did not trust him to stand firm in the face of political pressure. Signs of Soutter's irritation and distrust are evident in their correspondence within a year of Wood's arrival. Wood was interested in magnifying the role of the UMass system president's office. He quickly added administrative positions to his budget and asserted more control over the budgets of the Amherst, Boston, and Worcester campuses. His impact was all the more irksome in that it coincided with the end of a major growth spurt for

the University of Massachusetts and, as noted above, a drastic tightening of the Legislature's purse. An early letter from Soutter to President Wood suggests that the Dean did not suffer the new president gladly:

> Dear Bob:
>
> It has come to my attention that your office is continuing to drain off our funds at the rate of about $1,000 per week. I would like to request that further withdrawal of our funds be stopped and that we be reimbursed back to the $50,000 which we agreed to last summer. If later in the summer your office needs more money, we would be glad to consider this in the light of what is still available to us.[15]

Their relationship did not improve. Wood seems to have begun a good-faith effort in the fall of 1971 to objectively examine a long-held dream of Soutter's to expand the campus into a full University site. He asked the dean to "convene a planning group" for this purpose, including representatives from the other UMass campuses as well as the Worcester Consortium colleges. The committee began work in late 1971.[16] But by that time, budgetary pressures from Beacon Hill, described above, as well as a State Board of Higher Education heeding the Sargent Administration's call to reduce the costs of higher education in Massachusetts, trimmed the sails of such initiatives.[17] The obstacles impeding the completion of University Hospital probably added to growing impatience and

Lamar Soutter, M.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

Robert Wood, Ph.D.
(Photo courtesy of the Department of Special Collections and University Archives, W.E.B. Du Bois Library, University of Massachusetts Amherst)

tension between Wood and Soutter. Soutter had little confidence that President Wood would fight for the kind of hospital he believed in. Wood, for his part, saw the Dean as an obstructionist, someone unwilling to compromise.[18] When the Worcester campus planning committee asked Wood whether he intended to name a Chancellor to the Worcester campus to create uniformity among the three campuses – something which would cause them to slow down their planning until that individual could participate – he began making plans to insert an appointee of his own as the medical school Chancellor, someone who, like the UMass Boston and Amherst Chancellors, would report directly to him and the Trustees. Wood wanted to find someone with more appetite for politics than Soutter. And, by the fall of 1972 when the committee's report was complete, he sorely needed a campus leader who could convince the state legislature of the School's commitment to primary care.

In the background, a tug of war was being waged between the Worcester campus leadership and the legislature over the relative place of primary care education among the school's priorities, a question closely tied in the minds of many state politicians to the matter of funding for a tertiary care hospital. This further complicated the situation for both Soutter and Wood. Wood saw Soutter as an obstacle to smoother dealings with the legislature. At a Medical School faculty meeting held in September 1973, President Wood laid out his concerns. He also announced that Board chair Joseph Healey, Soutter, and he had met to discuss the issue of "succession." He reported Dr. Soutter's preference to target the "full operation of the hospital," or June 1976, as his approximate date for retirement.[19]

Wood's initial choice for the next UMass Med Chancellor, Professor Adam Yarmolinsky, had been one of Sargent Shriver's original deputies at the Peace Corps and had held numerous other positions in the administrations of Presidents Johnson and Carter. Prior to his most recent appointment as Ralph Waldo Emerson Professor assigned to Wood's office, Yarmolinsky had been a professor at Harvard Law School and member of the John F. Kennedy Institute of Politics. His background must have promised political finesse,

organizational skill, and attunement to current demands for broader health care access, seemingly the ideal candidate to act as liaison between the Legislature and the President.[20] In October, Wood appointed Yarmolinsky to coordinate the "intensive planning efforts" he anticipated during the coming year to develop the Worcester campus. As Wood informed his Board, "This planning will proceed in cooperation with the Board of Higher Education which has asked that Professor Yarmolinsky of the University coordinate the planning in view of his expertise and present work in the health manpower field." Despite the effort to normalize Yarmolinsky's involvement with the Worcester campus or, indeed, to shift responsibility for it to the Board of Higher Education, Wood's larger intentions seem to have been clear to Soutter and other medical school leaders, namely, to ease Lamar Soutter out of the medical school's leadership.

These maneuverings were intensely resented. To Soutter's direct objection, Wood smoothly replied that Professor Yarmolinsky would work "in collaboration with the Medical School and the other campuses in his staff assignment… I hope you won't consider Professor Yarmolinsky an outsider for long, and I think you'll find that his qualifications surpass any other possible candidate."[21]

At this point, behind the scenes, a quiet rebellion began against what the Worcester campus – especially the department chairs – saw as an attempt to railroad Lamar Soutter out of office. A sense of their *esprit de corps* and loyalty to Dr. Soutter can be glimpsed in faculty reminiscences. Even after 40 years, R. William (Bill) Butcher, then chair of Biochemistry, remembered, "…right from the beginning, Lamar Soutter was, and remains, one of my great heroes. He was a magnificent man…" Brownie Wheeler was more concise: Soutter "was a Brahmin but not a stuffed shirt."[22] Many of the early faculty and students felt exactly the same. In response to Wood, the chairs signed a letter of unwavering support for the dean and forced a meeting with the University President. As a result, President Wood asked that Dr. Wheeler, a figure trusted by everyone on the Worcester campus, act as an intermediary between Soutter and Wood.[23] Months passed before a compromise was reached and an outside Visiting Committee was formed. When it did convene, Yarmolinsky, who was to have overseen the

Committee's workings, was no longer part of the process. In the interim, Wood and Soutter came to an agreement that made Lamar Soutter the first Chancellor/ Dean of the Medical School, allowed for the Visiting Committee's formation, and set a definite date for the Dean's retirement of June 1975. Soutter's acceptance of the title of Chancellor in February 1974 did not settle matters for the hospital, but it did establish a workable agreement between the Medical School and the President's office.[24]

The growing fiscal crisis in state government forced the University to reduce its budget request for the Medical School for fiscal year, 1974-1975. Dean Soutter, hospital director John Stockwell, and Dr. Wheeler were furiously engaged in recruiting for the Hospital so that planning could occur well before the building was completed. Yet, as had happened in the two years prior to the Medical School's opening, in 1973 legislators refused to pay for hospital personnel until the hospital was actually near completion. They balked especially at recruitment of what some legislators began to call "super-specialists," such as heart surgeons.[25]

Many of the same questions pitted Lamar Soutter against the UMass president. While Soutter had publicly promised that the hospital would not duplicate the strengths of existing Worcester hospitals but would instead emphasize tertiary care, legislators could not be persuaded to follow through with funding. Wood was in the uncomfortable position of trying to bring Soutter into line with the Beacon Hill perspective. In the summer of 1973, for example, Wood prepared an elaborate briefing paper for House Speaker David Bartley in advance of the latter's meeting with Dr. Soutter. Soutter, he knew, would be lobbying for the medical campus budget at a time when the Hospital's imminent completion, an increase in the Medical School's entering class size from 40 to 64 students, and a concomitant increase in faculty, combined to raise the budget request by 153% over the previous fiscal year. It was at this juncture, in fact, that Wood began to consider separating the Hospital's budget from the School's in future requests. (Soutter and Stockwell resisted this move initially because it made it more difficult for them to "rob Peter to pay Paul," as it were, by "borrowing"

faculty salary lines from one fund and applying them – temporarily – to the other when needed. (They may also have feared that this would make it easier to cut the hospital budget or even eliminate it.)[26] The President became wary of high-ticket hospital equipment purchases which might duplicate items already available at other Worcester hospitals. He cautioned Speaker Bartley regarding all these issues. Finally, Wood seems to have viewed Soutter's philosophy of medical education with progressively less enthusiasm. The Dean's vision of a research-oriented school, Wood believed, was "duplicatory," and an "old direction" that would not serve the state's needs. All in all, even though the President was working for the Medical School's ultimate good by trying to mediate between it and an increasingly impatient legislature, in the short term his actions were at cross-purposes with Dean Soutter's and, undeniably, were being taken behind the Dean's back. In this climate, it is little wonder that relations between the President and the Dean were chilly, or that the school viewed the approach of an outside Visiting Committee with heightened concern.[27]

Just weeks before the Visiting Committee was due to arrive, Wood wrote to Soutter complaining that he and his staff were not invited to meetings of the hospital and medical school planning committees. Soutter agreed to cut $600,000 and 60 new positions from his budget at the suggestion of state representative Joseph Early of Worcester, vice-chair of the House Ways and Means Committee. But disagreements continued. Wood explicitly wrote a series of questions for Soutter to consider in anticipation of the Visiting Committee's review. One major concern was the "clarification of the extent to which the development of super-specialties is an inevitable consequence of the decision to establish a teaching hospital in a town which already has a number of community hospitals." This, plus the likelihood that the hospital would not be self-supporting for a number of years –contrary to what the Legislature had been led to believe – were matters for the Visiting Committee to assess.[28]

The Visiting Committee convened on February 6, 1974. It was asked to either ratify Soutter's plans for the school, meaning a full-service medical center with both primary care education and a tertiary care hospital, or to acquiesce

to the Legislature's "buyer's remorse" triggered by the steeply rising costs of such plans. The committee, a distinguished group of academic medical leaders, was chaired by Dr. Kenneth Crispell, Vice President for Health Sciences at the University of Virginia. Continuity with the previously established Committee on the Development of the Worcester Campus was assured by the presence on both committees of Drs. Brownie Wheeler and Sam Clark, Chairmen of the Departments of Surgery and Anatomy respectively.[29] Its report, which was not presented to the Trustees until February 1976, carefully reinforced the need for a tertiary care teaching hospital, but as a foundation for good primary care education. It began: "The University of Massachusetts should continue its commitment to use its resources to encourage students to become primary care physicians and should develop postgraduate (or residency) training opportunities for primary care physicians..."[30] In all, the report carefully ratified Soutter's and the faculty's vision for the campus while also emphasizing the need to give primary care its full measure of support.

On February 18, 1975, Dr. Soutter asked to be relieved of his duties for reasons of health, months ahead of his scheduled retirement. An irregular heartbeat and the tensions of the hospital struggle seem to have impelled his decision. Just two weeks before that, Wood had written to him, "On several occasions I have asked you to provide...FY 1975 departmental state funds budget allocations for the Medical School and separately for the Teaching Hospital...this information has not been provided ...The Worcester Campus cannot continue operations under a single appropriation structure." Wood's main target may have been hospital director John Stockwell, but Soutter bore the brunt of Wood's persistence.[31]

Reactions to the news of Lamar Soutter's sudden retirement were swift. The day after the announcement Worcester's morning newspaper ran a story titled "Medical School's 'One-Man Army' Resigns," a direct quotation from department chair Bill Butcher. Butcher added, "Without him, I doubt the school and hospital would ever have become realities." That sentiment was widespread. President Wood's remarks to the Board of Trustees 12 days after Soutter's announcement

are worth quoting in full:

> The word most frequently used to describe Dr. Soutter in news stories and features since he was appointed in 1963 is 'tireless.' Whether it was at the State House, at Worcester, or at meetings of this Board, Bimi Soutter has given unsparingly of his energies and his time to the creation of the Medical Center. A *Boston Globe* reporter, writing in 1970 about the controversy over the construction of the teaching hospital, said: 'If any school can overcome overwhelming problems by dint of sheer enthusiasm, UMass Medical certainly will.' That enthusiasm and that relentless willingness to solve overwhelming problems, marked Dr. Soutter's style from the moment of his appointment in December 1963.
>
> I can testify from personal experience – he never hesitated to scold, chasten, and speak out for the school. When the Department of Health, Education and Welfare failed to come up with $16.5 million toward the construction of the teaching hospital, he described the agency as 'totally immoral.' When a newspaper columnist questioned the need for the hospital, Dr. Soutter said the newspaper's founder would turn in his grave at the thought that the paper had become beholden to what he called 'the big, powerful, private medical interests.' [32]

Two weeks later, the Board heard a request from Dr. Guido Majno, chair of Pathology, that the Medical School's library be named in honor of Dr. Soutter, the wish of the school faculty, administration, staff, and students. Although it violated the Board's then-current policy against naming buildings in honor of living individuals, the request was enthusiastically granted. Soutter was also named Chancellor/Dean and Professor of Surgery Emeritus.[33]

Reginald William (Bill) Butcher, Ph.D., chair of Biochemistry, was designated Acting Dean by President Wood and the Board of Trustees. Dr. Wheeler had been appointed Chief of Staff of the Hospital by the Board just five months earlier; his responsibilities for planning hospital operations and getting it open were now expanded. (Butcher referred to Brownie and himself as "Mr. Outside" and "Mr. Inside" – they made a good team.) The two main administrative responsibilities of the Worcester campus thus were quickly apportioned for the near future until a replacement for the Chancellor/Dean

could be found. A sense of how critical their situation seemed, however, may be taken from Dean Butcher's new nickname: "Acting Captain of the Titanic."[34]

R. William Butcher, Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

The Deal: A Tertiary Care Hospital for a Primary Care School

The year-long battle with Beacon Hill for the hospital dragged on. With the gubernatorial defeat in November 1974, of the Republican Francis Sargent by the Democrat, Michael Dukakis, the University gained a different kind of opponent, but an opponent nevertheless. Dukakis was concerned not merely to lower the state's indebtedness, but to reform the health care system. Inflation was ballooning construction and fuel prices just at the moment when the state of Massachusetts faced an enormous budget shortfall of its own – an unprecedented deficit of close to $700 million during Governor Dukakis' first year in office.[35] The budget deficit called for severe fiscal restraint by all state departments. University Hospital, scheduled to open in mid-1975, presented a multi-million dollar expense ripe for the cutting – despite the fact that its construction was almost complete. Newspaper articles glowingly described the new hospital's "colored carpets…massive loads of equipment…four-ambulance loading dock… awe-inspiring stillness [and] countless rooms…"[36] To Governor Dukakis and his Secretary of Educational Affairs, Paul Parks, on the other hand, the hospital

represented all that they disliked about UMass Medical School – unnecessary expense in the service of a mistaken idea, namely, to create an elitist medical research institution educating medical specialists at the expense of primary care practitioners. Governor Dukakis saw the issue this way:

> Look, what's this [medical center] going to do for the thousands of Massachusetts residents that today don't have decent affordable health care? That was our priority. This is all very interesting, a research-oriented medical school, but we're interested in the folks, first, who can provide the care for the kind of people we're concerned about, and secondly, whether or not thousands and thousands of Massachusetts citizens are going to have decent, affordable health care. You know, what's this going to do for those folks? And that was—was our priority, along with a concern about resources...[37]

Center, l to r, Governor Michael Dukakis, Secretary of Educational Affairs Paul Parks (*Photo courtesy of the Department of Special Collections and University Archives, W.E.B. Du Bois Library, University of Massachusetts Amherst)*

The people of Central Massachusetts, of course, understood the significance of the hospital quite differently. Organized labor understood its value in terms of jobs; local business and industry saw a more generalized boon to the regional economy; and local citizens looked to the prospect of being able to stay near home if a serious health problem loomed. The Comprehensive Health Planning Council of Central Massachusetts, Inc., especially chair Robert S. Bowditch and former chair, Robert D. Cope, added their support.[38] Labor leaders James P. Loughlin, Dan Murray and others did likewise. Local politicians such as John J. Conte, Daniel J. Foley, James A. Kelley, Jr., David Bartley, and Joseph Early provided the linkage among these various groups and lobbied for the necessary votes on Beacon Hill. The local papers followed the story with passionate headlines: "Officials Predict 'Disaster' if UMass Hospital Stalled;" "Early Says

State Stifles Medical School Growth;" and "End Delay on UMass Hospital." Dr. Wheeler, as the Hospital's Chief of Staff, wrote a blistering letter intended for the editor of *The Boston Globe* bluntly explaining that, "If the medical school and its teaching hospital are allowed to become a political football that can be kicked about by any new cabinet secretary, they will soon become sub-standard institutions for both education and patient care."[39]

Each side understood that the school itself would stand or fall with the fate of its proposed teaching hospital. On the Governor's side, Paul Parks, Secretary of Education and prominent activist for integration of the Boston public school system, publicly stated a preference for using the hospital as an HMO with prepaid medical contracts for inpatient and outpatient care, rather than as a tertiary care hospital. He thought "we ought to...develop something in between a tertiary care hospital and a community hospital or community medical center. We could develop a new model, something that has not been done anywhere else in the country."[40] From another corner of the field, potentially competing institutions such as Boston University, led by president John Silber, also voiced strong doubts about state support for yet another academic health science center. After all, Silber claimed, the state could subsidize all the medical students it might need – and at much less cost – at private schools like BU.[41] Governor Dukakis was less inflammatory, stressing his concern to see primary, not tertiary, care as the Medical School's chief mission.[42]

The battle came to a head during the summer and fall of 1975 over restoring $5.5 million to the state supplemental budget to complete the construction and equipping of the hospital. It played out primarily in two venues, on Beacon Hill and in meetings of the University Board of Trustees. Some idea of the activity of Worcester's legislative delegation can be gained from the following news clipping:

> State senators from the Worcester area rallied to the defense of the proposed teaching hospital at the University of Massachusetts Medical School in Worcester yesterday. Sens. James A. Kelley, Jr., D-Oxford, chairman of the Senate Ways and Means Committee, Daniel J. Foley, D-Worcester, and John J. Conte, D-Worcester, issued a statement saying they were 'confident that the Massachusetts Legislature will

> find the bulk of the budget for the medical school…If Secretary Parks does not see fit to insert it as a supplementary request, we in the Senate will insert it,' they said.[43]

Additional pressure was applied by organized labor, especially in the person of James P. (Jimmy) Loughlin, Secretary-Treasurer of the Massachusetts Labor Council of the AFL-CIO, and a Worcester native. Loughlin had been one of the first public figures to support Worcester as the medical school site in 1965. His presence at the school's groundbreaking testified to his influence. Now, a decade later, Loughlin was an even greater advocate for the hospital. In a crucial meeting in Worcester, Governor Dukakis, Secretary Parks, City Manager Francis McGrath, acting Dean Bill Butcher, and Loughlin met at the nearly completed hospital so that Dr. Wheeler could show them around. Loughlin minced no words. If the Governor wanted Labor in his corner, he should understand how much Labor cared about UMass Hospital because, as Dr. Wheeler remembered Loughlin's comments, "this was where the son and daughter of the working man was going to get his education, and they wanted it to be just as good as anywhere else."[44]

A final agreement was elusive. The Governor's objections to funding University Hospital, as noted above, were more than fiscal. One essential compromise, therefore, required the school's senior faculty and administration to hammer out a new "Statement of Goals" that explicitly emphasized primary care education. Easing the development of the document, ironically, was the much-lamented retirement of Dr. Soutter in February 1975. Tensions between the Dean and UMass President Robert Wood had likely impeded such recalibration of the school's stated goals. President Wood now urged the faculty and administration at Worcester to re-think – and *re-state* – the School's mission, reconciling the need for a teaching hospital with a fundamental commitment to primary care education. The task of shepherding a reformulated set of goals through the faculty fell to acting Dean Butcher.[45] The "Statement of Goals" eventually presented to President Wood vividly demonstrates how much the Medical School was now prepared to acknowledge the Commonwealth's expectations.

STATEMENT OF GOALS

The University of Massachusetts Medical Center

as prepared by

The Faculty and Administration

of the Medical School

1. Goals in Education

-- To provide excellent medical education to qualified residents of Massachusetts, graduating 100 new physicians each year.

-- To emphasize the training of family physicians, or as they are called in a broader sense, primary care physicians. These include the specialties of Family Practice, Primary Care Internal Medicine and Primary Care Pediatrics. A substantial majority of our graduates enter these specialties upon graduation.

2. Goals in Service

-- To improve the delivery of medical care for the citizens of the Commonwealth, with particular emphasis on those segments of the population who are underserved.

-- To assist in the development and provision of improved medical care programs and delivery for those patients who are served by other state health departments and agencies.

"Statement of Goals: The University of Massachusetts Medical Center, as prepared by The Faculty and Administration of the Medical School," September, 1975, pp. 1, 2. For complete citation, see n. 47.

In Dean Butcher's words, "we were singing the song that the Legislature wanted to hear, but fortunately it was something I believed in, too."[46] As in all earlier statements, the first goal was to provide "excellent medical education" to qualified Massachusetts residents. The second goal, however, read as follows: "To emphasize the training of family physicians, or as they are called in a broader sense, primary care physicians. These include the specialties of Family Practice,

Primary Care Internal Medicine and Primary Care Pediatrics. A substantial majority of our graduates enter these specialties upon graduation."

The document carried out a two-fold mission: to demonstrate the school's commitment to accessible primary care for Massachusetts, but also to medical and educational excellence, an implicit defense of a tertiary care teaching hospital. The statement insisted, somewhat defensively, "The only acceptable education for health care is one based upon the highest standards of excellence... The primary care physicians we educate must not be second-class doctors. They must be exposed first-hand to the latest and best methods...conducted in part where specialists can teach them, under expert supervision..."[47] Governor Dukakis had begun attending Board meetings during this period and his response to the Goals revealed how closely his administration followed these events. After the Board had discussed the document, Dukakis "remarked that he had read the one-page list of Medical School goals and believed they were excellent." Pressing his advantage, he urged the school to join with the Departments of Public Health and Mental Health in improving medical care to the clients of the state's health institutions such as schools for special-needs students and mental hospitals. At the next month's Board meeting, President Wood told his Trustees that the Statement of Goals "had had an important effect on the [Legislature's] deliberations on the budget of the University Hospital this year..."[48]

Not everyone was so sanguine; some even questioned the Statement's transparency. For example, although the body of the Statement included sections on the importance of research, in the brief executive summary research was nowhere to be found. President Wood saw the Statement as indicative of the "direction which this Medical School is taking," but others expressed doubt. Indeed the Chancellor of UMass-Amherst asked, incredulously, if the Medical School "actually did not view research as one of its goals." One of his deans had privately written him to say that, "The Statement ...is commendable –but is it complete, or honest? Or is this (merely) a political statement? How does one justify, for example, supporting the over-supplied specialty of cardio-thoracic surgery as compatible with...these goals. I guess I just question the integrity of

the Statement as it stands." Acting Dean Butcher was quick to reply that research was certainly one of the school's goals, simply not one mentioned in the executive summary. Other Trustees jumped in to say that the Statement

> ...makes clear the necessity for a faculty of specialists, in order to give primary care practitioners a well-rounded training which would enable them not only to excel in their field, but also to know what lay beyond their competence. The impression was made [by the Statement of Goals] that it is vitally important, in describing the Medical School's commitment to primary care, not to give the impression that it is a 'trade school for general practitioners.'

And here lay the heart of the matter. Many of the first faculty members, including Acting Dean Butcher, were dedicated researchers. Yet, from the fall of 1975 one can date the faculty's explicit identification with primary care education. As Chancellor Roger Bulger wrote in 1978, we "...have an unusual opportunity... to better link the basic medical sciences, the traditional specialty orientation of medicine, and the provision of humane and compassionate primary care." In short, this was the moment when the school acknowledged its hybrid identity.[49]

Roger Bulger, M.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

Governor Dukakis and others in the statehouse still held out for additional concessions. He exerted leverage when negotiations for Chancellor Soutter's successor reached the final stage. The background of Roger J. Bulger, M.D., President Wood's choice to follow Lamar Soutter, was well suited to the situation. An internist and previously the Medical Director of the University of Washington Hospital and Chief of the Division of Allied Health Professions as well as professor of Community Health at Duke, Dr. Bulger was currently the Executive Officer of the Institute of Medicine. Bulger was known to be someone knowledgeable about, and interested in, health policy. He was particularly engaged by the issue

of maldistribution of physicians geographically and by specialty. Wood was particularly impressed by Bulger's "direct involvement in the development of national health policy," but his reputation for tact and administrative finesse also must have looked appealing. As Wood frankly told his board, "The process of nomination was affected by current budgetary uncertainties."[50]

Governor Dukakis invited Bulger to meet with him and the Commissioners of Health and Mental Health, who quizzed him intently on the fallacy, as they believed, of locating a new, apparently redundant, medical center so close to Boston. Bulger was able to convince them that a state medical school would not be a burden on the state but, rather, would deliver health care that no other school could deliver, as for example, in state schools for disabled children. In private meetings, Governor Dukakis, acting Dean Butcher, and Dr. Bulger agreed that the medical school should take on a role in providing medical and psychiatric care for clients under the authority of the Departments of Mental Health, Public Health, and Corrections, something that Dr. John Howe, III, a recent recruit in cardiology, was already working on. This was a pressing issue for the governor, given that in 1972 a class-action lawsuit had held the state responsible for "sub-standard care" at Belchertown and other state schools, resulting in a consent decree which mandated improved conditions. Better health care for the schools' residents had become a priority.[51] Among Chancellor Bulger's first decisions, therefore, was to direct the medical school to pursue a contract with the Belchertown State School and Monson State Hospital to staff their medical departments.[52] In Dr. Bulger's words, "For me, it was an opportunity to show [Governor Dukakis] what a state school could do." By December 1976, the Medical Center had entered into service agreements with five state institutions. Parenthetically, this initiative led to the development of a Psychiatry Department at UMass that strongly emphasized public sector psychiatry. The hiring of Boston Children's Hospital psychiatrist Dr. Stanley Walzer, M.D. in 1977 – a strong advocate of public sector psychiatry – as the first permanent chair of the Psychiatry department, cemented the public sector orientation of psychiatry at UMass. In 1978 the department received a state contract to provide care at

Northampton State Hospital and in 1982, at Worcester State Hospital (now, the Psychiatric Treatment and Recovery Center).[53]

The final component of compromise, and surely the most important in the short run, was budgetary. After overwhelmingly voting down a Republican-sponsored bill to de-fund both the hospital and the medical school, all sides were ready to compromise.[54] The Trustees and school officials agreed to reduce the budget request for the hospital from $7.8 to $5.5 million. They further agreed to the insertion of a ceiling of $3.5 million on University Hospital's deficit for fiscal year 1976 (ending June 30, 1976) and the creation of a legislative oversight committee for the first half of 1976. With these controls in place, and a general sense of the momentum behind the hospital, the Legislature passed a funding bill on November 8; the Governor signed it into law on November 10, 1975. The hospital's Ambulatory wing opened in December, while the inpatient facility accepted its first patients in January 1976.[55]

Opening the Hospital

After more than a year of delays, the Hospital finally opened on January 18, 1976. Far into the night before the official opening, John Stockwell, Hospital Director, the Chief of Staff and Chair of Surgery, Brownie Wheeler, and many others, were busy plugging in equipment, installing curtains, and generally making sure the place was fit to receive patients. Dr. Wheeler appreciatively acknowledged that, "The environmental services people, the janitors, literally stayed up all night to have the corridors clean, and everything neat and clean for the photographers and the press, and so forth."[56] One 72-bed floor was opened with 28 beds "available to start" and about 40 full-time clinical faculty. For the next two or three years, the hospital must have looked ghostly. Dr. Richard Irwin, who visited several times before joining UMass as Chief of Pulmonary Medicine, remembered that, "The first time I came out here, the inpatient census was 33. There was gravel, you know, where the parking lots are. There were only two cars in the parking lot..." Gail Frieswick, a nurse-administrator who eventually

became a Vice Chancellor and the hospital CEO, was one of several early employees to mention those parking lots, and especially how muddy they always were whenever it rained or thawed: "There was no parking and it was all mud. That I do remember vividly because everybody complained about the mud when it rained." It took a decade to find money for a covered parking lot.[57]

Hospital on opening day, January 18, 1976
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

Dr. Arthur Pappas, chair of Orthopedic Surgery, admitted the first two patients, but Chancellor Emeritus Soutter was there, too, to welcome them.[58] Pappas, a native of nearby Auburn, was an orthopedic surgeon best known for his expertise in treating sports injuries, and a large practice at Boston Children's Hospital.[59] He was also the consulting surgeon for the Boston Red Sox. (One of UMMC's early Public Affairs directors, Carole Cohen, recalled the many occasions when her office was strictly forbidden to acknowledge the presence of Red Sox star players who were temporarily in residence under Dr. Pappas's care – no matter how graphic the local headlines announcing their presence. Word always leaked out. One doctor, for example, recalled an inquisition by

Susan Fitzpatrick, R.N. and Arthur Pappas, M.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

his barber in a neighboring town: "Was it really true that the Red Sox came to UMass?" (Naturally, he answered "yes.") Susan Fitzpatrick, who helped care for the first two patients, was the first RN hired and, like Dr. Pappas, remained a part of UMMC for many years. The two patients, a 10-year-old girl from nearby Dudley and a 3-year-old boy from Worcester, might have felt dwarfed by the hospital's cavernous size: as the only patients in a 400-bed hospital with only a few dozen doctors, nurses, and technicians on duty, they may have experienced a mixture of anxiety and amazement at their unusual situation. Both did well and at least one sent grateful notes and Christmas cards for many years afterward. That first week, most patients (there weren't many) were admitted either by Dr. Pappas or by the plastic surgeon, Wallace Chang. The Emergency Room, under Acting Director Dr. Wayne Silva, opened the same day with Dr. Alvin Blaustein admitting the ER's first patient.[60]

The plans for the Hospital's first year called for opening beds on a gradual, need-determined basis. But, indisputably, the growing numbers of medical students at UMMS would require a broad range of clinical services – and patients – to address their educational needs in the near future. Whereas in 1973, only 16 students required clinical rotations, by 1975, 48 were doing clinical rounds, followed by 104 in 1977. Once the school reached its maximum enrollment, approximately 200 third- and fourth-year students would need clinical training at University or other hospitals in the region. Thus, the Hospital's growth pattern attempted to balance educational need, patient demand, and strategies to further increase patient demand. As the "Maintenance Budget Request" for the Hospital's first year of service noted, "The growth of the Medical Departments will be influenced by the rapidity with which the physicians [and surgeons] build firm referral patterns and the academic emphasis on a particular medical specialty." The pattern of nurse staffing would follow the patterns established by the medical services. Overall, the total staff projected for the Hospital's first year numbered 175.[61] Initially, besides Nursing, Housekeeping, Food Services, and Laboratory

Services, the clinical departments included Ambulatory Medicine, Anesthesiology, Cardiology, Medicine, Obstetrics-Gynecology, Pathology, Pediatrics, Psychiatry, Radiology, and Surgery. Within a year, their number and complexity grew enough to require a full organizational chart of departmental divisions and new departments, including Family and Community Medicine, Laboratory Medicine, Nuclear Medicine, Orthopedics, Physical Medicine and Rehabilitation, and Ophthalmology.[62]

A fundamental dilemma, one that acting Dean Butcher described as being "caught between a rock and a hard place," arose from the hospital's desire to minimize direct competition with the local hospitals, on the one hand, and its need to stay within its agreed upon deficit ceiling by maximizing patient revenue. Regional collaboration, an early hope of the Worcester-region Comprehensive Health Planning Council, proved elusive. The idea for a Consortium of Worcester Hospitals originated in 1974 as a suggestion of a community visiting committee chaired by the president of County National Bank. The Consortium first met on October 31, 1974 and consisted of representatives from City, St. Vincent, Memorial, Hahnemann, UMass, and the Comprehensive Health Planning Council of Central Massachusetts, Inc. According to a newspaper account, they intended to discuss issues of "inter-hospital competition." The meeting was called to "let everyone know what [UMass Hospital] is doing and for UMass to know what they are doing." Two weeks later, the first indications of discord appeared when Dr. Soutter replied to a complaint from Helen Marie Smith, executive director of St. Vincent Hospital. She complained about the school's plan to use its emergency room to care for local patients who are "not now receiving care." Smith argued that offering outpatient care through the University Hospital ER violated the spirit of their agreement not to compete. (Soutter agreed, saying, "She has a point," though he added that the school's educational needs precluded his being able to abide by the agreement in this case.)[63]

The group established formal by-laws in 1979, and attempted to function

Current Departments* [64]

Department	Status	Chairman	Current Full-time Faculty	Additional Faculty Allocation (FY75)
Anatomy	Established	S. L. Clark, Jr.	9	--
Anesthesiology	Approval requested	M. D. Stanton-Hicks (Appt. req.)	--	5
Biochemistry	Established	R. W. Butcher	10	--
Cardiovascular Medicine	Established	J. E. Dalen	3	--
Community and Family Medicine	Established	H. S. Fulmer	6	1
Graduate Family Practice	Established	R. E. Walton	2	1
Laboratory Medicine	Approval to be requested	M. Kaplan (Acting)	0	4
Medicine	Established	R. B. Hickler	11	4
Microbiology	Established	D. J. Tipper	7	0
Nuclear Medicine	Established	L. Braverman (Acting)	0	0
Obstetrics and Gynecology	Established	R. F. Hunter (Acting)	0	2
Ophthalmology	Established	C. D. J. Regan	1	1
Orthopedics	Established	A. M. Pappas	3	1
Otolaryngology	Established	R. E. Gacek	1	1
Pathology	Established	G. Majno	5	2
Pediatrics	Established	H. B. Hanshaw	1	4
Pharmacology	Established	N. C. Brown	9	--
Physiology	Established	H. M Goodman	10	--
Psychiatry	Established	E. Mason	--	2
Radiology	Established	L. E. Hawes	2	2
Surgery	Established	H. B. Wheeler	6	2
Urology	Established	A. P. McLaughlin	1	--

Departments for which approval has not yet been requested

Animal Medicine	W. Webster
Dermatology	0
Genetics	0
Neurology	2 (from Medicine)
Physical Medicine & Rehab.	0
Radiation Therapy	1

* c. June 18, 1975

collaboratively. However, whether through genuine misunderstanding or deliberate subterfuge, the preemptive acquisition of a second linear accelerator by the same local hospital, St. Vincent, in violation of an understanding that no one hospital would, as it were, corner the local market on such services, reinforced the mistrust with which Worcester's three largest hospitals, University, St. Vincent, and Memorial, viewed each other. The group soon ceased to collaborate meaningfully, resulting in increased hospital costs for the region as a whole since, in a faithful reflection of national spending patterns, each of the larger hospitals acquired the expensive equipment it felt essential to its own patients' needs.[65]

One major concession to regional planning was the decision by UMass and Memorial to divide the Obstetrics-Gynecology functions between them. Memorial had long been a major obstetrical center, which UMass agreed not to challenge; UMass, on the other hand, established an Obstetrics-Gynecology department emphasizing gynecology and especially gynecological oncology and other complex cases suited to a referral center, as well as establishing a Worcester Adolescent Pregnancy Program with Planned Parenthood. (St. Vincent, the only Catholic hospital in Worcester, continued its own obstetrical service.) Richard Hunter, previously the chair of OB-GYN at Memorial, became chair of the department at the medical center, with a residency shared by both institutions.[66]

An Emergency Room and Trauma Center, on the other hand, were always part of the Hospital's plan, despite the potential to compete with other hospitals' emergency services. Similarly, although an emergency helicopter transport service received approval from the UMass Board only in 1982, it was clearly anticipated in the original plans, as evidenced by the presence of a helipad on hospital blueprints from 1968. Dr. Wheeler proposed the helicopter service based on his surgical experiences in Korea; in planning for the ER, he placed the helicopter pad "right outside the entrance to the Emergency Room." As these services developed, so did opposition to them, both from Boston and closer to home. Lamar Soutter, according to Dr. Wheeler, never explicitly denied that UMass would include an Emergency Room. To be a fully developed teaching hospital, how could he have made such a pledge? After all, a hospital, and especially a publicly funded hospital, would be

obliged to at least stabilize patients who were brought to it in an emergency. Of course, such patients might well be referred to the medical center's own physicians for follow-up. This prospect strongly suggested that UMass Hospital would, despite Soutter's assurances to the contrary, directly compete with local hospitals. Local hospitals were correct to be concerned. By the summer of 1978, according to figures submitted to the state Department of Public health, the vast majority of ER patients at University Hospital originated in and around Worcester: 45% lived in the city of Worcester itself; 49% in the rest of Worcester County. As one sign of the importance of Emergency Medicine to the hospital, although it was initially a division within the Department of Medicine, it became a free-standing hospital department in 1991, the same year the American College of Surgeons awarded UMMC standing as a Level 1 Trauma Center. Emergency Medicine became an academic department in the school at the end of 1993 under the leadership of Richard Aghababian, M.D. [67]

Dr. Aghababian, a member of the first graduating class of the school (1974), after two years in an Internal Medicine residency in Cambridge had traveled to the University of California San Francisco (UCSF) to be part of the first fellowship program in Emergency Medicine, a program sponsored by the UCSF Department of Medicine and funded by the Robert Wood Johnson Foundation. When he first returned to the east coast, he worked as the ER chief at a regional hospital in Fitchburg while volunteering at UMass one shift per week. As Dr. Aghababian described it, the Emergency Medicine program at UMass developed in a "somewhat clandestine" fashion because of the lingering tensions with other local hospitals. Developing a robust Emergency Medicine service was a foundational goal, part of the Hospital's drive to establish its unique importance to the health of central Massachusetts.[68]

Richard Aghababian, M.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

The introduction of an emergency medical helicopter service in 1982

naturally facilitated this goal. It also provoked more concern, this time from hospitals in Boston, not just Worcester. Despite the presence of a helipad in early hospital blueprints, detailed planning for what became the New England Life Flight service only began in 1981. Boston University's chief of surgery approached Dr. Wheeler to explore a cooperative helicopter transport service based at BU but the two institutions could never agree to what seemed like a fair division of costs – at least in the eyes of UMass. (That is why the other Boston hospitals, which had been approached before UMass, had not signed on with BU either.) In October 1981, the Board authorized UMass Chancellor Robert Tranquada, Roger Bulger's successor, to prepare a proposal for the Board. On June 9, 1982, the helicopter service was finally approved after opposition from Boston supporters was quelled, but only for one year.

Life Flight, 1983
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

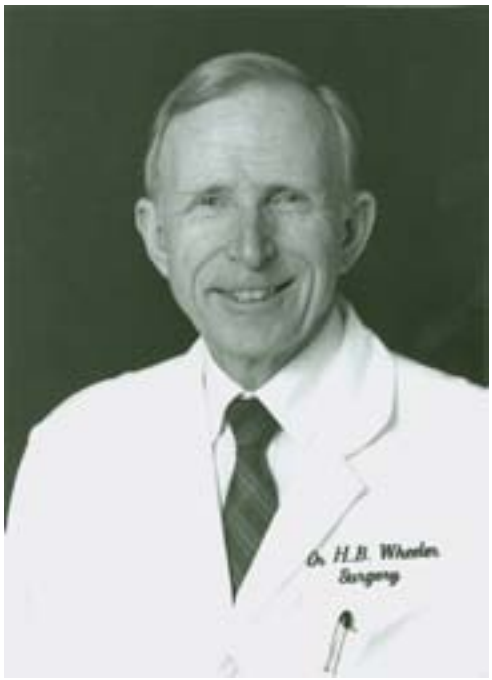
It was inaugurated on August 31, 1982 and renewed the next year. Two years later, a tragic helicopter crash, the result of dual-engine failure, cost the lives of the pilot and the attending physician.. (The patient, strapped to a gurney, survived, as did the nurse, although she was seriously injured.) The program, after reevaluation, was resumed quickly. On May 20, 1985, the Board of Trustees reauthorized it on "a continuing basis." By the fall of that year, a planned reunion for Life Flight patients anticipated sending invitations to 1,000 people.[69] In 1991 when UMMC took over the ambulance service for Worcester, a service previously run by the Fire Department in conjunction with City Hospital, the UMass Emergency Department was no longer hiding in plain sight. With the ambulance service, a residency program, and Life Flight, it had become a major part of the hospital's services.

Staff and Program Development

Recruiting for the clinical departments, given the continuing uncertainty over funding for the hospital, presented a greater challenge than did the hiring of basic science faculty and chairs (to be discussed in Chapter 8). Dean Soutter had played the major role in the earliest recruiting, with some assistance from John Stockwell, the man he recruited from Children's Hospital of Minneapolis to be the first Hospital Director. But his chief ally in recruitment and early planning was Dr. H. Brownell ("Brownie") Wheeler, an innovative young surgeon specializing in peripheral vascular surgery. Wheeler, a Kentucky native and a graduate of Vanderbilt University, Harvard Medical School, a residency at Peter Bent Brigham Hospital (now Brigham and Women's) in Boston, and a fellowship at St. Mary's Hospital in London, was a surgical pioneer; at St. Mary's he had been the operating surgeon with his mentor, the British surgeon Charles Rob, during the first published series of carotid endoterectomies.[70] Wheeler returned to the Brigham after his fellowship and pioneered the procedure there. He then also developed a non-invasive approach to identifying deep vein thrombosis (DVT), a technique known as "impedance plethysmography."[71]

In the mid-1960s, when Lamar Soutter began scouting for talent, Brownie Wheeler was an assistant professor in Surgery at Harvard as well as Chief of Surgery at the Harvard-affiliated West Roxbury Veteran's Administration Hospital, an appointment he'd been given at the age of 33. At the time, Dr. Soutter was the V.A.'s Chief Consultant in Surgery for the New England/New York region; he spent a lot of time at the West Roxbury hospital which happened to be only a few miles from his home. Wheeler attracted his notice when, despite his relative youth and junior status, he won a contest over a recruitment preference against Dr. Francis Moore, renowned Chief of Surgery at the Brigham, a senior professor at Harvard Medical

School, and, incidentally, one of Dr. Wheeler's direct superiors. Wheeler, who had impressed Soutter with a combination of fairness, toughness, and compassion, was first invited by Dr. Soutter to help out with the planning in July 1964. As he recalled, "At the time…the entire UMass Medical School consisted of him and his secretary in [an office] in the old Boston Gas Building."[72] Wheeler became the school's first paid faculty consultant in the fall of 1966 with the understanding that he would become the first chair of the Department of Surgery. He began as Chief of Surgery at St. Vincent Hospital in Worcester in 1971 until University Hospital opened in 1976 when he became the Chair of Surgery at UMMS.[73]



H. Brownell Wheeler, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Wheeler was a ubiquitous presence at the Medical Center, taking on various roles such as Hospital Chief of Staff, founding chair of the Executive Committee, founding chair of the Educational Policy Committee, and innumerable recruitment and other ad-hoc duties. He was also deeply involved in planning the physical layout of the hospital, the research facilities, animal quarters, and the Group Practice plan. Some years later, he also founded the palliative care program in the Department of Surgery as well as a school-wide committee, sponsored by the Lamar Soutter Library, to develop a program in Humanities in Medicine. There was little in the medical center's early development, in fact, that Brownie Wheeler did not

help shape. Through a long and distinguished career here, he well deserves to be called "the patriarch of the place," in the words of fellow department chair James Dalen. It is not surprising that President Wood turned to him as a mediator during Wood's tense standoff with Dr. Soutter over the Worcester campus Chancellorship. One of Dr. Wheeler's earliest recruits for the Department of Surgery, Bruce Cutler, M.D., recalling his impressions after 30-plus years, said of Brownie Wheeler, he was "the most fair and honest of any leader I ever dealt with." Numerous interviewees have echoed this sentiment.[74]

The Wheelers lived just two blocks from the Soutters in the town of Dedham

H. Brownell Wheeler, M.D., center, with medical students, residents and patient. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

– highly convenient when Lamar and Mary Soutter entertained potential recruits. Brownie and his wife Betty could walk over to join them for dinner. Afterward, the two couples would discuss whether the candidate was a good "fit," a reference not only to academic and/or clinical excellence, but to a combination of collegiality, confidence, and excitement that Soutter especially valued. Even before Dr. Wheeler became a paid consultant to the school, he acted as the Dean's unofficial sounding board and confidante during informal evening conversations at home. As Soutter wrote to President Lederle in 1966, of all the candidates he considered to become chair of Surgery (for Soutter, perhaps the most critical appointment),

Wheeler was the best qualified by both "experience and temperament for the job. He is young, energetic, extremely tactful, and has shown considerable effective leadership in running the surgical service at the Roxbury V.A. Hospital." Besides his administrative and clinical flair, Soutter judged that Wheeler's "investigative work is excellent."[75]

Given Soutter's and Wheeler's backgrounds, it is understandable that many of the early faculty recruits came from Harvard or BU. One internist who arrived here in the early 1970s remembers hearing the place referred to as "Brigham West."[76] Many of the first clinical department chairs, including James Dalen (Cardiology), Arthur Pappas (Orthopedics), Stanley Walzer (Psychiatry), Roger Hickler (Medicine), and Brownie Wheeler (Surgery), either had been educated at Harvard hospitals, had spent much of their previous careers working there, or both.[77] Their jobs were especially challenging, not only because of the uncertainty or at best, frugality, of state support, but because they were asked to achieve two distinct goals: to build up the specialty services implied by Soutter's claim that this would be a referral hospital, and to bring in enough patients to fill hospital beds and outpatient clinics and supply sufficient educational opportunities for the students.

Soutter, a thoracic surgeon himself, no doubt with the agreement of Brownie Wheeler and John Stockwell, decided very early in the Hospital's planning phase to make cardiac surgery and cardiovascular medicine centerpieces of the Hospital's offerings. Despite having three large community hospitals, three smaller hospitals, and one state psychiatric hospital, Worcester did not have the kind of advanced cardiac surgery – coronary artery bypass surgery, valve repairs or replacements, for example – then becoming available in most cities of its size. Such procedures, besides extending lives considerably, also brought in substantial revenue to the hospitals that performed them. Cardiac surgery took time to develop. Soutter had high hopes of recruiting John J. Collins, M.D., the Chief of Cardiac Surgery at the

Brigham, an effort that provoked Board of Trustee-level discussions of the over-scale salaries such surgeons would require and intensified unease over the direction the school might be taking under Lamar Soutter's leadership. One of the Trustees, Commissioner of Public Health William Bicknell, "expressed his belief that the impact of such specialties on the balance of a medical school teaching program deserves the most serious consideration, and questioned the impact such specialties would have on one of the goals of the Worcester Medical School – the training of family and community physicians." He was sure that a "superspecialty [sic] department start-up could have a potentially adverse impact on the Medical School's programs," and added, "The need for additional cardiac surgical units in Massachusetts...approaches zero..."[78]

Bicknell need not have worried. Collins withdrew his acceptance of the position in Worcester. Cardiothoracic surgery did not jump start the Hospital's patient revenues and, although it developed into a much needed service for central and western Massachusetts and a financial mainstay of the hospital, it did so gradually. Wheeler believed, on the basis of conversation with other leading surgeons in the Harvard system, that some of the leaders of cardiovascular surgery in Boston actively tried to keep experienced surgeons from starting a new, potentially competitive program in Worcester. But, since the hospital had already hired several young surgeons who had been trained at Massachusetts General Hospital, UMass was able to at least start its program by having cooperating surgeons from Mass General, including the Chiefs of Surgery and Cardiac Surgery, Drs. Gerald Austen and Mortimer J. Buckley, respectively, preoperatively examine patients to confirm the need for surgery and, occasionally even perform the procedures themselves. Young surgical recruits, such as the future chief of cardiac surgery, Thomas Vander Salm, M.D., and the future chief of vascular surgery, Bruce S. Cutler, M.D., who both trained at Mass General,

Okike Nsidinanya Okike, M.D. from the Mayo Clinic, and others, carried the program on their own after four or five years. But at the beginning, given chronic

Thomas Vander Salm, M.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

Okike Nsidinanya Okike, M.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

understaffing, Vander Salm and Cutler both performed many of the procedures and acted as interns, attending the patients at nights and on weekends.[79] Again and again, in Dr. Wheeler's words, "it was a big struggle to get the necessary approvals to do a lot of things that were competing with Boston, because there was a lot of organized opposition from Boston [hospitals]." With time, Dr. Vander Salm's cardiac surgery unit became a genuine success for the hospital and the region.[80]

Cardiology, however, did well from the beginning. Ironically, one of Dr. Collins' long lists of demands to Soutter and Stockwell had been that James Dalen, then chief of one of the cardiac catheterization labs at the Brigham, be recruited to Worcester. When another of Soutter's high-profile Harvard recruiting efforts, to lure the renowned cardiologist, Richard Gorlin, also fell through, Dalen's recruitment became much more urgent. Dr. Gorlin had negotiated to become the head of a fiscally autonomous department of Cardiovascular Medicine, an unusual arrangement given cardiology's typical placement as a division within a department of medicine. Now, despite Dr. Dalen's more junior status than Gorlin, he became the beneficiary of Dr. Gorlin's negotiating skills. He negotiated actively on his own behalf as well, insisting that Cardiology be responsible for catheterization studies, especially angiograms, rather than the Department of Radiology. Since one of the leading local cardiologists and a likely source of many referrals, agreed with Dalen, he won his point. In the meantime, he assured Cardiology of an early revenue flow.[81] Dalen recalled,

> I had just become an Associate Professor of Medicine. I was in charge of one of the cardiac catheterization labs, and like everyone else in Boston, I was very curious about the new medical school being built in Worcester. I certainly wondered who was going to be on the faculty there, particularly wondered who was going to be the Chief of Cardiology. I think many other cardiologists at Harvard, BU, and Tufts also wondered who would go there.

When Brownie Wheeler approached him about the position, he was delighted at the opportunity. Like nearly every early recruit to the medical center, Dalen saw it as "a wonderful opportunity, [a] brand new medical school, [to] build a whole department." Dalen had been trained by another eminent cardiologist, Dr. Lewis Dexter, known for innovations in understanding the natural history of pulmonary embolism, its diagnosis, and prophylaxis. Dalen's interests centered on preventive

cardiology, especially venous and arterial thromboembolism. This focus fortuitously harmonized with Brownie Wheeler's work on deep vein thrombosis in the '60s and '70s. At the time Dalen left Harvard for UMass Medical School, he was the principal investigator of the Multiple Risk Factor Intervention Trial (MRFIT), one of the early trials of heart attack prevention. Dalen, who remained at UMMS for nearly 15 years, served as Chair of Cardiovascular Medicine, Chair of Internal Medicine, Physician-in-Chief, and finally interim Chancellor at UMass before becoming dean and Vice President for Health Sciences at the University of Arizona. His clinical priorities, like Brownie Wheeler's, played a crucial role in establishing the Medical Center on a sound footing.[82]

Dalen began his work in Worcester in the spring of 1975. He and his first faculty recruits (Drs. Ira Ockene, who ran the UMass catheterization lab; John Paraskos, who was the first echocardiographer at the Brigham and designed and

James Dalen, M.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

ran the heart station at the UMass hospital; Joseph Alpert, who later became the Chair of Medicine at the University of Arizona, and John P. Howe III, who later became a dean at UMass Medical School, president of the UT Health Science Center-San Antonio, and currently CEO of Project Hope), arrived about six months before the hospital opened. All had either been part of Dalen's service at Peter Bent Brigham Hospital, had been trained by Lewis Dexter, or both. Dr. Dexter, too, who

retired from Harvard shortly after University Hospital opened, came to UMass once a week for a few years to teach third-year medical students.[83]

Dr. Dalen understood the value of building up a patient base before embarking on major research initiatives. As he always insisted, "You've got to have a base…if you don't have [patients], you have nothing…[The] first priority, of course, is teaching, and that's why we're here. In order to have teaching, you ought to have patients."[84] Dalen well understood that, "Worcester did not need another hospital. I mean, you know, you had St. Vincent, a very strong hospital; Memorial was a very strong hospital. And they had about four other ones. Well, it took time…people that live in central and western Massachusetts are not crazy about going to Boston for health care. If you have good health care in Worcester, they will come, if you reach out to them." And that is exactly what they did:

> I had four cardiologists just sitting on their thumbs, planning things. And just about that time the CPR became an important thing… And so we trained doctors in CPR all over the state, all over the western and central part of the state. We'd actually – we went to almost every hospital in…western and central Mass[achusetts] that would have us, and put on programs in… cardiac resuscitation. And that's how we got to know all the doctors.[85]

By 1978, hospital director Michael Bice could report to the Trustees that in the previous six months, almost all patient referrals from outside hospitals came from locations where UMass physicians had previously given continuing medical education classes. Dalen had made the conscious decision to compete for patients in the towns surrounding Worcester rather than in Worcester itself or, in Dr. Ira Ockene's words, "to go after the doughnut and leave the doughnut hole alone… to go after patients who had previously been going to Boston, primarily from the suburbs around Worcester, the towns around Worcester," to minimize "town-gown" conflicts. It did not hurt, either, that the then Bishop of Worcester became one of Dr. Dalen's patients. Word spread.

Eventually, Dalen's department created the second largest cardiac-care unit in New England. Within three years, UMass hospital was performing more cardiac catheterizations than Memorial and St. Vincent hospitals combined.[86] The outpatient clinics, which opened in May 1975, seven months earlier than the hospital, had seen 3,500 patients by January 1976; Stockwell was careful to report that only 30% of these patients were from Worcester.[87]

Two years after Dalen's arrival, the new Chancellor, Roger Bulger, M.D., informed him that Roger Hickler, M.D., a respected internist, had decided to step down as the chair of Medicine. Dalen and Bulger both vividly remember their conversation. Dalen was offered two choices: to become the Chair of a reunited Department of Medicine, or to continue as the chair of Cardiovascular Medicine and spend the rest of his life fighting a new Chair of Medicine. He chose option one.[88]

Roger Hickler, M.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

Roger Hickler was named the Lamar Soutter Professor of Geriatric Medicine and in 1978 established a division of Geriatrics within the Department of Medicine. In a related development, which had been in the works from the opening of the Hospital, they established a palliative care unit of five or six beds:

> This program, [Chancellor Bulger told the Board], would be devoted to the care of people who were terminally ill and who had to be hospitalized for brief periods. The thrust of the program was to enhance the care of such patients at home...to help not only the patients but also the families of the patients. Such care, he noted, was reimbursable by both Medicare and the insurance companies. Home care of the terminally ill...involved the Visiting Nurse Association and volunteers, and a hospital back-up was needed. [Patients would receive] only such care as was necessary for brief periods of time...This would be the first such unit in a hospital in the United States.[89]

Coincidentally, at about the same time the Jewish Home for the Aged of Worcester County, located in Worcester itself, approached the medical center for assistance in developing fuller interest, awareness and competencies in the care of the elderly among Worcester-area clinicians and medical students. The medical center responded by establishing a small Gerontology Planning Office, headed by Rosalie S. Wolf, Ph.D., with an advisory council headed by Dr. Philip Caper, the new Vice Chancellor for Health Affairs (see below) as well as medical faculty such as Dr. Hickler, and community members. After a few years, it became plain that geriatrics programs were being developed at all three of the UMass campuses; a proposal for a University-wide center with partnerships among Worcester Consortium colleges seemed likeliest to win Trustee approval and, just as important, funding from the National Institute on Aging and private foundations. Under Dr. Wolf's leadership, such a proposal was presented to the Board in 1981 with full support from the University president, David Knapp. It was established in February 1981 with seed money from the University.[90]

A Group Practice Plan for the physicians was enacted as early as 1974. It established that revenues collected for professional services be deposited in a Group Practice trust fund controlled by the medical school dean and used to pay overhead and operating costs of the practice, equipment, educational costs, base compensation, and fringe benefits for members of the group practice. Initially, no thought was given to the disposition of physician earnings over and above the level of base salary and fringe benefits; such overages were routed directly to the medical school dean to be used for "institutional purposes." After the plan had been working for a year or so, however, Bulger and the clinical department chairs realized that the plan actually might be a *dis*incentive to the "high-earning specialties" such as anesthesiology or surgery. In the fall of 1976, Dr. Bulger explained the problem to

ESTIMATED FY77 PHYSICIANS' GROUP CASH FORECAST*

SUMMARY

CASH INCOME	
Estimated collection of FY76 receivables	$100,000
Inpatient, excluding Cardio-Thoracic	986,000
Cardio-Thoracic Program	186,000
Clinic	128,000
Emergency Room	83,000
TOTAL	$1,483,000
EXPENDITURES	
Professional liability insurance	200,000
Administrative Costs	75,000
Cardiac Surgery program	55,000
Group Practice salaries	750,000
Incentive overage	50,000
Fringe benefit program	250,000
Repayment of loan and interest	100,000
Reserve fund	3,000
TOTAL	$1,483,000

*Doc. T76-098, "Cash Flow Shortfall in Group Practice Trust Fund, Memorandum to the Board of Trustees Executive Committee, June 1, 1976, Box "Trustees Documents, FY 1976, 001-101," fol. "Trustees Documents, T76,091-098," Trustees, UM/A.

the Health Affairs committee of the UMass Board, urging that some of the overage be returned to individual departments for the chairs to use for departmental development, whether as faculty incentives or as investments in equipment or staff. Some of the overage, too, could be given to less high-earning departments such as Family and Community Medicine or Pediatrics to redress resource imbalances somewhat. The remainder would be used by the dean. But by the end of its first year, the most serious problem posed by the Group Practice was the need to pay its physicians when the Hospital's delayed start-up had made it impossible for them to generate much income for the first 6 months of the Group's operation.[91]

Nursing

Establishing the Nursing service at the Hospital was equally complex. A team of nurse administrators from Utah had been hired to manage the hospital, but was fired after only a short time for failing to establish the necessary policies and procedures, hire sufficient nurses, or train them for the appropriate levels of care. After two years in operation, the Hospital was still trying to stabilize its nursing administration. Staff nurse turnover was also considered a serious problem even by the UMass Board of Trustees. The state's lower than average wage scale was one important reason for these difficulties.[92] But the problems ran much deeper. Anne Bourgeois, Ed. D., who was hired in 1978 to coordinate, standardize, and upgrade the nursing clinical practice (and who became Chief Nursing Officer in 1986 and President, University Hospital from 1998-2001), had been teaching at Hahnemann Hospital in Worcester, a diploma school, before coming to UMass. In an era when hospital-based, diploma-granting nursing schools were increasingly seen as inadequate for the demands of a newly professionalizing nurse workforce, UMass Hospital established a policy of only hiring collegiate-trained nurses.

Dr. Bourgeois, who had a Bachelor's degree in nursing at the time, was keenly aware of the resentment that the new hospital had generated among local diploma graduates.

> They called this the white elephant on the hill…and it was like if you were living in Worcester, and you were a staff nurse, and you were working at City, St. V's, or Hahnemann, or Memorial – probably especially Memorial – you did not go to work at UMass, because it was not the place to go. So any staff nurses that left where they were working had to be enticed with something other than either money or the reputation of the place. That's really tough![93]

Diploma schools feared they would be closed, as indeed they were over the ensuing decade. Another source of resentment, however, was based on the growing national trend toward "primary," vs. "functional" nursing practice. "Primary" nursing emphasized the nurse's responsibility for the continuity of care and therapeutic relationship with her/his assigned patients. Unlike an earlier model of nursing, it deemphasized the performance of specific nursing tasks in favor of coordination of the patient's care, often in collaboration with a more narrowly credentialed provider, such as a Nurse Assistant (NA) or Licensed Practical Nurse (LPN). Gail Frieswick, Ed. D., the Associate Director for Clinical Practice (and eventually the Vice Chancellor/CEO from 1988 to 1995), hired Bourgeois a few months after her arrival at the hospital. Frieswick had been specifically charged to develop primary nursing as the standard of care throughout the hospital. Bourgeois' experience in both the diploma and the collegiate traditions made her an ideal person to help new collegiate graduates master this new model of nursing, and the two made a formidable team. An early ally, Dr. Lillian Goodman, was the chair of the nursing program at nearby Worcester State College (WSC). Goodman, who became the second dean of the UMass Graduate School of Nursing in 1995, along with Mary K. Alexander, a nurse practitioner and professor at WSC who in 1995

became an associate dean and a professor at UMass, were fierce advocates for this new direction in nursing and were invaluable in sending the Hospital their WSC graduates. Internally, an education office was established to continually upgrade nursing skills as more advanced technologies and services were added to the hospital. Building by word of mouth, Frieswick and Bourgeois were able to hire more and more nurses. In 1977, too, the Hospital Management Board voted to raise nurse salaries to a par with other hospitals in Worcester and Boston. The nursing situation gradually improved.[94]

Gail Frieswick, Ed.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

Anne Bourgeois, Ed.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

Frieswick undertook another difficult job – to transform the traditionally patriarchal relationship of doctors to nurses into a model of mutual respect consistent with changing professional and gender norms of the 1970s and ’80s. For example, in the beginning, the nursing administrators had no office space of their own; they used one of the patient rooms on the third floor. The process took time. Once Frieswick became Director of Nursing she began by visiting the clinical chairs in their offices every month. At first, she remembered,

> They did not want to talk to me...I just consistently came every month. I did not let them go. I did not let them up. I met with every individual clinical chair, and then I would start telling them about what was going on in the hospital...and I really focused on their clinical practice...I would get them involved with what they wanted in [the nurses'] clinical practice, because we needed to know...You know, after 17 years, you get to know people...They could come into our office anytime, Anne or I, and talk with us about anything.

This was a two-way street. Often, if a nurse was not performing at the necessary level of expertise, the doctors came directly to Bourgeois, then the Associate Director of Nursing, to solve the problem. Eventually, Dr. Frieswick was included in the monthly department chairs' meetings and meetings of the Hospital Management Board. As Dr. Frieswick put it, "We built bridges." Collaboration became more essential every year since the hospital needed to increase its patient revenues to minimize its dependence on state funding and free those state revenues for the school. New floors could not be opened nor new services started without appropriate nursing to staff them. Collaboration was not optional.[95]

Solidifying the Hospital's Position: 1976-1986

The opening of UMass Hospital in 1976 coincided with the arrival of the new chancellor/dean, Roger Bulger, M.D. and his wife, Ruth Ellen Bulger, Ph.D., Professor of Anatomy, Physiology, and Genetics. For the two years they were in Worcester, keeping the hospital on a positive trajectory was likely Roger Bulger's most pressing and difficult challenge.[96] One of his first major appointments, explicitly responding to this need, brought Senator Edward M. Kennedy's chief health policy adviser, Samuel Philip Caper, M.D., into Bulger's administration. A 38-year-old internist (non-practicing) and microbiologist, Caper was best known in Boston medical circles for having helped organize a "heal-in" at Boston City Hospital in the mid-1960s. After a stint as a researcher at NIH followed by

a position administering the outpatient unit of Boston City Hospital, he joined Kennedy's Washington staff on the Senate Health Subcommittee, helping to write the National Health Planning and Resources Development Act of 1974. He and Bulger worked together when the latter led the health manpower initiatives of the Institute of Medicine. Bulger created the new position of Vice Chancellor for Health Affairs to accommodate the role he hoped Caper would play, namely, as a health policy expert whose government experience would facilitate the school's dealings with the state and with regional health entities such as the other Worcester-area hospitals. As a measure of the importance of the position to the new Chancellor, it was explicitly described as the second senior administrative officer after the Chancellor/Dean.[97]

At about the same time, the Board of Trustees established a Hospital Management Board. Mr. Joseph Benedict – past-President of the Federal Home Loan Bank of Boston, President of the Worcester-based Freedom Federal Savings Bank, a Brigadier General in the Army Reserves, and a close friend of Senator Kennedy – was named its inaugural chair.[98] Benedict retained this post for nearly 20 years during which he was a staunch supporter of the Hospital's mission in central Massachusetts.[99]

Joseph Benedict
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

The Management Board was at first considered advisory to the Medical Center's Chancellor.[100] But in 1982 the Board, still with Benedict as chair, was reconfigured into the Management Board of the University Hospital and given stronger determinative powers. Of the 17-member Management Board, nine slots were explicitly reserved for members who worked and/or lived in the Worcester area, not including the medical center chancellor, the hospital director, a member of the

medical staff elected by the hospital executive committee, and the chief of staff, who also were Board members. The University President or a designee and three UMass Trustees of the President's choice filled out the membership. The Management Board's actions were now subject directly to the University Trustees, but it was in a much more knowledgeable position to guide hospital policy.[101]

The hospital's opening, as discussed earlier, was tied to a commitment exacted by the Legislature that its operating deficit would not exceed $3.5 million during the first fiscal year of operations. Although it was expected to bring in about $720,000 in revenues during that period, it was expected to operate at a significant deficit for several more years.[102] Nevertheless, within a year Chancellor Bulger reluctantly requested permission to seek a rate increase to bring hospital charges "more in line with those currently in existence at the major teaching hospitals of the greater Boston area." The new rates would be higher than the charges for other Worcester hospitals, but thus would emphasize the special nature of their services. The increase, he added, would still not fully cover costs, but they would provide a small profit above Medicare and Blue Cross reimbursement rates that would give the hospital something to pay for operating costs and new inventory. In fact, the hospital's revenues were only about $600,000, but with tight budgeting, Bulger and the hospital leadership managed to stay below their deficit ceiling.[103]

In February 1977, as part of his mid-fiscal year report to President Wood – an attempt to wring additional funds for the hospital from the tight-strapped University budget – Chancellor Bulger summarized the hospital's first full year of inpatient services. In fiscal year 1976, inpatient admissions numbered 657, averaging a daily census of 59 with 85 beds available in all. Outpatient Clinic visits reached 9532, Emergency Room visits, 1548, and Operating-Room procedures, 387. Withal, only 74 professional positions had been authorized and only 69 had been filled. For staff positions, the discrepancy was 445.3 out of 606 authorized.

Bulger began by reminding Wood that their accreditation review by the LCME in the spring of 1976, while granting the school a three-year accreditation, had noted the urgency of fully opening the hospital prior to their next review in 1979. Justifying a requested mid-year budget supplement of $800,000 at a time when the entire state was suffering the effects of a stagnating economy and continuing inflation, he wrote, "The most striking accomplishment has been our success in attracting patients...The referral patterns from doctors in communities in central and western Massachusetts have been built much more rapidly than predicted." But, this had created a problem, leading to "more acutely ill patients than originally anticipated... [T]he resulting demand upon the resources of the Center should be viewed as indicative of success..." Unfortunately, acutely ill patients require "continual nursing care, attention from doctors on a more frequent basis, and more items from medical and surgical supplies, including more expensive drugs in greater doses" than moderately sick patients. The cost of medical and surgical supplies, he noted, had risen by 10.5% in one year. Malpractice insurance costs had increased by nearly one-third. The only solution, he believed, was to move forward as rapidly as possible in hiring more clinicians, opening more beds, and establishing more hospital services, thus utilizing the hospital more fully and efficiently. Indeed, for FY78, Bulger requested that 90 more beds be opened for a total of 175. Yet, despite permission from the President's office to fill 345 positions, the Legislature had not released the necessary funds by November 1977, forcing the Medical Center to hire personnel under non-permanent contracts.[104]

The Legislature's understandable reluctance and unavoidable inability to financially support the hospital's need for growth, the Group Practice's shortfall, and the difficulty of recruiting active doctors or nurses without an adequate payment mechanism all prompted Dr. Bulger and the University Board to investigate an alternative fiscal model for the hospital. (It was around this time

that Bulger ordered that half the lights in the medical school be turned off and the thermostats drastically lowered to conserve money; students could be found in the Lamar Soutter Library studying hard while bundled up in hats, scarves, gloves and down jackets.)[105]

Something had to be done. Rather than the hospital being tethered to an "expenditure appropriation" from the State, which would require them to return all revenues earned back into the state's general fund, Bulger began exploring a "Trust Fund" model. The latter model would still require some state subsidy, but for a finite number of years. The bulk of income would be generated through the hospital's revenues to be deposited into, and withdrawn from, a Trustee-governed trust fund. This would allow the hospital to minimize its dependence on the State and to manage its income and expenses more effectively. Such a fund could help sustain the (then struggling) Group Practice, or help fund the recruitment of established clinical faculty who themselves would bring in large patient panels, or help support other time-sensitive initiatives incident to any large enterprise.[106]

At the July meeting of the University Board of Trustees, President Wood announced a breakthrough. Just a week earlier Governor Dukakis signed into law the University's FY1978 Appropriation Act that created a new trust fund which returned

> ...all hospital revenues to the Trustees for the operation of the hospital... Establishment of the trust fund, in contrast to other proposals presented to the Legislature, has the desirable effect of "uncoupling" hospital expenditures and revenues from the University budget, and will allow us to make orderly progress toward full operation of the hospital. This is a major step forward in the funding of revenue-producing enterprises in the state.

This was a significant political achievement for the hospital, and especially for Philip Caper; the new budget agreement coincided with heightened public concerns over escalating health care costs, especially those associated with

emergency and specialty care –precisely what the hospital was attempting to provide – and a lack of primary care doctors in rural and urban America.[107] From the legislative perspective, the arrangement signaled something more precious: an end to seemingly infinite increases in their own outlays for the hospital. (In 1980, anticipating the end of state subsidies to the Hospital, the UMass Board voted to create its own Hospital Trust Fund for the "maintenance and operation" of University Hospital, to be managed from the Worcester campus.)[108] President Wood added, optimistically, "We anticipate revenues of approximately $13 million during FY78." At the same time, a state subsidy of $3.5 million covered the hospital's anticipated debts for free care, bad debts, and educational efforts such as residencies (which numbered about 100 by then), medical student clinical rotations, and student preceptorships in the ambulatory clinics. By the middle of 1978, Michael O. Bice, who was appointed Hospital Director in July 1977, could report a "turnaround": in January 1977, before the Trust Fund was in operation, some $400,000 was collected; in January 1978, the amount was $1,400,000. By opening units gradually, they expected to fully open the hospital's 403 beds by the end of 1981.[109]

Freeing the hospital to manage its finances independently of legislative restrictions and, especially, freeing it to plan beyond a year in advance, widened its horizons immediately. The year 1978, in retrospect, seems to have been the year when the Trustees stepped back and with high hopes assessed the hospital's prospects for the long term. In mid 1978, the end of its second fiscal year, hospital leaders submitted a Five-Year Plan, as required by law, to the state and local health planning agencies.[110] It optimistically included nine new initiatives projected for the coming five years, including the establishment of a regional cancer center, an inpatient psychiatric unit, a clinical research center of 8-10 beds, a rehabilitation medicine program, and further development of cardiac care programs and other

needed tertiary care services such as neurology, ophthalmology, and surgical subspecialties.[111] Teaching, one of the hospital's chief responsibilities, was also developing well. Three hundred residents and 300 UMass medical students rotated through the hospital, while another 300 or so health professions students of various sorts also utilized the clinical site for their studies. The latter activity, organized in affiliation with local and regional colleges and universities, constituted one of the unique roles a state medical center was expected to perform.[112] Finally, the University could view the Hospital in a time frame longer than a single fiscal year.

By the summer of 1978, 161 of the hospital's projected 403 beds were staffed with the expectation that the remaining beds would open in stages until 1981, when the full complement would be available. By March 1979, a short-term, acute psychiatric ward, pediatric wards, palliative care, geriatrics, and cardiac recovery units were all in operation. On April 18, 1979, a one-hour television special on Channel 5 titled "Just Hold My Hand," most of which was filmed at the hospital's palliative care unit, was broadcast nationally. The following month an open house for the general public showcased the hospital's open heart surgery unit.[113] The following year, the medical center realized one of its key goals when it was designated as a Regional Trauma Center, the first in Massachusetts. And with the arrival of Dr. David Drachman, a leading researcher in Alzheimer's disease, as chair of the department of Neurology and in 1984, director of a new Alzheimer's Research Center, one of only five in the country, another of its strategic goals began to be fulfilled. The next year a Renal Transplant Service, something otherwise unavailable outside of Boston, was officially approved by the state, although not without an initial (and habitual) rejection by the state on the grounds that there were already seven transplant units in Boston.[114]

A new University president – in this case, David Knapp – however, always seemed to require a year or two to be convinced of the medical center's viability.

For example, in talks with the Trustees' Long-Range Planning committee in November 1978, Knapp, newly inaugurated in October, along with several Trustees, worried that the campus was in danger of overextending itself. Knapp cautioned against accepting "'gift horse[s]'...which frequently turned out to be somewhat undesirable gifts." He discouraged starting programs in podiatry, optometry, or a Master's degree in nursing. Knapp revived the old issue of the "seeming incongruity [of] the Medical School's emphasis on primary care and the Teaching Hospital's emphasis on specialization." In contrast to previous occasions, however, several Trustees now justified the need for a good tertiary care hospital for the education of primary care doctors. One of them even cited Lamar Soutter as his authority.[115]

In fact, the 1980s did prove a challenging financial terrain for UMass Hospital –like most U.S. teaching hospitals – to navigate. More and more large companies expressed alarm at the rising cost of employee health insurance, a concern that increased during the recession of the early 1980s. Also, on the national scene in 1981, Congress enacted the Boren Amendment to the Social Security Act, abandoning the previous, "reasonable cost" basis of hospital reimbursement in favor of what it hoped would be counter-inflationary formulas. Reagan-era politics reinforced these trends by flaunting the superiority of private sector economic behavior. Massachusetts responded to the Boren Amendment by adopting the "Chapter 372" statute of 1982. Described as "the culmination of a long and difficult negotiation process between the state administration and the hospital industry, the medical profession, Blue Cross, the private insurance industry, and the business community," it reorganized the reimbursement system for hospitals for Medicare, Medicaid, and private payors. Moreover, it capped reimbursement rates at their 1982 levels and called for productivity goals for hospitals receiving Medicare and Medicaid reimbursements. In this climate, hospitals adopted measures to align their services more closely with community

demand, becoming, in short, more like businesses and less like charities.[116] Indeed, the impact of Chapter 372 on the UMass hospital included a hiring freeze and imposition of 2% cost reductions for the next two fiscal years.[117]

During the five-year period of 1979 to 1983 inpatient admissions doubled and clinic visits increased by nearly that much. Chancellor Robert Tranquada, M.D., who succeeded Roger Bulger in 1979, could report in 1983 that the hospital was running in the black.

Yet hospital margins were never sufficient to finance new initiatives. Costs remained high and stringent cost controls and layoffs became unavoidable. In this newly competitive climate – of capped reimbursements, diagnosis-related groups(DRGs), and managed care contracts – the hospital's administrative culture rapidly if somewhat reluctantly took on a more corporate style than had been part of its makeup hitherto. It entered an era of much closer financial oversight, of reliance on techniques such as management-by-objectives. Marketing, strategic planning, and business models permeated decisions about clinical planning and outreach.[118] These were all apparent in, for example, the language Chancellor Tranquada deployed to successfully propose renovating the cardiovascular medicine service, traditionally one of the hospital's strongest. In his words, "Without question, cardiovascular medicine will be one of the most active product lines in the health-care field

Robert Tranquada, M.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

in the years ahead."[119] Janice Wyatt, the hospital director during this period, began issuing "Management by Objectives" quarterly reports to the Hospital Management Board (HMB). Everything from decisions about opening a new clinic to eliminating "pilfering" of scrub gowns received scrutiny from the HMB.

Janice Wyatt
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

If ordinary patient revenues were to be capped by the state and federal governments, then alternative ventures must be found to produce revenue for growth. By 1984, the President, Board of Trustees, HMB, and medical school administration agreed to create a "private, non-profit and tax exempt corporation to serve as a holding company for a system of non-profit and for-profit...ventures which cannot be undertaken competitively by the hospital." As Dr. Tranquada told the UMass Trustees Executive Committee, such a holding company would allow the medical center to "reach capital markets promptly and economically" whether to raise money or to enjoy tax advantages unavailable to them now. Any profits earned by such ventures as, for example, a nursing home, a clinical laboratory business, off-site ambulatory centers, consulting services, or operating room software and so forth, would become charitable donations to the Hospital. They named the holding company "University Health Systems of New England, Inc."[120]

In short, as Tranquada wrote in the long-range plan for fiscal years 1984 through 1989, the hospital would need to control costs while also satisfying local community demand for intensified tertiary care services. More than ever, he noted, it must distinguish itself and its services from the other hospitals in its region. Thus, the hospital proposed to expand areas of high demand (and reimbursement) such as cardiology, cardiac surgery, pediatric surgery,

gastroenterology, sports medicine, and, as originally outlined in 1978, develop centers for oncology, diabetes, and physical rehabilitation. The plan also called for expanded networks of primary care doctors and development of so-called "alternative delivery systems" such as health maintenance organizations, or HMOs.[121]

The growth of the dialysis and kidney transplant programs exemplified this strategy. When Jeffrey Stoff, M.D., arrived at the medical center from Beth Israel and Harvard Medical School in 1983 to be the first chief of the Renal Medicine Division, the hospital had no dialysis center to support its patients. Dialysis was a province of Memorial Hospital. Nor did transplantation surgery take place anywhere outside of Boston. A total of three nephrologists – including Dr. Stoff – comprised the division which at the time of Stoff's arrival cared for a total of 12 patients. In 2014, six satellite dialysis units are affiliated with the program and approximately 600 patients get their care through the Division. In order to accomplish such growth, Stoff consciously adopted the "entrepreneurial" model analogous to that first utilized by James Dalen for cardiology, namely, to send his steadily increasing division members out into the surrounding communities to establish outpatient offices. These faculty physicians spent 70% of their time, either in those community-based offices or at local, community hospitals where dialysis units could be established. The rest of their time was spent at the medical center to see patients, to teach, and to attend grand rounds, division conferences, and the like. The transplant program,

Jeffrey Stoff, M.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

too, required careful planning and persistence, in this case, to win approval for a Certificate of Need in the face of near-unanimous resistance by the existing kidney centers in Boston. Once the CON was successfully won, another two years passed until the transplantation program opened in February 1986. By March 2014, 1000 transplants had been completed, making this one of the largest programs in New England.[122]

The Challenges of Cost Containment, 1987-1992

By 1988 University Hospital had succeeded in becoming the dominant provider of high acuity and emergency care in central Massachusetts. Its ambulatory clinics, too, reported record growth, with visits increasing by 40% between 1983 and 1988. But it was hamstrung by a lack of space for expansion of both the ambulatory services, on the one hand, and operating room space on the other. The hospital's strategic goals now gave additional weight to expanding the ambulatory clinics;[123] to consolidating and expanding cardiothoracic medicine and surgery; to opening a comprehensive AIDS program;[124] and to becoming the regional hub for oncology and tertiary care pediatrics. As it looked to the future, UMass Hospital's strategy increasingly depended not only on expansion of its areas of strength, but on development of strong networks with other regional hospitals and primary care doctors to ensure a strong and reliable flow of referrals—inpatient *and* outpatient.[125] Ambulatory clinic expansion became all the more urgent because of the rapid infiltration of the UMMC catchment area by HMOs (37% of Worcester patients were enrolled in HMOs by 1988). Moreover, Medicare's DRG prospective payment classifications, which went into effect in 1983, decidedly favored outpatient over inpatient care (especially for performing a medical procedure rather than "mere" education or counseling), and shorter

over longer inpatient stays.[126] In response, the hospital contemplated an approximately $150 million expansion (later reduced to $120 million) for acute-care pediatrics and psychiatry,[127] built the Joseph T. Benedict ambulatory care annex in 1991-92,[128] entered into a joint venture to convert Fairlawn Hospital into a rehabilitation center,[129] and helped preside over the closure of the foundering Worcester City Hospital, renovating and leasing its aging downtown site.[130]

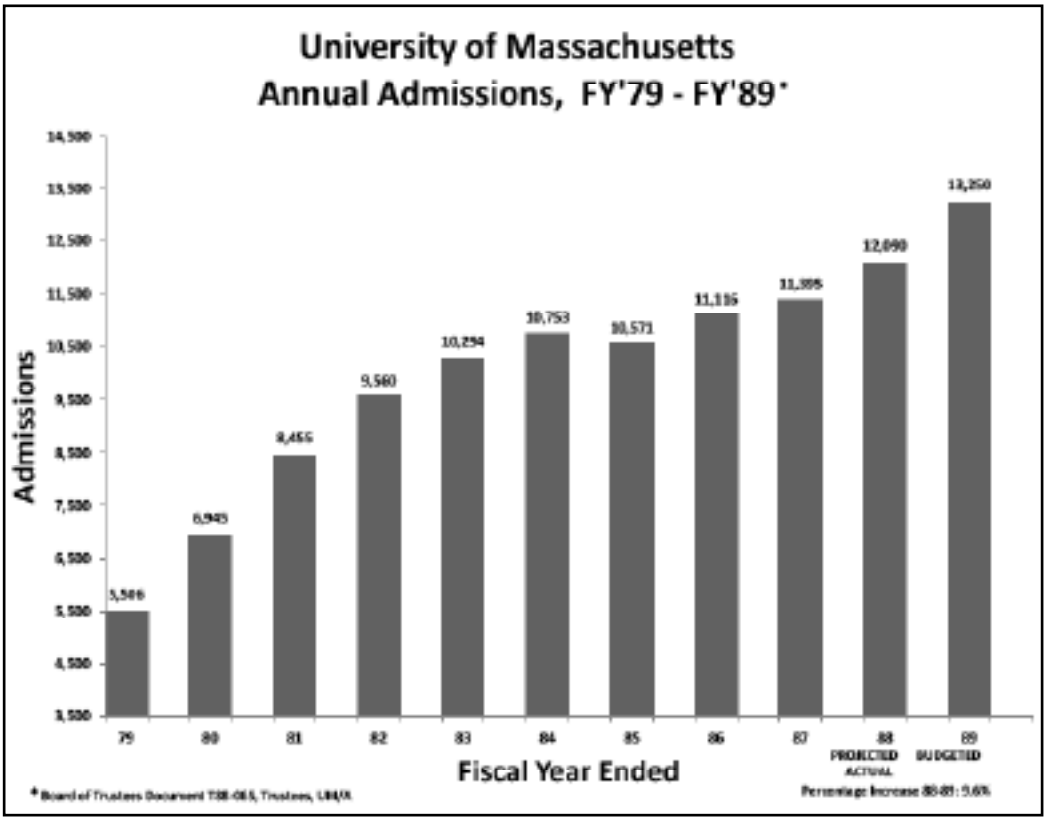
University Hospital Annual Statistics, FY1977-1998 (rounded up)**

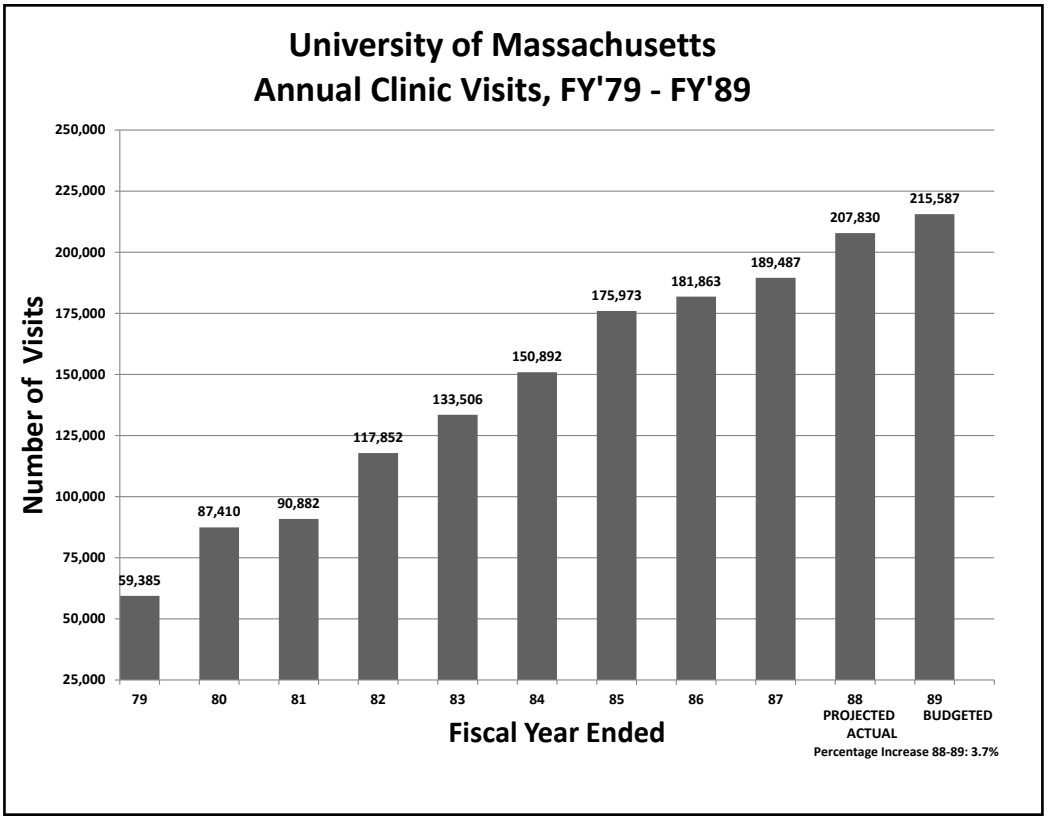
	Inpatient Visits	Outpatient/Ambulatory Visits*
1976	N/A	12,600
1977	2,800	45,000
1978	3,900	57,200
1979	5,500	83,000
1980	6,900	118,000
1981	8,500	118,000
1982	9,600	129,200
1983	10,300	143,900
1984	10,800	162,800
1985	10,600	183,400
1986	11,100	190,700
1987	11.400	201.600
1988	11.900	223.900
1989	12,700	190,000
1990	13,300	212,200
1991	14,300	233,000
1992	15,100	250,500
1993	15,600	271,500
1994	16,000	306,800
1995	16,600	384,300
1996	16,500	353,600
1997	17,600	389,600

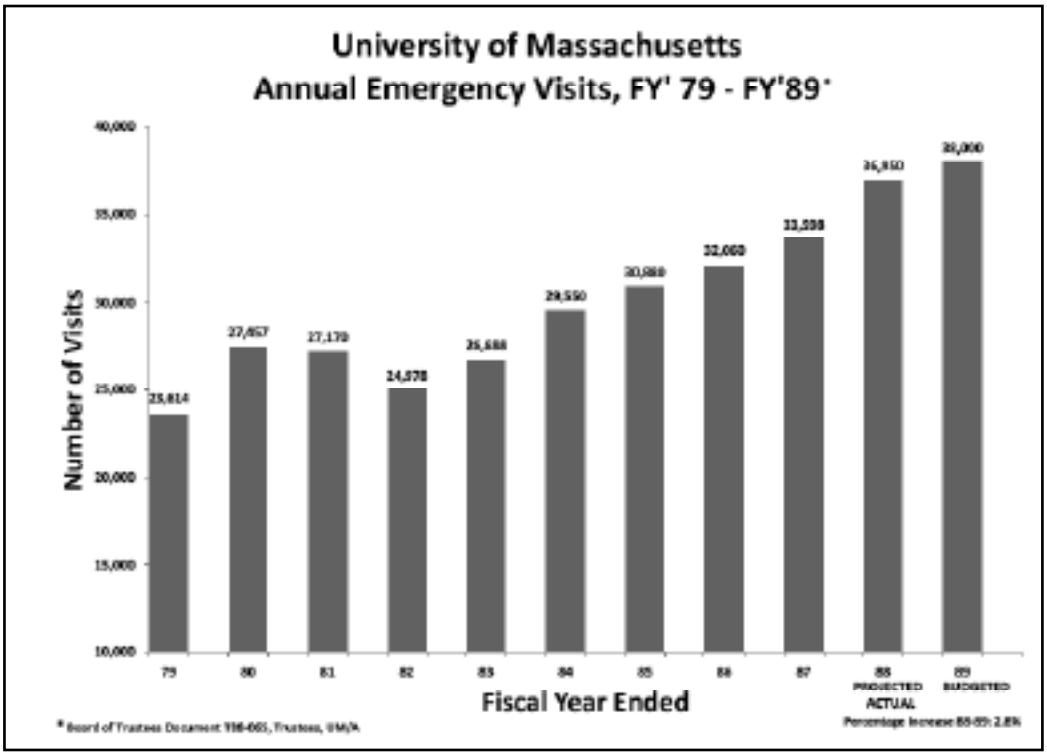
* Excludes ancillary visits

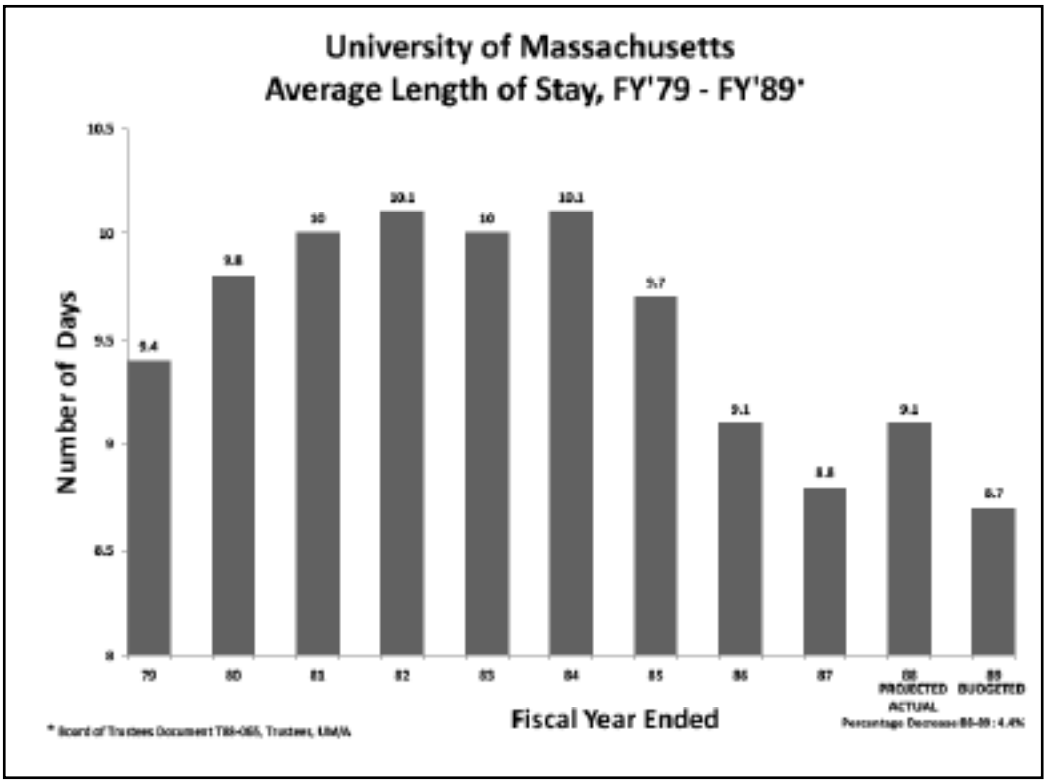
** Figures for 1987 and 1988 were derived from data in UMMC Department of Public Affairs files for unpublished Annual Reports for those years. Many thanks to Mark Shelton for providing me with these files. Figures for 1989 were derived from Trustees Doc. T89-071, Trustees, UM/A. All other figures were derived from UMMC Annual Reports, 1982-1997, Publications Collection, UM/W.

The stock market crash of October 1987 reduced the value of trust fund portfolios, adversely affecting the state budget and all state departments. A recession soon followed. As part of the state's efforts to control its budget, the University, including the Medical Center, was subjected to a 5% mandated reversion of state funding, forcing hiring freezes, a three-week furlough of all University employees, and other drastic measures. In general, the four-year period from 1987 to 1991, which overlapped the chancellorship of Leonard Laster, M.D. (1987-1990), was marked by unfriendly relations between the Medical Center and elected officials.[131]




University of Massachusetts
Annual Clinic Visits, FY'79 - FY'89
Number of Visits
250,000
225,000
200,000
175,000
150,000
125,000
100,000
75,000
50,000
25,000
59,385
87,410
90,882
117,852
133,506
150,892
175,973
181,863
189,487
207,830
215,587
79
80
81
82
83
84
85
86
87
88 PROJECTED ACTUAL
89 BUDGETED
Fiscal Year Ended
Percentage Increase 88-89: 3.7%


University of Massachusetts
Annual Emergency Visits, FY' 79 - FY'89*
Number of Visits
40,000
35,000
30,000
25,000
20,000
15,000
10,000
23,814
27,457
27,170
24,578
26,688
29,550
30,980
32,060
33,198
36,850
38,000
79
80
81
82
83
84
85
86
87
88 PROJECTED ACTUAL
89 BUDGETED
Fiscal Year Ended
* Board of Trustees Document 98-065, Trustees, UMMA
Percentage Increase 88-89: 2.8%



The Dukakis administration renewed pressure on the hospital to become self-sustaining. An on-site review of the hospital's management was conducted by Mr. B. J. Rudman, Assistant Secretary for Management of the Massachusetts Executive Office of Administration and Finance. His report recommended "separating the Hospital and the Medical School, revising the structure of the Hospital Management Board and the reporting function of the Hospital Director" apparently to allow the hospital greater autonomy from the medical school. The investigation and report were initiated by the central Massachusetts legislative delegation in response to the Hospital's decision to lay off more than 100 employees to balance its budget.[132]

A new Republican administration under Governor William Weld took office in 1991. For nearly the first year of Governor Weld's term, the picture for

the medical center looked, if anything, even bleaker. The first signs of serious trouble occurred when the state legislature proposed furloughing state employees earning over $20,000 annually as a way to make up a $70-plus million state budget deficit. State employees would be asked to work without pay for anywhere from two to 15 days, depending on salary. As interim Chancellor Aaron Lazare wrote to Governor Weld, "the impact of the [Emergency Fiscal Controls] act... both to the individuals and to the organization as a whole is disastrous; and it is detrimental to the economic good of the Commonwealth." Five division chiefs in the departments of Medicine and Surgery immediately decided to leave. Other faculty members were "outraged." Indeed, a few, particularly in the basic sciences, took direct action. Because much, or even the majority, of funding for their labs came not from the state but from either the NIH or from private foundations, letters were sent to Representative Joseph Early, Senators Edward M. Kennedy and John Kerry, and to the redoubtable Representative John Dingell, chair of the House Energy and Commerce Committee's subcommittee on Oversight and Investigations as well a member of the Health subcommittee. Rep. Dingell was just then in the middle of a much publicized investigation of purported scientific fraud, but took time to write the Secretary of Health and Human Services, Dr. Louis Sullivan, that "Not one cent of Federal research money should be diverted towards efforts to salvage the state's financial health." Nevertheless, despite having had no raises for the previous three years, Massachusetts state employees were subjected to the furlough.[133]

Even worse, Governor Weld's proposed budget for fiscal year 1992 called for closure of up to five state colleges and the total de-funding of the medical school. His announcement unleashed five months of intense lobbying by Dr. Laster's successor, Chancellor Aaron Lazare, along with Albert ("Albie") Sherman, Vice Chancellor for University Relations,[134] others of the Lazare

administration, and the region's political representatives. Worcester developer Norm Peters and other local community leaders also lobbied their local state representatives on behalf of the school.[135] Local newspapers unleashed expressions of editorial outrage. Tours of the Medical Center for visiting state officials became a regular feature as did trips to Beacon Hill by Sherman and Lazare. During the Lazare chancellorship and thereafter, assiduous cultivation of state legislative figures – especially those from Central Massachusetts – never was allowed to flag.[136] In this case, the Governor changed his mind: education was an "investment," he ultimately decided, not an expense. The colleges and the medical school remained in his budget.[137]

Aaron Lazare, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

For the medical school, a close brush with de-funding provided a wake-up call to become financially independent, or as close to that as possible. By 1992, state funds comprised only 7% of the medical school's annual budget. Where Massachusetts spent $4.39 per capita on medical education, the national average was $11.74. The Legislature now began to consider the prospects for the Medical Center to become fiscally self-sufficient.[138] When the FY 1992 budget was finalized, including restored funding for the Medical School, the bill contained a

rider that mandated that the Trustees "study ways in which the...Medical School can increase revenues to sustain said medical school." This is part of the context for the development of Commonwealth Medicine, the Development Office, the Technology Transfer Office, the use of the Worcester City Campus Corporation as a holding company, and other initiatives to promote financial independence.[139]

The Trustees' charge also included investigating the "implications of creating independent status for the medical school" or of the Medical Center's becoming a free-standing non-profit institution. UMass Board chair Gordon Oakes delegated Trustee Michael Foley, a 1976 graduate of the medical school and a new member of the HMB, to organize a committee to carry out the study. The committee was called the "Privatization" committee in internal documents.

Michael Foley, M.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

The Foley Committee's report, presented in April 1992 to the Board and to select legislative committee chairs, argued that the only way for the medical center to become more profitable would be to loosen its bureaucratic ties to the state. That is, "the Medical Center is...hampered only by the continued recision in its state appropriation and the barriers imposed on its entrepreneurial initiatives by a system that is not designed to respond to an aggressively competitive marketplace." In short, freed of salary caps, wage freezes, reversion of some revenue to the state, and the need to work through the state building authority on every real estate or construction project, it could make much more money for the state than it would cost. And, of course, it would help if Massachusetts's appropriation for public education were not at the bottom of

U.S. state averages.[140] Ultimately, the Lazare administration, including Richard (Rick) Stanton as Deputy Chancellor for Finance and Administration and Thomas (Tom) Manning, as Deputy Chancellor for Operations, slowly loosened the regulatory coils restricting the school's entrepreneurial reach.[141]

But the University Board learned a different lesson from these events. In this economic climate the Hospital began to look – at least to some Trustees – more like a liability than an asset.[142] Even as the hospital's yearly returns showed a sizeable surplus, Medicaid reimbursement shortfalls and high expenses required the hospital to reallocate employees to positions at lower salary levels, freeze hiring, and to budget for lower overall costs and shorter average patient hospital stays. An analysis of the medical center's physician salaries, too, showed that 60.5% received salaries at or below the 50th percentile for the Northeast. Some faculty, notably in the Department of Surgery, had resigned, leaving serious gaps in staffing.[143] Some of the Trustees began expressing concern over the University's liabilities for the Hospital's current or future deficits as well as the seemingly diminished prospects that revenues from the hospital could be used to enrich programs at the medical school. The Hospital's fate would shortly diverge from the School's.

A Divorce or a Merger? Privatization from 1993-1998

"*It was a divorce and a merger.*" Aaron Lazare, March 3, 2008

In 1993, the University Trustees directed the administration to divest itself of the hospital, a process that took five years to complete.[144] This concluding section will consider the reasons for such a seemingly drastic action, the negotiations with UMass Hospital's culturally and geographically closest competitor, Worcester Memorial Health Care, and some of the consequences of

the subsequent divestiture of the hospital.

Only 20 years after fighting the Sargent administration for hospital construction funds, 17 years after facing down the Dukakis administration for the funding to complete hospital construction, and just one year after receiving the Foley Report on the future of the Medical Center, why would the University be willing to divest itself of its teaching hospital? First, a brief reminder of the broader context. Throughout the United States during the 1990s, hospitals – especially academic teaching hospitals – were finding it nearly impossible to stay ahead of their costs. Even if, as at UMMC, revenues grew (and they did not grow by much), costs always outpaced the gains. At the same time, U.S. health care costs rose at a faster rate than did the general cost of living, with hospital expenses frequently targeted as one of the major offenders. Both public and private sources sought control over the seemingly endless rise of hospital rates. Moreover, the direction of medical care was toward outpatient procedures rather than inpatient hospital stays in response to the price control pressures of large insurers, often expressed through HMO contracts with hospitals. The Balanced Budget Act of 1997, for example, made big cuts in Medicare reimbursements to hospitals. As insurance companies consolidated, as HMOs penetrated at least some metropolitan markets, and as the Clinton administration attempted to pass a health care reform bill, the financial fragility of high acuity hospitals became increasingly apparent.[145]

Clearly, larger hospital systems with greater bargaining power vis-à-vis insurance giants and HMOs would be the likeliest to survive. Cost efficiencies and wide patient-referral networks would put them on a more even playing field with groups like Blue Cross/Blue Shield. As the President of the Massachusetts Hospital Association told the University Hospital Management Board in 1993, hospitals would need to "form relationships with other institutions [e.g.]

community hospitals," to adapt to the increasing emphasis on "case managed care" and especially, the need to lower costs. Anticipating the Clinton health care reform efforts, he told the Board, "There is likely to be a deliberate movement toward national reform."[146] A wave of hospital consolidations did occur in many metropolitan marketplaces between 1990 and 2000. The number of mergers per year peaked in 1997 at 152 mergers, according to Cuellar and Gertler, falling to 18 in 2000. Another study found that between 1990 and 2000 the average number of hospital mergers per year amounted to 58.[147] In central Massachusetts alone, the number of independent, acute care hospitals decreased from eight to two between 1985 and 1998.[148]

The Trustees were hardly unaware of such trends. Conscious of their obligation to all campuses of the system, they were not sanguine about the hospital's future prospects. For example, in 1992, at the same meeting when Michael Foley gave an interim report from the "Privatization Committee," the Board instituted a new practice – henceforth HMB minutes would receive full discussion rather than be approved with "the pro forma approach" of previous years. A few months later, Robert Karam, a UMass Trustee who had joined the University's board as Vice Chair in 1991, joined the Hospital Management Board. (An insurance company executive, he had chaired the board of Southeastern Massachusetts University prior to its incorporation into the UMass system as UMass Dartmouth.)[149]

Robert Karam *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

He soon began to express concern over the University's potential liability for hospital losses, some of which were due to the state's insistence on full

recovery of fringe benefits costs, and some due to the recent investment in renovations of the old Worcester City Hospital buildings. The UMass Board shared his concern. Chancellor Lazare's reply reveals how cognizant he was of the pressure to dissolve the School's financial ties to the Hospital. He informed the Board that Richard Stanton had been negotiating with the state to work out a solution. He continued, "...privatization, an issue looked at in depth by a committee led by Trustee Foley in April, may be the only acceptable alternative but that nothing could be implemented until all of the issues have been worked out at the state level which will take more time."[150] At the beginning of 1993, Trustee Karam called for an independent audit of the Hospital's finances "because of its complexity."[151]

Sometime during that year, the Medical Center began a series of conversations with its closest Worcester peer and rival, Memorial Health Care, but without success. As noted earlier, the two systems shared a residency in OB-GYN and many Memorial physicians served as preceptors for UMass medical students. Moreover, Memorial had several robust research programs, especially in the Department of Medicine, in which UMass Medical School faculty collaborated. Peter Levine, M.D., the current Memorial CEO, had held a concurrent faculty appointment at the medical school and, as a hematologist who created a center for hemophilia studies, had worked closely with virologists at the medical school on the problem of tainted blood products; their work intensified once awareness of HIV-

Peter Levine, M.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

tainted blood products and the tragic wave of hemophiliacs with AIDs became known in the mid-1980s.[152] Of the possible hospitals in central Massachusetts, Memorial was clearly closest in structure and culture to University Hospital. But prospects for a merger between the two hospitals waxed and waned.[153] Neither system considered the other a reliable negotiating partner – yet. In response to the Board's concerns, Dr. Lazare requested that Board Chair Gordon Oakes create a "Task Force to work with [him] on the review of the future of the Medical Center…"[154]

In December 1993, the University Board directed the Medical Center to "continue to explore all restructuring and potential merger opportunities for the future." Dr. Lazare recalled, "This was happening…to a lot of university hospitals – they were separating out their hospitals because, they said, 'We're not in the hospital business; we're in the education business. We don't want to take the risks.' They were right…" In mid-1994, a special joint committee of the UMass Board concluded that because at this time a merger with the Medical Center of Central Massachusetts (as Memorial had renamed itself) "looks unlikely," the need to reduce costs was paramount. George McClelland, chair of the finance committee of the Hospital Management Board, acknowledged the "urgency" of the Hospital's financial status. He "reiterated the extreme losses resulting from the observation beds, new payer classifications, and decline in admissions, particularly surgeries, which created a situation where the Hospital was faced with an extreme reduction in margin for both February and March. They hoped to reduce costs by $40 million over the next three to four years while "retaining quality and service." The hospital re-assigned 62 employees, laid off 50 others, and scrutinized new programs carefully. Chancellor Lazare told the clinical department chairs in September 1994, the Board's "increased oversight of the Medical Center…is both necessary and welcome, particularly in the current health

care environment." The Board of the University of Massachusetts was determined to divest itself of the Hospital. Albeit reluctantly, the Worcester campus leadership now began seeking a merger in earnest. They feared that if they did not succeed, the Trustees would likely sell the hospital to someone with no local ties to the school or to Central Massachusetts. Worse, it might be taken over by a hospital system in Boston.[155]

In the meantime, Memorial Health Care also was seeking a partner, and for many of the same reasons. After considering a merger with the locally-based Fallon Clinic they realized that the two organizations' cultures would be too hard to blend; a hospital like Memorial, structured to organizationally mimic an academic hospital with powerful department chairs, clinically-based hiring, and a substantial amount of funded research, was not a good fit with an HMO-style medical clinic. (Parenthetically, UMass' leaders, despite a high level of respect for their counterparts at Fallon, came to the same conclusion.) After also considering St. Vincent, Dartmouth, and Brown as potential partners, Memorial began negotiations with an organization that could have proved seriously compromising to UMass Medical Center, Partners HealthCare in Boston. The Partners organization was created from the merger of two of Harvard's leading affiliate hospitals, Massachusetts General and Brigham and Women's. Memorial's CEO, Peter Levine, M.D., had enjoyed a successful career as a hematologist and, as noted above, a leader in the care of patients with hemophilia. Having been Chair of the Department of Medicine, he was named the Memorial CEO after successfully negotiating mergers with Hahnemann and Holden Hospitals in 1991. Envisioning a merger with Partners in the mid-1990s, Levine thought Memorial could become an analogue of North Shore Medical Center, assuming an identity as a "Partners West" in parallel with North Shore's identity as a "Partners North." Having come to Worcester from the Harvard system, Levine initially thought the

arrangement could work well.[156]

Word of the serious negotiations underway between Memorial and Partners reached Chancellor Lazare. He and his team knew immediately that this would be disastrous both for the Medical Center and for Worcester. The Medical Center stood to lose a huge business in referrals for open heart surgery and other acute care services from Memorial; the city stood to lose its position as a medical hub for central and western Massachusetts. No longer would the largest employer in town be a local organization; worse, it would be Boston-based, Harvard affiliated – all that Dr. Soutter and the school's early leaders had resisted so urgently since 1965. Lazare now began a quiet offensive of his own – in earnest. The objective: a merger with Memorial.

Richard Stanton
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

As Rick Stanton recalled, "Aaron started to set up breakfasts with Worcester leaders, and he was always conscious of putting one Memorial Trustee in every group."[157] Lazare described these meetings:

> What I did was have breakfast meetings with all the leaders of the community. And I met with them, just myself, with about twelve, fifteen people. And I said, "You're going to lose your hospital. And if the Mass General buys this, then this medical school is going to have to merge with a hospital outside of Worcester, and Worcester will no longer be a center for medical care. Right now, the hospital business and the medical school together make Worcester's economic anchor. So we may do something with someone in Rhode Island, and the Mass General is going to own this place [Memorial], and Worcester is going to suffer." So they put pressure on Memorial to merge with the medical school, with the hospital.[158]

Dr. Lazare, through Arthur Russo, M.D., then head of the UMMC Group Practice and someone with a working relationship with Peter Levine, alerted

Levine that UMMC was aware of their negotiations with Partners and would like to enter into serious talks of their own.[159] Memorial's Board by then had become convinced that a local merger would indeed better satisfy their interests. As Lois Green, MPA, a well-connected consultant to non-profit boards and the Memorial Board chair during the merger negotiations, summed it up, "We didn't want to be a satellite." Richard Glew, M.D., an infectious disease specialist, the Chief Medical Officer, and Chair of Medicine at Memorial at the time of the merger, was just as succinct: "Boston was our common enemy."[160] Levine and Russo then held at least two clandestine meetings to try and lay out the ground rules for their larger negotiating teams. Those larger meetings, which were held first at a modest hotel in Westborough and then, for nearly a week, at the Chatham Bars Inn on Cape Cod, included among others, Lazare, Russo, and Stanton from the Medical Center, Lois Green from the Memorial Board, Levine, Richard Glew, and David DeBruyne, Levine's key administrative deputy, representing the staff at Memorial, and Robert Karam, representing the UMass Trustees. According to some accounts from both sides, they were not easy negotiations although both sides were committed to completing a merger. Ultimately, a series of what Peter Levine called "immutable principles" guided their decisions about how to structure the merger. In Levine's words, they were intended to be:

Lois Green
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

> ...immutable principles, that would call for the new entity tying itself very closely to the Medical School, in terms of guaranteeing that we would be its principal site for teaching and research, clinical research, and so forth—and...to do a real, complete, full-asset merger: with a single set of departments under a single set of chairs, with a series of guarantees that we would leave the best

> and most productive aspects of each place intact, that we'd need chairs who would in fact understand the relative benefits of both [places].[161]

Mergers can be successful, as the Partners merger appears to be, or they can fail, as did the merger, at about the same time, of the hospitals of Stanford University Medical Center and the University of California-San Francisco.[162] The merger of UMass Hospital with Memorial was negotiated and given the Commonwealth's legal imprimatur in 1997 and approved by the UMass Board in 1998. In the medical school's Annual Report for 1997, the merger was described as a boon for the local economy and for (clinical) research.[163] One of its immediate results was the contribution of approximately $30 million from Memorial's endowment for the construction of a new research building for UMass Medical School, as well as assistance in fund-raising for the remaining costs (at least another $70 million). It opened as the Aaron Lazare Research Building in 2001.[164]

It probably took a decade for the combined entity to really gel. Peter Levine was chosen to become CEO of the new entity; after three years, he was succeeded by someone from the University side of the house, Arthur Russo. After Russo was forced to resign as a result of various missteps, Dr. Marianne Felice, the medical school's chair of Pediatrics who had been at Johns Hopkins until her arrival in 1998, was named interim CEO from 2001-2002. In 2002, John O'Brien, previously CEO of Cambridge Health Alliance health care system and Commissioner of Public Health for the city

Marianne Felice, M.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

of Cambridge, was chosen to take over the Memorial system, effectively moving beyond unresolved issues of the merger and the possible charge of favoring one campus over the other. As the two hospital boards were merged into a united, and smaller, Board of Trustees, feelings were bruised. Robert Karam was named chair of the new UMass Memorial Health Care Board, and Lois Green vice chair. (Green never forgave the new Board for, in her eyes, preventing her from succeeding Karam as chair, an order of succession that had been traditional on the old Board.)[165] Bruised feelings proceeded on down the hierarchy. When two sets of departments were merged into one, for example, a full complement of department chairs was displaced, almost all of them from the Memorial side since the general preference was to place the more academically senior chairs in charge of the merged departments.[166]

For their part, full-time clinicians at UMass Hospital experienced a definite sense of abandonment resulting from the merger. From 1998, control of the Physician Group Practice was gradually transferred to the new hospital entity, UMass Memorial Medical Center.[167] That became, in Dr. Lazare's words, "The hardest part of the deal…the doctors didn't work for us anymore. They could complain to us, but we didn't hold the power…So, we lost the hospital, basically."[168] Except for those who were paid partially through research grants or for their curricular work as course directors or administrators, many clinicians no longer felt as though they were medical school faculty. For them, the process felt like a "divorce," not a "merger." These changes became clear in very concrete ways: first, pension and salary arrangements changed; much more profoundly, expectations about "productivity" changed, too, albeit much more slowly. Although new pressures for greater clinical productivity were occurring all across the United States during these years, whether in academic or community hospitals, many former UMMC physicians blamed the hospital's privatization

for the heightened pressure to increase clinical "productivity" they began to experience.[169]

From Memorial's viewpoint, the situation looked quite a bit different. Lois Green remembers the Board's wrestling with these issues:

> How much is faculty time? How much is clinical time? And we looked at it in some of the clinics—the faculty weren't in there very much, and then how do you measure productivity? And the clinical system, to go forward had to increase its productivity or we wouldn't have enough income.

Peter Levine saw it this way:

> And although we were doing research and teaching, the majority of [Memorial] physicians, whether full-time or private, were spending the majority of their time in very productive, effective clinical practice. Whereas at the university, the majority of staff was pursuing, for the majority of their time, very effective teaching and research activities, and you know, maybe the average might have been forty percent of their time was in clinical practice, as opposed to seventy percent of their time.[170]

Again, in Aaron Lazare's words, "When [previously] you hired a physician here, there was a culture that they are all academics..."[171] Many felt deeply distressed to no longer be full-fledged citizens of a medical school. And, despite universal agreement that the former university hospital needed to bring its clinical numbers closer to the norm for a community hospital, such cultural differences rankled and stubbornly persisted for many years. Cultural differences ran just as deep among the two institutions' nursing cadres. UMass nurses were unionized; Memorial's were not. Nor did Memorial's nursing staff wish to join the union at the University campus. Such differences of culture and professional identity – whether among doctors or nurses – have not faded completely even after nearly two decades. But, with the passage of time and the emergence of

more pressing issues such as the need to adapt to the era of capitated care, those matters have become less prominent. With the rise of large federally funded, clinical research opportunities such as NIH's Clinical and Translational Research center grants within a decade of the merger, the two hospitals began to strengthen their interdependencies. As envisioned at the time of the merger, UMass Medical School and UMass Memorial Health Care are tightly, indeed symbiotically, bound to each other.

NOTES

CHAPTER FIVE

1 The term "physician's workshop" is used in Charles E. Rosenberg's history of the American hospital through the early twentieth century, *The Care of Strangers* (NY: Basic Books, 1987), p. 271.

2 Rosemary Stevens, *In Sickness and in Wealth: American Hospitals in the Twentieth Century* (NY: Basic Books, 1989), pp. 294-296, 317.

3 Ray E. Heiney, Jr., "University of Massachusetts Teaching Hospital Study of Projected Operating Costs and Income including Analysis of Capital Cost Recovery," May 1971, p. 3, Box "Other Campuses – Medical School, Worcester, 1962-," fol. "University of Massachusetts Study of Projected Operating Costs and Income including Analysis of Capital Cost Recovery," RG 55-2, UM/A.

4 H. Brownell (Brownie) Wheeler, M.D., personal communication, Sept. 6, 2006, Worcester, MA.

5 Victor R. Fuchs, *Who Shall Live? Health, Economics, and Social Choice* (New York: Basic Books, 1974), p. 104; also see Kenneth M. Ludmerer, *Time to Heal: American Medical Education from the Turn of the Century to the Era of Managed Care* (New York: Oxford, 1999), pp. 349-369, quotation p. 249.

6 Board of Trustees Committee on Buildings and Grounds, "Minutes," Sept. 9, 1968, pp. 1-2, Box "Board of Trustees Minutes of Meetings of Full Board and Committees," Aug.-Dec., 1968, fol. "Trustees (Committees), Minutes, Agenda, etc." Sept. 1968, Trustees, UM/A.

7 Walter S. Wiggins (AMA) and Robert C. Berson (AAMC) to George Howe (HEW), Nov. 9, 1966, in "University of Massachusetts Medical School Teaching Hospital [re-]Application for a Joint Construction Grant," June 14, 1968, Box 45, fol. 559a, John W. Lederle papers, UM/A; Geraldine A. Collier, "HEW Grant is Sought," *Evening Gazette,* Feb. 8, 1971, fol. "Archives 1971," Public Affairs (now, Communications) papers [hereafter PA], unprocessed, UM/W. Nixon's impoundment of monies – not only as a policy making, but also as a fiscal tool – provoked a Congressional response in 1974, but the funds were never re-allocated. Takeshi Fujitani and Jared Shirck, "Executive Spending Powers: The Capacity to Reprogram, Rescind, and Impound," Harvard Law School Budget Policy Paper, Briefing Paper #8, May 4, 2005, accessed on July 2, 2014 at https://web.archive.org/web/20150812142842/http://www.law.harvard.edu/faculty/hjackson/ExecutiveSpendingPowers_8.pdf

8 It certainly didn't help that Massachusetts was the home of the Kennedy

family and had voted against Nixon in 1968. Board of Trustees, "Minutes," Aug. 10, 1970, Box "Board of Trustees Minutes of Meetings of Full Board and Committees," July-Sept., 1970, fol. "Board of Trustees, General Meeting, August 1970," Trustees, UM/A; Collier, "HEW Grant," *ibid.*

9 Anthony J. J. Rourke, "UMass University Hospital Cost Study," June 1, 1964, typescript, Box, "Other Campuses, Medical School, Worcester, 1962 --, Si-Z," fol. "UMass University Hospital Cost Study, 1964," p. 13, Other Campuses, Medical School Collection, UM/A. Heiney, "University of Massachusetts Teaching Hospital Study of Projected Operating Costs," p. 3, Box "Other Campuses, Medical School, Worcester, 1962--, Si-Z," fol. "University of Massachusetts Study of Projected Operating Costs and Income including Analysis of Capital Cost Recovery," "Other Campuses – Medical School, Worcester, 1962-," UM/A. The federal hospital construction grant submitted in 1968, incidentally, estimated the total cost of constructing and equipping the hospital at $38,833,341, absent finance charges. Cf. "University of Massachusetts Medical School Teaching Hospital, Application for a Joint Construction Grant, June 14, 1968." Geraldine A. Collier, "Med School Bid for U.S. Funds Rejected," *Evening Gazette*, April 13, 1971, in PA/UM/W.

10 "House Vote Advances Building of $53-Million Med School Hospital Here," *Worcester Telegram*, Sept. 29, 1971, PA, UM/W.

11 Cope was also on the Board of Trustees of the Worcester Foundation for Experimental Biology. Cf. Jon A. Towne, "Health Planner Raps Parks' Hospital Plan," *Worcester Telegram,* Aug. 4, 1975, p. 9, in Margaret Cope papers, unprocessed [hereafter Cope], UM/W.

12 Personal communication with H. Brownell Wheeler, M.D., May 8, 2014.

13 Geraldine A. Collier, "Soutter Criticizes Hospital 'Cutbacks,'" *Evening Gazette,* Dec. 9, 1971, pp. 1, 2; "Med School, Hahnemann Sign Pact," *Evening Gazette,* Jan. 19, 1971, n.p.; Sharen M. Abbott, "Med School Seeks Affiliation with Three Hospitals in City," *Evening Gazette*, May 17, 1971; Soutter quotation from undated news clipping fragment, Nov. 23, 1971, p. 14, all in PA, UM/W.

14 Towne, "Health Planner Raps Parks' Hospital Plan;" Robert D. Cope, "Excerpts from Statement on Area Hospital Facilities," *Worcester Telegram*, Feb. 3, 1972, p. 8; Steven J. Wallach, "Work at UMass Hospital, 3 Other Facilities OK'd," *Worcester Telegram*, March 3, 1972, pp. 1, 13, all from Cope, UM/W.

15 Lamar Soutter to Robert C. Wood, Dec. 30, 1971, Box "Robert C. Wood, Series 5: Worcester, Box 36, f. 431-437," fol. "Chancellor/Dean, 1971-1973," Robert W. Wood papers [hereafter Wood], UM/A.

16 Members of the Worcester Consortium at that time included Clark University, the College of the Holy Cross, Worcester Polytechnic Institute (WPI), Assumption College, Worcester State College (now, University), Becker College, Anna Maria College, Nichols College, and Quinsigamond Community College. Doc. T73-079, "Development of the Worcester Campus of the University of Massachusetts: A Committee Report," 182 pp., n.d., Box "Board of Trustees Documents, FY1973, T001-094," fol. "Trustees Documents, T73-079," Trustees, UM/A.

17 Notably, the Committee decided to postpone consideration of the development of the medical curriculum and focused only on the potential development of ancillary programs such as graduate education, nursing, residency and postdoctoral education, faculty research, and continuing medical education. "Development of the Worcester Campus," esp. pp. 1-17, 20.

18 H. Brownell (Brownie) Wheeler, M.D., Oral History Interview transcript, interviewed by Ellen More, Aug. 21, 2006, South Portland, ME, pp. 30-34, Oral History Collection, UM/W.

19 Robert Wood, "Remarks," Sept. 20, 1973, pp. 2, 4, fol. "Faculty Meeting, Sept. 20, 1973," Box "Robert C. Wood, Series 5: Worcester, Box 36, fol. 431-437," Wood, UM/A.

20 He was also a member of the Executive Committee of the Institute of Medicine. Wood hired him in May 1972. Doc. T72-143, "Office of the President Personnel Actions," May 26, 1972; "Adam Yarmolinsky" [abbreviated CV], both attached to Board of Trustees, "Minutes," May 26, 1972, Box, "Board of Trustees Minutes of Meetings of Full Board and Committees, May-Sept., 1972," fol. "Board of Trustees General Meeting, May 26, 1972, Trustees, UM/A." "Memo from the Office of the President to the Board of Trustees," Oct. 18, 1972, p. 2, Box, "Board of Trustees Minutes," Oct.-Dec., 1972 fol. "Board of Trustees' Retreat," Oct. 1972," Trustees, UM/A. Yarmolinsky appears to have relocated to the Boston campus after it became clear that the medical school chancellorship would not be his. He left the University for the University of Maryland in 1980.

21 Much later, Wood carefully phrased this as "preparing to separate that position [of Chancellor] from the Deanship of the Medical School." For Wood's characterization (written fully two years after the events), see Robert Wood, "Forward," Doc. T76-050, "Report and Recommendations, The Visiting Committee to the University of Massachusetts Medical School," Feb. 1976, Box "Board of Trustees Documents, FY1976, #001-101," fol. "Trustees Docs., T76-050-053," Trustees, UM/A. Franklin Patterson to Robert C. Wood, Jan. 24, 1971; Lamar Soutter to Robert C. Wood, March 2, 1973[sic: 1972]; Robert C. Wood to Lamar Soutter, March 14, 1973 [sic: 1972]; Robert C. Wood to Lamar Soutter, May 24, 1972, all in Box "Robert C. Wood, Series 5: Worcester, Box 36, fols. 431-437," fol. "Chancellor/Dean, 1971-1973," Wood, UM/A.

22 Reginald William (Bill) Butcher, Jr., Oral History Interview transcript, interviewed by Ellen More (by telephone), Aug. 30, 2010, pp. 3-4, Oral Histories; Wheeler quotation from Peter Castaldi, "University of Massachusetts Medical School: A History," 2002, videographer, Barry L. Davis. Quotation from H. B. Wheeler, M.D., outtakes, Castaldi collection, both at UM/W.

23 H. Brownell (Brownie) Wheeler, M.D., personal communication, Jan. 19, 2012. Dr. Wheeler recalled that the letter, written by William Butcher, then the Chair of Biochemistry and a former member of the U.S. Navy, began with a flourish, the chairs styling themselves in the words of Shakespeare (by way of Admiral Horatio Nelson at Trafalgar), as a "band of brothers." They strongly suggested that they would all resign if an external figure were to be imposed above Dr. Soutter. Wood quickly reconsidered his strategy. Cf. Wheeler, Oral History transcript, pp. 32-34.

24 Brian McNiff, "UMass Officials Start Budget Counterattack," *Evening Gazette*, March 11, 1974; "Dr. Soutter Resigns Post," *Evening Gazette*, Feb. 21, 1975, Newsclippings, PA, UM/W.

25 Louis P. Bertonazzi, "Letter to the Editor," Sept. 4, 1975, Newsclippings, PA, UM/A.

26 Wood eventually prevailed, but not until 1976. See n. 81 below.

27 "Memo from Office of the President To: Board of Trustees; Subject: "Hyannis Retreat," Oct. 18, 1972, Box "Board of Trustees Minutes, Oct.-Dec., 1972," fol. "Board of Trustees, Trustee Retreat, October, 1972," Trustees, UM/A. Richard Saunders to Robert C. Wood, Aug. 17, 1972; Robert Wood, "Memorandum for Speaker David M. Bartley, Aug. 10, 1973," pp. 1-3, both in fol. "Chancellor/Dean, 1971-1973;" Robert Wood, "Remarks," Sept. 20, 1973, pp. 2, 4, fol. "Faculty Meeting, Sept. 20, 1973," all in Box "Robert C. Wood, Series 5: Worcester, Box 36, fol. 431-437," Wood, UM/A. Doc. T76-050, Robert Wood, "Foreword to the Report and Recommendations of the Visiting Committee to the University of Massachusetts Medical School," Feb., 1976, p. 2, Box "Trustees Documents, FY 1976, 001-101," fol. "Trustees Documents, T76-050-053," Trustees, UM/A.

28 Robert C. Wood to Bimi Soutter, Jan. 20, 1974; Lamar Soutter to Robert C. Wood, Oct. 7, 1974; Lamar Soutter, "University of Massachusetts 1975 Budget for the Medical School," Feb. 19, 1974, 2 pp.; Lamar Soutter to Robert C. Wood, March 20, 1974; Lamar Soutter, "Revision of Statement by Chancellor Soutter to the House Committee on Ways and Means Concerning the Fiscal Year 1975 Maintenance Budget for the Worcester Campus of the University of Massachusetts," March 15, 1974; Robert C. Wood, "Memorandum for Chancellor Soutter, "Development Plans for Medical School Faculty," Nov. 7 and 11, 1974,

all in Box "Robert C. Wood, Series 5: Worcester, Box 36," fol. "Worcester, Chancellor/Dean, 1974," Wood, UM/A. "Former Congressman Joseph Early Dies," *Telegram and Gazette*, Nov. 9, 2012, accessed at https://web.archive.org/web/20150812152230/http://www.telegram.com/article/20121109/NEWS/121109417/0on Nov. 18, 2013.

29 Members of the Crispell committee were agreed upon mutually by Dean Soutter and President Wood. It was a remarkably balanced group. Besides Crispell, the Committee included deans or former deans of Johns Hopkins, NYU and Yale medical schools; the dean of the Charles R. Drew Postgraduate Medical School; Lisbeth Schorr, noted health planner, advocate for community health centers and former member of the Office of Economic Opportunity's Office of Health Affairs; the Associate Director for Community Health Services of the University of North Carolina School of Medicine (a leader in developing the field of Family Practice); the Board of Trustees' two physicians, as well as Drs. Sam Clark and Brownie Wheeler, UMMS Chairmen of Anatomy and Surgery, respectively. Dean Soutter was not among the Committee's members.

30 Board of Trustees, "Minutes," Feb. 6, 1974, p. 2, Box "Board of Trustees Minutes of Full Board and Committees, A-Executive," 1974, fol. "General Meeting, Jan.-Aug., 1974;" Kenneth R. Crispell et al, "Report and Recommendations, the Visiting Committee to the University of Massachusetts Medical School," Feb. 1976, p. 1, Box "Trustees Documents, FY 1976, 001-101," fol. "Trustees Docs., T76-050," both in Trustees, UM/A. Information on the Crispell Committee was graciously shared by Dr. Brownie Wheeler, personal communication, Jan. 19, 2012.

31 Robert C. Wood to Lamar Soutter, Feb. 3, 1975; Robert C. Wood to Lamar Soutter, Feb. 20, 1975, all in Box "Robert C. Wood, Series 5: Worcester, Box 36, f. 431-437," fol. "Worcester, Chancellor/Dean, Jan.-June, 1975," Wood, UM/A. Stockwell resigned once the new Chancellor, Roger Bulger, M.D., chose Phillip Caper, M.D. for the new position of Vice Chancellor of Clinical Affairs and took another position in Massachusetts. Board of Trustees, "Minutes," Oct. 6, 1976, Box "Board of Trustees, Minutes of Meetings of Full Board," June-Dec., 1976, fol. "Board of Trustees General Meeting," Trustees, UM/A.

32 John W. Gearan, "Medical School's 'One-Man Army' Resigns," *Worcester Telegram*," Feb. 22, 1975, Newsclippings, PA, UM/W. For President Wood's remarks see Board of Trustees "Minutes," March 5, 1975, Box "Board of Trustees, Minutes of Meetings of Full Board and Committees: A-Budget [1975]," fol. "Board of Trustees General Meeting, Jan.-April, 1975," Trustees, UM/A.

33 Board of Trustees Committee on Buildings and Grounds, "Minutes," March 18, and April 16, 1975, Box "Board of Trustees, Minutes of Meetings of Full Board and Committees: Buildings and Grounds-Exec," 1975, fol. "Board of Trustees

Committee on Buildings and Grounds, Jan.-March, 1975," Board of Trustees "Minutes," April 4, 1975, Box "Board of Trustees, Minutes of Meetings of Full Board and Committees: A-Budget [1975]," fol. "Board of Trustees General Meeting, Jan.-April, 1975." President Wood's administrative troubles were not limited to the Medical School. In a four-page "Bill of Particulars Against the Administration of Robert Wood, President, University of Massachusetts," n. d., but c. Feb. 1976; the faculty at UMass-Amherst objected to his arbitrariness in trying to restrict tenure appointments, in forcing out Chancellor Oswald Tippo against faculty advice, expanding his administrative staff, opposing the faculty's efforts to unionize, and other matters. They described his administration as "highly authoritarian (p. 2)." Cf. Box "Board of Trustees Minutes of Meetings of Committees: Executive, Faculty and Educational Policy, 1976 (Jan.-Dec.)," fol. "Board of Trustees Executive Committee, "Minutes," Feb.-Dec., 1976," all in Trustees, UM/A.

34 Butcher set out to placate the Legislature by overseeing creation of a primary care oriented "Statement of Goals" (see Chapter 5), while Dr. Wheeler set out to organize and open the hospital. Wheeler, Oral History Interview transcript, pp, 35-36. R. William Butcher, Oral History Interview transcript, p. 11. Cf. Lamar Soutter to Robert C. Wood, Oct. 7, 1974, Box "Robert C. Wood, Series 5: Worcester, f. 431-437," fol. "Chancellor/Dean, 1974," Robert C. Wood Papers; Board of Trustees Executive Committee, "Minutes," Oct. 2, 1974, Box, "Board of Trustees Minutes of Full Board and Committees, A-Executive, 1974," fol. "Executive Committee, 1974," Trustees, both UM/A.

35 Board of Trustees, "Minutes," Sept. 11, 1975, p. 5.

36 Jon A. Towne, "$130-Million Hospital and School – an Integrated Medical Community," *Worcester Telegram*, May 5, 1975, p. 3, in Roger J. Bulger papers, fol. 1, unprocessed, UM/A [hereafter, Bulger, UM/W].

37 Hon. Michael Dukakis, Oral History Interview transcript, interviewed by Ellen More, Aug. 21, 2013, Boston, MA, p. 9, Oral History Collection, UM/W.

38 Jon A. Towne, "Health Planner Raps Park's Hospital Plan," Aug. 4, 1975 (n. 8 above).

39 Wheeler's remarks were quoted from a letter "being prepared for Globe editors." Cf. Jon A. Towne, "Officials Predict 'Disaster' If UMass Hospital Stalled," Aug. 1, 1975, *Worcester Telegram*, Cope, UM/W.

40 Bryan Marquard, "Paul Parks, Boston education leader, dies at 86," *Boston Globe*, July 31, 2009, accessed at https://web.archive.org/web/20150812153932/http://www.highbeam.com/doc/1P2-20595169.html; Board of Trustees, "Minutes," Aug. 6, 1975, p. 3; Loretta McLaughlin, "UMass Medical School at

Crossroads," *Sunday Herald Advertiser*, May 25, 1975.

41 Such claims blatantly contradicted the admissions trends at the three Boston medical schools, all of which had decreased the percentage of in-state students admitted during the past decade. Silber's contribution to the debate garnered little support, especially since the state was legally forbidden to fund private education. John R. Silber, "Paying the Bill for College," *The Atlantic*, 1975, pp. 33-40, esp. pp. 35-37, reprint, in fol. 1, Bulger, UM/W.

42 McLaughlin, "UMass Medical School at Crossroads."

43 Edward T. McHugh, "Senators Urge Funding of Med School Hospital," *Worcester Telegram,* Aug. 8, 1975, Newsclippings, PA, UM/W.

44 "City Lobbies for Medical School Hospital," *Evening Gazette*, Aug. 7, 1975; Edward T. McHugh, "Senators Urge Funding," both in Newsclippings, PA/ UM/W. Cf. Wheeler, Oral History transcript, pp. 44-45.

45 Knowing that Hugh Fulmer had recently gone through a similar process for his own department, Butcher asked him to help: "'We're going to have a visit by a visiting committee of the Legislature, and would you please help us out? Because they want to see what we've produced, in terms of what the original mission of the school was to be. And they want to know what the goals of the school are.'" Cf. Hugh Fulmer, Oral History Interview transcript, interviewed by Ellen More (by telephone), July 30, 2009, p. 50, Oral History Collection, UM/W. For Dukakis' comment, see Chapter 4, n. 40 above. Also see "Memorandum of Presentations Made at Informal Meeting of the Board of Trustees, UM/Worcester, Jan. 8, 1974;" Robert Wood, "Memorandum to Faculty and Educational Policy Committee, March 11, 1975, Box "Board of Trustees Documents, FY 1975, 074-167," fol. Board of Trustees Docs., T75-087-094," both in Trustees, UM/A.

46 Butcher, Oral History Interview transcript, pp. 20-21 (n. 22 above).

47 "Statement of Goals: The University of Massachusetts Medical Center, as prepared by The Faculty and Administration of the Medical School," Sept., 1975, pp. 1, 2, Box 36, "Robert C. Wood, Series 5: Worcester," fol. "Chancellor/Dean, Jul. 1975-76," RCW, UM/A. The Board of Trustees accepted the document at a Board meeting on Nov. 5, 1975. Cf. Doc. T76-010, Box, "Board of Trustees Documents FY 1976, 001-101, fol. "Trustees Doc. T76-001-025," Trustees, UM/A.

48 "Minutes, Board of Trustees Meeting," Oct. 1, 1975; "Minutes, Board of Trustees Meeting, Nov. 5, 1975," both in Box "Board of Trustees Minutes of Meetings of Full Board and Committees: A-Budget" [1975], fol. "Board of Trustees General Meeting, Oct.-Dec., 1975," Trustees, UM/A.

49 Roger J. Bulger, "The Medical Center: University of Massachusetts," pp. 125-146, quotation p. 134, in *New Medical Schools at Home and Abroad: Report of a Macy Foundation Conference,* ed. John Z. Bowers and Elizabeth F. Purcell (New York: Josiah Macy, Jr. Foundation, 1978); "Minutes, Board of Trustees," Nov. 5, 1975, fol. "Board of Trustees General Meeting, Oct.-Dec., 1975," Box "Board of Trustees Minutes of Meetings of Full Board and Committees: A-Budget" [1975]; "Minutes, Board of Trustees Executive Committee," Oct. 1, 1975, fol. "Board of Trustees Executive Committee," April-Oct., 1975; "Minutes of Executive Committee, Nov. 5, 1975, fol. "Board of Trustees Executive Committee Minutes," Nov.-Dec., 1975, both in Box "Board of Trustees Minutes of Meetings of Full Board and Committees: Buildings and Grounds-Exec., 1975," all Trustees, UM/A.

50 Robert Wood, "Memorandum to the Board of Trustees," Oct. 10, 1975, Box "Robert C. Wood, Series 5: Worcester, Box 36," fol. "Chancellor/Dean, July 1975-76," Wood. UM/A.

51 John Howe, III, M.D., who soon became a close aide and Associate Dean of Professional Affairs to Chancellor Bulger, played a major role in developing the template for the state contracts between the medical school and the departments of Mental Health and Public Health. Cf. Roger Bulger to Ellen More, undated written communication c. April 2010, Bulger, UM/W; University of Massachusetts Board of Trustees "Minutes," Dec. 11, 1975, p. 5, Box "Board of Trustees Minutes of Meetings of Full Board, June-Dec., 1976," fol., Board of Trustees Health Affairs Committee, 1975," Trustees, UM/A.
For the consent decree, see Department of Mental Health, "The Massachusetts Consent Decrees for Mentally Retarded Citizens," 1980, pp. 7-8, accessed online at https://web.archive.org/web/20150812153654/http://archives.lib.state.ma.us/bitstream/handle/2452/49253/ocm10707787.pdf?sequence=1 on April 5, 2014; Robert Medeiros, "Belchertown State School Labeled a Model Institution," *Nashua (NH) Telegraph*, Nov. 23, 1973, accessed online at http://news.google.com/newspapers?nid=2209&dat=19731123&id=K6ArAAAAIBAJ&sjid=XfwFAAAAIBAJ&pg=6325,3280067 on April 5, 2014. The first consent decree, for Belchertown, was signed in 1973.

52 Robert C. Wood to Lamar Soutter, Feb. 18, 1975; Reginald W. ("Bill") Butcher to Robert C. Wood, Sept. 16, 1975; R.W. Butcher to Robert C. Wood, Nov. 25, 1975; Robert C. Wood, "Memorandum," Dec. 2, 1975, in Wood, UMA. Amy Claire Barkin, "Progress Report: Belchertown Medical and Health Services Contract; Monson Medical and Health Services Contract," n.d., Box "Board of Trustees Minutes of Meetings of Committees: H-Z, 1976 (Jan.-Dec.)," fol. "Board of Trustees Health Affairs Comm., 1976, Jan.-June," Trustees, UM/A.

53 These included Belchertown State School, Monson State Hospital, Department of Mental Health (for pharmacy services), Department of Public

Health (for child development services), and Pondville Hospital (for radiotherapy services). "University of Massachusetts Medical School Teaching Hospital Revised FY 78 Budget Request," p. 9, Box 1, fol. 1, Roger J. Bulger Papers [Hereafter, Bulger], UM/W; Doc. T76-031, "Interagency Agreement #1," Box "Board of Trustees Documents, FY 1976, 001-101," fol. "Trustees documents, T76—26-033," all in Trustees, UM/A; Roger Bulger, Oral History Interview transcript, interviewed by Ellen More (by telephone), April 20, 2010, pp. 1-7, Oral History Collection, UM/W; Paul Appelbaum, "Grand Rounds (DVD)," n.d., Psychiatry collection, unprocessed, UM/W.

54 Edward T. McHugh, "House Beats GOP Move to Abolish Med School," *Worcester Telegram*, Oct. 2, 1975, Newsclippings, PA, UM/W.

55 Edward T. McHugh, "Compromise May Remove UMass Hospital Roadblock," *Worcester Telegram*, Aug. 27, 1975, Newsclippings, UM/W; "Acts and Resolves," Chap. 684, Item No. 7411-1005, Nov. 8, 1975, p. 780-781; Board of Trustees, "Minutes," Aug. 6, 1975, p. 4, Box, "Board of Trustees Minutes of Meetings of Full Board and Committees: A-Budget," fol. "Board of Trustees General Meeting, Aug.-Sept., 1975," Trustees, UM/A.

56 Frederick Anderson, Oral History Interview, interviewed by Ellen More, Dec. 9, 2013, Worcester, MA; Wheeler, Oral History transcript, p. 36, both in Oral History Collection, UM/W. Board of Trustees Committee on Health Affairs, "Minutes," Jan. 6, 1976, pp. 1, 2, Box "Board of Trustees Minutes of Meetings of Committees, H-Z, 1976 (Jan.-Dec.)," fol. "Board of Trustees Health Affairs Committee, 1976 (Jan.-June)," Trustees, UM/A.

57 Richard Irwin, M.D., Oral History Interview transcript, interviewed by Ellen More, March 8, 2013, Worcester, MA, p. 12; Gail Frieswick and Anne Bourgeois, Oral History Interview transcript, interviewed by Ellen More, Aug. 11, 2010, Worcester, MA, p. 3, both in Oral History Collection, UM/W; Board of Trustees, "Minutes," Feb. 1, 1984, Trustees, UM/A, Section "1984" at "Digitized Minutes of the Board of Trustees," accessed online at https://archive.org/stream/universityofmass1984univ#page/n9/mode/2up [hereafter, Trustees online, UM/A].

58 Board of Trustees, "Minutes," Feb. 4, 1976, p. 2, Box "Board of Trustees Minutes of Meetings of Full Board, Jan.-May," fol. "Board of Trustees General Meeting, Jan.-Feb., 1976," Trustees, UM/A.

59 This characterization comes from James Dalen, *University Hospitals: Doctors and Patients* (San Diego, CA: Aventine Press, 2009), p. 103.

60 John F. Stockwell, "UMass Hosp. Notes," 1976, 1:1, Feb. 19, 1976, Box 1, fol. 33, Stockwell, UM/W; Carole Cohen, Oral History interview, interviewed by Ellen

More, Sept. 16, 2010, Worcester, MA, Oral History Collection, UM/W.

61 Doc. T75-40, "University of Massachusetts Teaching Hospital Maintenance Budget Request, Fiscal Year 1976," pp. 2, 23, 24. Frieswick and Bourgeois, Oral History Interview transcript, p. 9.

62 Doc. T78-99, "University of Massachusetts Hospital One and Five-Year Plan, FY 1978-1982," p. 9. Radiation Oncology was added in 1984. Robert Tranquada, M.D., "UMass Medical Center, July 1989 [sic: 1979] to Aug. 1986," typescript, Robert Tranquada papers, unprocessed, UM/W.

63 Gregory R. Byrnes, "Med School Boosts Fight Against Cancer," Evening Gazette, Sept. 18, 1974;" Mark A. Silverman, "Med School Trustees Seek Hospital Fund," Worcester Telegram, Nov. 7, 1974; Jon A. Towne, "Consortium Opens Talks," Worcester Telegram, Nov. 20, 1974; Jon A. Towne, "Soutter Says Emergency Unit Essential," Worcester Telegram, Dec. 6, 1974, p. 1, all in Newsclippings, PA, UM/W.

64 "List of Current Departments" (c. June 18, 1975), Box "Board of Trustees Documents, FY 76, #001-101," fol. "Trustees Documents, T76-049," Trustees, UM/A.

65 The original inter-hospital agreement called for the first linear accelerator to go to St. Vincent since University Hospital was not yet built, but on condition that the second one would go to UMass. St. Vincent managed to acquire state permission for a second accelerator. Personal communication, H. Brownell Wheeler, M.D., May 8, 2014. UMass Hospital won approval for a C-T scanner at the end of 1981. Board of Trustees, "Minutes," Dec. 9, 1981, Section 1981, Trustees online, UM/A.

66 Mark A. Silverman, "Med School Trustees Seek Hospital Fund," *Worcester Telegram,* Nov. 7, 1974; Jon A. Towne, "Consortium Opens Talks," *Worcester Telegram*, Nov. 20, 1974; Jon A. Towne, "Soutter Says Emergency Unit Essential," *Worcester Telegram*, Dec. 6, 1974, p. 1, all in Newsclippings, PA, UM/W. Cf. Robert E. Tranquada to David Knapp, July 11, 1979 in Doc. T79-076, Board of Trustees Documents, Trustees, UM/A. Board of Trustees Minutes, Nov. 7, 1979, Section 1979, Trustees online, UM/A; Richard Hunter, Oral History Interview transcript, p. 3, Jan. 5, 2011, Worcester, MA, Oral Histories, UM/W.

67 Aaron Lazare and John O'Brien, "Memo: Leadership of the Department of Emergency Medicine," March 13, 2007, Richard Aghababian papers [hereafter, Aghababian], UM/A. Board of Trustees Committee on Health Affairs, "Minutes," Jan. 6, 1976, p. 3, Box "Board of Trustees Minutes of Meetings of Committees, H-Z, 1976 (Jan.-Dec.)," fol. "Board of Trustees Health Affairs Committee, 1976 (Jan.-June)," Trustees, UM/A; Doc. T78-124, "Massachusetts Hospital One and Five Year Plan, FY 1979-1983," p. 11, Box "Board of Trustees Documents, FY78,

085-133," fol. "Trustees Doc. T78-124-126," Trustees, UM/A; Board of Trustees, "Minutes," Dec. 1, 1993, Trustees, UM/A online; Wheeler, Oral History transcript, pp. 47-50, Oral Histories, UM/W.

68 Richard Aghababian, M.D., Oral History Interview transcript, Part 2, interviewed by Ellen More, April 16, 2014, Worcester, MA, pp. 3-10, in Oral Histories, UM/W. Cf. https://web.archive.org/web/20150812183626/http://www.timi.org/

69 Board of Trustees, "Minutes," Oct. 13, 1981, March 31, 1982, April 14, 1982, Aug. 11, 1982, Oct. 2, 1985; Board of Trustees Executive Committee "Minutes," July 16, 1984, Aug. 8, 1984, May 20, 1985, all from Sections "1981," "1982," "1985," Trustees online, UM/A (n. 63).

70 Rob, Charles G. and H. Brownell Wheeler, "Thrombosis of internal carotid artery treated by arterial surgery," *British Medical Journal*, 1957, 2 (Sept.); 264-266.

71 The existing method required patients to undergo a needle stick in the foot to thread a catheter with dye up to the groin. The dye frequently caused nausea, the needle stick was painful, and the results were often unreliable. Patients hated the procedure. IPG dominated the field until the emergence of ultrasound in the late 1970s. Anderson, Oral History Interview (n. 56 above).

72 Wheeler quotation from Castaldi, video outtakes, n. 22 above.

73 Dr. Wheeler resigned as Chief of Staff in July, 1976 after Chancellor Bulger named Philip S. Caper, M.D., a health care adviser to Senator Edward Kennedy, his Vice Chancellor for Health Affairs, a newly created position. H. Brownell Wheeler, M.D. to Robert Wood, July 20, 1976, Box "Robert C. Wood, Series 5: Worcester, Box 36, f. 431-437," fol. "Misc., 1976," Wood, UM/A. Cf. Doc. T76-062, Box Board of Trustees Documents, FY 1976, #001-101, fol. Trustees Documents, T76-054-063 (except #060)," in Trustees, UM/A; H. Brownell Wheeler, personal communication, May 12, 2014.

74 Bruce S. Cutler, Oral History interview transcript, interviewed by Ellen More, Sept. 11, 2006, p. 2; Wheeler, Oral History Interview transcript, p. 29; James Dalen, Oral History Interview transcript, interviewed by Ellen More (by telephone), May 6, 2009, pp. 3, 8, 18, all in Oral History Collection, UM/W.

75 Lamar Soutter, "Memorandum to President John W. Lederle, Sept. 27, 1966, Box 1, fol. 2, "Curriculum Vitae," fol. 9, "Personnel file, 1964-1999," H. Brownell Wheeler, M.D. papers, 1964-2006 [hereafter Wheeler], UM/W.

76 Lynn Li, M.D., Oral History Interview transcript, interviewed by Ellen More,

Jan. 10, 2013, Worcester, MA, p. 3, Oral History Collection, UM/W.

77 Roger Hickler came to UMass from Boston University, but only after spending 20 years at Harvard. Mary Anne Magiera, "Medical School Accepts 24, 8 More Than Its First Class," *Worcester Telegram,* April 27, 1971.

78 Board of Trustees Minutes, Nov. 6, 1974, p. 10, Box, "Board of Trustees Minutes of Full Board and Committees, A-Executive, 1974," fol. "Board of Trustees General Meeting, Sept. - Dec. 1974," Trustees, UM/A.

79 Cutler, Oral History interview notes, transcript, p. 2.

80 Wheeler, Oral History transcript, p. 47-50; Board of Trustees, "Minutes," Nov. 6, 1974, Box "Board of Trustees, Minutes of Full Board and Committees, A-Executive, 1974," fol. "Board of Trustees General Meeting, Sept. - Dec. 1974," Trustees, UM/A; Lamar Soutter to Robert Wood, Jan. 22, 1975, Box "Robert C. Wood, Series 5: Worcester, Box 36, f. 431-437," fol. "Chancellor/Dean, 1971-1973," Wood, UM/A; Board of Trustees Committee on Health Affairs, "Minutes," May 11, 1976, p. 1, Box "Board of Trustees Minutes of Meetings of Committees, H-Z, 1976 (Jan.-Dec.)," fol. "Board of Trustees Health Affairs Committee, 1976 (Jan.-June)," Trustees, UM/A.

81 Gorlin had intended to bring his current team with him from the Brigham. Richard Gorlin to Roger B. Hickler, Jan. 16, 1974, esp. pp. 1, 9, Appendix 3. Cf. James Dalen to Roger Hickler, July 23, 1974; Lamar Soutter to James Dalen, July 31, 1974, all in Box 11, fol. 11; Roger Hickler to Lamar Soutter, Aug. 19, 1974; Oscar Starobin to James Dalen, Aug. 21, 1974, Box 11, fol. 10, Wheeler, UM/W.

82 Dalen, Oral History Interview transcript, pp. 1-2, 12, 22. See Chapter 8 for a discussion of the events culminating in Dr. Dalen's decision to leave UMMS.

83 James E. Dalen, *University Hospitals,* pp. 102-103 (n. 59 above).

84 Dalen, Oral History Interview transcript, pp. 3, 8, 18. Several of the early faculty made similar comparisons to other nearby, new medical centers. In their view, the University of Connecticut Hospital made a serious error in focusing on research early in its career (although, given its location in rural Connecticut and the presence of established hospitals in urban Hartford, it may have appeared to have little chance of directly competing for patients). With regard to Brown University's medical school, it faced a different problem, the lack of any one dominant hospital, with chairmanships rotating among several different sites. Cf. Dalen, Oral History Interview transcript, p. 3; Richard Irwin, Oral History Interview transcript, pp. 9-10.

85 Dalen, Oral History Interview transcript, p. 9.

86 Dalen, Oral History Interview transcript, pp. 8, 9, 19-22. Board of Trustees Long-range Planning Committee, "Minutes," Nov. 8, 1978, p. 11, Section 1978, Trustees online, UM/A. Suggesting the niche they expected to fill: "In 1975, there were 1,420 open heart surgical procedures and 828 by-pass procedures performed in Massachusetts. All but 2 of those procedures were performed in Boston," from Doc. T78-099, "One and Five-Year Hospital Plan for University Hospital, FY 1978-1982." Also see Doc. T78-124, "Massachusetts Hospital One and Five Year Plan, FY 1979-1983," p. 13, Box "Board of Trustees Documents, FY78, # 085-133," fol. "Trustees Doc. T78-124-126," Trustees, UM/A.

87 The first ambulatory patient, a man from Western Massachusetts, was seen by Dr. Charles Regan in the Ophthalmology Clinic. John F. Stockwell, *UMass Hosp. Notes,* 1976, *1*:1, Feb. 19, 1976, Box 1, fol. 33, John F. Stockwell Papers [hereafter, Stockwell], UM/W; Board of Trustees Committee on Health Affairs, "Minutes," Jan. 6, 1976, p. 3, Box "Board of Trustees Minutes of Meetings of Committees, H-Z, 1976 (Jan.-Dec.)," fol. "Board of Trustees Health Affairs Committee, 1976 (Jan.-June)," Trustees, UM/A.

88 University of Massachusetts Board of Trustees "Minutes," Dec. 7, 1977, p. 10, Box "Board of Trustees Minutes of Meetings of Full Board," fol. "Board of Trustees General Meeting (Full Board), Aug.-Dec., 1977," Trustees, UM/A; Dalen, *University Hospitals*, pp. 107-108; Dalen, Oral History Interview transcript, p. 5; Bulger, Oral History Interview transcript, p. 14.

89 Board of Trustees, "Minutes," Feb. 1, 1978, p. 4. Box "Board of Trustees Minutes of Meetings of Full Board and Committees: A-Budget and Finance, 1978," fol. "Board of Trustees General Meeting, Jan.-June, 1978," Trustees, UM/A.

90 Doc. 81-015, Rosalie S. Wolf, "University of Massachusetts Center on Aging," Nov. 1980, pp. 7-10; Board of Trustees, "Minutes," Aug. 8, 1979, Section 1979; Board of Trustees, "Minutes," Sept. 9, 1981, Section 1981, both in Trustees online, UM/A.

91 Chap. 733, "An Act Authorizing the Establishment of a Group Practice Plan at the University of Massachusetts Medical School," approved Aug. 6, 1974, *Acts and Resolves,* 1974, photocopy; Committee on Health Affairs, "Minutes," Oct. 19, 1976 and Nov. 22, 1976, all in Box "Board of Trustees Minutes of Meetings of Committees, H-Z, 1976 (Jan.-Dec.), fol. "Board of Trustees Health Affairs Committee, 1976 (Jan.-June)," Trustees, UM/A.

92 Board of Trustees Committee on Budget and Finance, "Minutes," Feb. 28, 1978, p. 7, accessed online in Section "1978-Committees," Trustees online, UM/A.

93 Trustee Committee on Budget and Finance, "Minutes," Feb. 28, 1978, in Section 1978-Committees, Trustees, UM/A, accessed online, ibid; Frieswick and Bourgeois, Oral History Interview transcript, pp. 1-3, quotation, p. 6; Anne Bourgeois, personal communication, Oct. 12, 2010.

94 Frieswick and Bourgeois, Oral History Interview transcript, pp. 18-19.

95 Frieswick and Bourgeois, Oral History Interview transcript, quotation, pp. 9-10.

96 In June, 1978, Bulger announced he was leaving to become president of the University of Texas Health Science Center-Houston at the end of 1978. Laurie M. Itow, "Bulger Says He'll be Leaving a Medical School That's 'on Its Way'," *Worcester Sunday Telegram*, June 18, 1978, p. 22, Box 1, fol. 1, Bulger, UM/W.

97 The Boston City Hospital residents' slowdown was accomplished by overzealous inpatient admissions that brought the place to a near standstill. For Dr. Caper's role in developing one of the U.S.'s first Area Health Education Centers [AHECs], see Chapter 6 of this book. Doc. T76-062, Box "Board of Trustees Documents, FY-76, #001-101," fol. "Trustees Documents, T76-054-063, Trustees, UM/A; Edward M. Kennedy to Roger J. Bulger, March 23, 1976; Philip Caper, "*Curriculum Vitae,*" Roger Bulger to Robert C. Wood, March 31, 1976; "Position Description: Vice Chancellor for health Affairs," all in Box "Board of Trustees Minutes of Meetings of Committees: Executive, Faculty and Educational Policy, 1976 (Jan.-Dec.)," fol. "Board of Trustees, Executive Committee, Feb.-Dec., 1976," Trustees, UM/A; "Dr. Caper: Power Without Practice," *Medical News*, May 2, 1977, *1*:6, pp. 1, 5, Box 1, fol. 1, Bulger, UM/W.

98 The other founding Hospital Management Board members included Gavin Robertson, Trustee, of Worcester, Vice Chair, Robert Bowditch, Richard Harrington, Frederic Hillis, Mrs. Russell Johnson, Dr. Anne Kibrick, Sister Kathleen Popko, Dr. Alonzo Yerby, Dr. Edward Croce, Trustee, of Worcester, and Paul Cronin, Trustee. "Constitution of the Hospital Management Board and the establishment of the membership thereof," July 27, 1976, Box "Board of Trustees Minutes of Meetings of Full Board, June-Dec., 1976," fol. "Board of Trustees General Meeting, July-Sept. 1976;" Board of Trustees, "Minutes," Aug. 4, 1976, Box "Board of Trustees Minutes of Meetings of Full Board, Jan.-May, 1976," fol. "Board of Trustees General Meeting, July-Sept., 1976," both in Trustees, UM/A.

99 Benedict, a patient of Dr. Wheeler, readily declared his gratitude and unwavering support whenever the medical center's fortunes seemed in danger, either from the Legislature or from a new Chancellor (e.g., Dr. Leonard Laster) who attempted to consolidate his own power by eliminating figures (e.g., Brownie Wheeler) he perceived as threatening. The Medical Center ultimately expressed its gratitude to Benedict by naming the Ambulatory Care building for him. Cf. Chapter

7, below; Wheeler, Oral History Interview, Part 1, transcript, p. 67; H. Brownell Wheeler, "Remarks About Joseph Benedict (on the occasion of the re-opening and re-dedication of the Benedict Building in 1998, three years after Benedict's death)," May 15, 1998, typescript, Box 8, fol. 3, Wheeler, UM/W.

100 Doc. T78-124, "Massachusetts Hospital One and Five Year Plan, FY 1979-1983," pp. 2-4, Box "Board of Trustees Documents, FY78, # 085-133," fol. "Trustees Doc. T78-124-126," Trustees, UM/A.

101 Doc. T82-061A, "Creation of the Management Board of the University Of Massachusetts Hospital,"; Doc. T83-058, Nancy Keyes, "Memorandum to the Board of Trustees Executive Committee," May 16, 1983, Board of Trustees Documents, Trustees, UM/A.

102 Board of Trustees, "Minutes," Feb. 4, 1976, p. 6, Box "Board of Trustees Minutes of Meetings of Full Board, Jan.-May," fol. "Board of Trustees General Meeting, Jan.-Feb., 1976," Trustees, UM/A.

103 Robert C. Wood, "Memorandum to the Board of Trustees," July 15, 1976; Roger Bulger to Robert C. Wood, Nov. 16, 1976, both in Box "Board of Trustees Minutes of Meetings of Committees: Budget and Finance, Buildings and Grounds, 1976 (Jan.-Dec.)" fol. "Board of Trustees Committee on Budget and Finance, July-Dec., 1976," Trustees, UM/A.

104 "Medical School and University Hospital Midyear Review and FY77 Deficiency Budget Request for the University of Massachusetts Hospital," Feb. 15, 1977, See esp. pp. 1-2, 6-7, 19-27, and Tables 2-4; "University of Massachusetts Medical School Teaching Hospital Revised FY 78 Budget Request," pp. 2, 3; "University of Massachusetts Hospital Management Newsletter, I:1 (Nov. 15, 1977), p. 2, all in Box 1, fol. 1, Bulger, UM/W. Cf. University of Massachusetts Board of Trustees Committee on Health Affairs, "Minutes," Nov. 22, 1976, p. 1, Box "Board of Trustees Minutes of Meetings of Committees, H-Z, 1976 (Jan.-Dec.)," fol. "Board of Trustees Health Affairs Committee, 1976 (Jan.-June)," Trustees, UM/A.

105 Roger Bulger, Oral History Interview transcript, p. 12.

106 Bernard S. Fellner, "Report on the Development of a Feasibility Study Regarding Trust Fund Operation for the University of Massachusetts Hospital," Nov. 6, 1976; Box "55/2, Other Campuses...R-Si," fol. "Report Regarding Trustee Fund Operations for the Hospital, Nov. 16, 1976;" Doc. T76-098, "Cash Flow Shortfall in Group Practice Trust Fund," Memorandum to the Board of Trustees Executive Committee, June 1, 1976; Box "Trustees Documents, FY 1976, 001-101," fol. "Trustees Documents, T76, 091-098," Trustees, UM/A. Much of the initial shortfall resulted from steep increases in malpractice rates plus the delayed

opening of the Hospital.

107 Robert C. Wood, "Memorandum to the Board of Trustees: FY1978 Maintenance Appropriation," July 15, 1977, Box "Board of Trustees Minutes of Meetings of Full Board, 1977," fol. "Board of Trustees General Meeting (Full Board), July 1977," Trustees, UM/A; Cf. Sarah F. Liebschutz, *Communities and Health Care: The Rochester, New York Experiment* (Rochester, N.Y.: University of Rochester Press, 2011); Barbara J. Culliton, "Health Manpower Act: Aid but Not Comfort for Medical Schools," *Science*, 1976, *194*: 4266 (Nov. 12), pp. 700-704.

108 Board of Trustees Special Meeting, "Minutes," July 2, 1980, in Section 1980; Board of Trustees Committee on Budget and Finance, "Minutes," Sept. 9, 1981, in Section 1981, both in Trustees online, UM/A.

109 Robert C. Wood, "Memorandum to the Board of Trustees: FY1978 Maintenance Appropriation," July 15, 1977, Box "Board of Trustees Minutes of Meetings of Full Board, 1977" fol. "Board of Trustees General Meeting (Full Board), July 1977," Trustees, UM/A; Board of Trustees Committee on Budget and Finance, "Minutes," Feb. 28, 1978, p. 5, accessed online in Section "1978-Committees," at Trustees, UM/A digitized. Cf. Doc. T78-099, "One and Five-Year Hospital Plan for University Hospital, FY 1978-1982," p. 16.

110 Roger Bulger, Memorandum to Robert C. Wood, July 15, 1977; Roger Bulger to Robert Wood, July 21, 1977, both in Box "Board of Trustees Minutes of Meetings of Full Board, 1977," fol. "Board of Trustees General Meeting (Full Board), July 1977," Trustees, UM/A.

111 Roger J. Bulger to Franklin Patterson, "Memorandum: The 5-year plan for University Hospital," May 8, 1978, pp. 1-2.

112 Doc. T78-124, "Massachusetts Hospital One and Five Year Plan, FY 1979-1983," esp. "Appendix: Listing of Student Affiliations (By Program Area) at UMMC, Calendar Year 1977," pp. 21, 23-24, Box "Board of Trustees Documents, FY78, # 085-133," fol. "Trustees Doc. T78-124-126," Trustees, UM/A. Affiliated programs included everything from Biomedical Engineering (WPI), Nursing (Worcester State College, UMass-Amherst, Hahnemann Hospital, Fitchburg State), Nurse Practitioner (UMass-Amherst), Hospital Administration (Boston College), Communication Disorders (Worcester State), Pharmacy (Mass. College of Pharmacy), Nuclear Medicine Technology (Worcester State), Physical Therapy (Becker Junior College), Public Health (UMass-Amherst), Social Work (Anna Maria College, Assumption College, Becker Junior College, Holy Cross College), and Public Health (UMass-Amherst), to mention only the local program affiliates.

113 Doc. T78-124, "Massachusetts Hospital One and Five Year Plan, FY 1979-

1983," p. 14, Box "Board of Trustees Documents, FY78, # 085-133," fol. "Trustees Doc. T78-124-126;" Board of Trustees, "Minutes," Feb. 7, 1979; April 4, 1979; May 2, 1979, all in Section 1979, Trustees online, UM/A.

114 In 1984, Drachman was made the director of a new Alzheimer's Disease Research Center at UMMC, one of only five in the U.S. Board of Trustees, "Minutes," June 1, 1977, Box "Board of Trustees Minutes of Meetings of Full Board, 1977," fol. "Board of Trustees General Meeting, Jan.-June, 1977;" Board of Trustees, "Minutes," May 7, 1980, Section 1980; Board of Trustees "Minutes," Dec. 5, 1984, Section 1984; Board of Trustees, "Minutes," Aug. 7, 1985, Section 1985, all in Trustees online, UM/A; Doc. T84-063, "Minutes of the Hospital Management Board," May 16, 1984; Doc. T84-117, Proceedings of the Sept. 19, 1984 Hospital Management Board Meeting," Board of Trustees Documents, Trustees, UM/A.

115 University of Massachusetts Trustees Long-Range Planning Committee "Minutes," Nov. 11, 1978, pp. 13-14, accessed online at Section "1978-Committees," Trustees online, UM/A.

116 Rosemary Stevens, *In Sickness and in Wealth*, pp. 309-310 (n. 2 above).

117 Board of Trustees, "Minutes," Dec. 8, 1982, Section 1982, Trustees online, UM/A.

118 Stevens dates the onset of the corporatization of hospitals to the 1970s, but for UMass, the trend definitely dates from the early 1980s and a reaction to the rise of managed care, much like the trends described in Ludmerer, *Time to Heal,* pp. 350-360 (n. 4 above). Cf. Rosemary Stevens, *In Sickness and in Wealth* , pp. 322-326.

119 Cf. Robert Tranquada, "Executive Summary to Cardiovascular Center Renovation-Worcester," pp. 1, 8, in Doc. T85-023, March 4, 1985, Board of Trustees Documents, Trustees, UM/A.

120 Board of Trustees, "Minutes," June 8, 1983, Section 1983; Board of Trustees Executive Committee "Minutes," Sept. 12, 1984, Section 1984; Board of Trustees Special Meeting, "Minutes," Jan. 16, 1985, Section 1985, all in Trustees online, UM/A; Doc. T83-044, "University of Massachusetts Teaching Hospital Fiscal 1984 Budget, Exhibits 4, 7, Board of Trustees Documents; Robert Tranquada to David C. Knapp, July 5, 1983, "Procedures for anticipated layoffs due to the effects of Chapter 372", in Doc. T83-068, Board of Trustees Documents; Doc. T84-037, Janice B. Wyatt, "Management by Objectives," March 20, 1984; "Proceedings of the April 18, 1984 Hospital Management Board Meeting," April 25, 1984; Doc. T84-021, Memo from David Knapp to the Executive Committee, "Formation of New Corporation to Support Hospital and University

of Massachusetts," March 6, 1984, Board of Trustees Documents, all in Trustees, UM/A. Committee on Budget and Finance, June 5, 1990,

121 "Quincy City Hospital & others vs. Rate Setting Commission, etc." 406 Mass. 431, Oct. 2, 1989-Jan. 16, 1990, pp. 436, 447-48, 449n.7, accessed online at https://web.archive.org/web/20150812184118/http://masscases.com/cases/sjc/406/406mass431.html on Jan. 18, 2014; Robert Tranquada, "Executive Summary of the Hospital Long-Range Plan," May 10, 1983, pp. 1-2, [approved June 8, 1983], in Doc. T83-058, Board of Trustees Documents; c.f. Doc. 85-015, Janice Wyatt, "Objectives for the Calendar year 1984," Jan. 23, 1985, Board of Trustees Documents, Trustees, UM/A.

122 Jeffrey Stoff, M.D., Oral History Interview transcript, interviewed by Ellen More, March 17, 2014, Worcester, MA, pp. 6-17, Oral History Collection, UM/W.

123 Once again, UMass faced opposition from hospital regulators in Boston who refused permission for the hospital to lease a nearby building for an expanded outpatient clinic. Not until 1990 did the hospital find a way to finance the Ambulatory Care Annex project through the state Health and Educational Facilities Authority – in the amount of $11 million. Board of Trustees Committee on Budget and Finance, "Minutes," Oct. 2, 1990; Board of Trustees, "Minutes," Oct. 3, 1990, both in Section 1990, Trustees online, UM/A. Cf. Doc. 86-060, "Proceedings of the Hospital Management Board Meeting," April 16, 1986 and May 21, 1986; Doc. 86-079, "Proceedings of the Sept. 17, 1986 Hospital Management Board Meeting," p. 4; Doc. T90-048A, all in Trustees Documents, UM/A.

124 Doc. T-87-039, "Proceedings of the March 18, 1987 Hospital Management Board Meeting," p. 1, Trustees Documents; Board of Trustees Meeting, "Minutes," Oct. 7, 1987, Section 1987, Trustees online, both UM/A. On March 18, 1987, John Sullivan, M.D., a pediatrician and viral immunologist deeply involved in development and clinical trials of Nevirapine, a drug to prevent maternal-fetal transmission of HIV, informed the Management Board of the need to educate all hospital employees about proper procedures and the need to develop up-to-date policies for AIDS care, as well as plans for the new AIDS center; in October, the Board learned that UMass Medical Center had received an $8 million grant from NIH to study the AIDS virus. The new center "will include a wider range of services from tertiary care to home and extended care services. It will include screening, as well as direct care of both out-patients and in-patients and will oversee their care within extended care facilities." Quotation from "University of Massachusetts Hospital Budget, FY88," p. 22, PA, UM/W. In 1989 Dr. Sullivan received a $1.5 million grant to study HIV+ children with hemophilia. Board of Trustees, "Minutes," Feb. 1, 1989, Section 1989, Trustees online, UM/A. For additional discussion of AIDS research at UMMC, see Chapter 9.

125 "University of Massachusetts Medical Center Hospital and Group Practice Strategic Plan, FY 1988- FY 1990," Draft, Nov. 16, 1987, pp. 6, 12, 34-40, PA, UM/W.

126 Stevens, *In Sickness and in Wealth*, p. 323 (n. 2 above); Doc. T85-038, "Hospital Fiscal Year 1986 Budget," May 16, 1985, pp. 2, 3, 5; Doc. T86-044, "University of Massachusetts Hospital Fiscal Year 1987 Budget Overview," pp. 1, 9, both in Trustees Documents, UM/A.

127 Board of Trustees Committee on Budget and Financial Affairs, Feb. 5, 1991, Section 1991, Trustees online, UM/A.

128 See n. 99 above.

129 The Fairlawn Rehabilitation Center opened in 1987. Doc. T86-061, "Proposal to Convert Fairlawn Hospital," July 3, 1986, Trustees Documents, UM/A.

130 When Worcester City Hospital was closed in 1991 and its campus taken over by the Medical Center, UMMC was viewed as the savior of the City. Robert Z. Nemeth, "Perspective: None foresaw the impact of UMass Med Center," *Sunday Telegram*, Nov. 10, 1991, Doc. T91-121, Trustees Documents, UM/A. Naturally, UMMC hoped to benefit from the deal, first, by gaining the inpatient and specialty referrals formerly tied to City Hospital and second, by acquiring the city contract for Advanced Life Support/Ambulance Services formerly held by the Fire Department. Through a collaboration with Congressman Joseph Early, Massachusetts Secretary of Health and Human Services David Forsberg, city officials, and the local hospital authority, UMMC acquired City Hospital's downtown campus on the condition that it retain tenants for the site who would continue the historic mission of the hospital to care for the health needs of Worcester's Main South neighborhood. To that end, a wing of the old hospital was remodeled and a long-term lease for that space was contracted with the Family Health and Social Services Center of Worcester (currently, Family Health Center-Worcester), a federally-qualified community health center operating in the Main South neighborhood since 1973; by 2013, FHC-W provided medical, dental, behavioral health, and pharmacy services annually to 30,000 patients in Worcester. Other space was rented to what became the UMMC affiliate, Community Healthlink, to provide mental health services to adults, children, families and the homeless. UMMC became the leaseholder and landlord of the campus. More important, it was able to use the corporate entity created by the Trustees, the Worcester City Campus Corporation (WCCC), as a vehicle to conduct real estate transactions more quickly than if they were entangled in the more cumbersome regulations governing most state property acquisitions. Board of Trustees Meeting, "Minutes," Oct. 2, 1991, p. 5, Section 1991, Trustees online, UM/A. Also see Doc. 91-121, Trustees Documents, UM/A.

131 Board of Trustees Committee on Budget and Financial Affairs, Feb. 5, 1991, Section 1991, Trustees online, UM/A.

132 Quotation from Doc. T87-039, "Proceedings of the March 18, 1987 Hospital Management Board Meeting," March 23, 1987, p. 2; Doc. T86-079, "Proceedings of the July 31, 1986 Hospital Management Board," p. 1, both in Trustees Documents, UM/A; Brian S. McNiff, "Study proposes UMass split hospital and school," *Evening Gazette*, March 16, 1987, Newsclippings, Public Affairs Collection, UM/W.

133 Aaron Lazare, M.D. to His Excellency William F. Weld, March 20, 1991; "Provision of Temporary Program of Furloughs," March 20, 1991; John D. Dingell to Hon. Louis W. Sullivan, March 20, 1991; Edward A. Barrette, Administrator, Department of Pathology to Department of Pathology, April 2, 1991, all in Box 1, fol. "Raymond Welsh, Ph.D. Papers," Raymond Welsh papers [hereafter, Welsh, UM/W]; The viral immunologist and Professor of Pathology, Raymond Welsh, who was at the time on the Board of Directors of the Massachusetts division of the American Cancer Society, wrote directly to Governor Weld, to Representative Joseph Early and to Senators Edward Kennedy and John Kerry on behalf of the Cancer Society, arguing on the ACS's behalf that such a step would be illegal. The Governor's office assured them that no federal money would be impounded. Raymond Welsh, Ph.D., Oral History Interview transcript, interviewed by Ellen More, July 19, 2011, Worcester, MA, pp. 8-10, Oral History Collection, UM/W.

134 Sherman was hired by Chancellor Laster in 1989 after having been the Vice President for Development at Boston University. (He had also grown up in the same neighborhood as William Bulger, president of the state Senate and later, of the UMass system. Sherman's years of greatest success as a lobbyist for the medical school coincided with the administration of Aaron Lazare. He retired in 2009. When funding for the medical school's newest research building was approved in 2008, the Legislature made it a condition of approval that the building be named for Sherman. Albert Sherman, Oral History Interview, Part 1, interviewed by Ellen More, Sept. 25, 2006, Boston, MA, Oral History Collection, UM/W; Doc. T89-010, Leonard Laster to David Knapp, Jan. 4, 1989 and "Albert Sherman," [professional biography], both in Trustees Documents, UM/A; "Ribbon Cut: Official Opening of the Sherman Center," accessed online at https://web.archive.org/web/20150812184425/http://www.umassmed.edu/shermancenter/on March 4, 2014.

135 Aaron Lazare, "UMass Medical School Review and Self Assessment, 1990-present," May 2005, Aaron Lazare, M.D. Papers, unprocessed, UM/W.

136 See, for example, Aaron Lazare, "Convocation Address," Oct. 23, 1992; Albert Sherman to H. Maurice Goodman, Feb. 10, 1993, both in Box 4, fol.

"Correspondence: Sherman, Albert, 1992-1993," Microbiology and Physiological Systems Collection (hereafter, MAPS), unprocessed, UM/W.

137 Aaron Lazare to "UMMC Community," "Official Memorandum," June 12, 1991, Box 1, fol. "Raymond Welsh, Ph.D. Papers," Welsh, UM/W; Fox Butterfield, "University of Massachusetts Losing Money and Morale," *New York Times,* May 28, 1991; Laura Pappano, "Weld withdraws plan to cut college campuses, funding," *Quincy Patriot Ledger,* May 16, 1991, Newsclippings, PA; [Richard Stanton et al], "The University of Massachusetts Medical School: A Case Statement for Continuing Support of Public Medical Education," typescript 10pp., in Richard Stanton Papers, unprocessed [hereafter, Stanton]; Richard Stanton, Esq., Oral History Interview transcript, Part 1, interviewed by Ellen More, Aug. 10, 2007, Worcester, MA, pp. 2-7, Oral History Collection, all UM/W.

138 In fiscal year 1988 state funds "provided $32.5 million (11%) of the total [UMMC] budget. In FY89 the state's portion decreased to 10%. For the current budget period, it has been cut to 8.5%," according to medical school Chancellor Leonard Laster. Board of Trustees Meeting, "Minutes," Aug. 2, 1989, p. 3, Section 1989, Trustees online, UM/A. By fiscal year 1992, the State's contribution to UMMC's operating budget was 7%. Cf. [Stanton et al], "The University of Massachusetts Medical School: A Case Statement...," pp. 1, 3, 4, Stanton, UM/W.

139 Doc. T92-026, "Proceedings of the Hospital Management Board for Feb. 26, 1992, Trustees Documents, UM/A; Aaron Lazare, Oral History Interview, Part 5, interviewed by Ellen More, March 3, 2008, Worcester, MA, Oral History Collection, UM/A. See Chapter 9 for a discussion of Commonwealth Medicine.

140 Board of Trustees Meeting, "Minutes," Aug. 7, 1991, pp. 6-7, Section 1991, Trustees online, UM/A; Gordon N. Oakes, Jr. to Senator Patricia McGovern, Representative Thomas M. Finneran et al, April 13, 1992; Aaron Lazare to Chancellor's Advisory Group, April 15, 1992; "Report of the Future of the University of Massachusetts Medical Center, Worcester," pamphlet, 12 pp., all in Stanton, UM/W.

141 Cf. n. 127 above. Amendments adding a new Section 36C to Chapter 75 of the General Laws granted the University of Massachusetts Board of Trustees authority to "engage in transactions on behalf of the Teaching Hospital and Medical School outside the statutory and regulatory framework generally applicable to state agency transactions..." Cf. Board of Trustees, "Minutes," Oct. 6, 1993, p. 5, Section 1993, Trustees online, UM/A.

142 Board of Trustees Executive Committee, Aug. 4, 1992, p. 4, Section 1992, Trustees, UM/A; Michael T. Foley, M.D., Oral History Interview transcript, interviewed by Ellen More, Sept. 24, 2009, Marlborough, MA, p. 49, Oral History Collection, UM/W. Foley, who was a Trustee from 1988 to 2003, emphasized that

the Board's awareness of the Hospital's fiscal fragility coincided with a period of administrative instability at the medical school in 1990, when Chancellor Laster was asked to step down. Michael Foley, M.D., personal communication, Sept. 24, 2009.

143 The construction of the covered Parking Garage began in 1986, undoubtedly to the relief of faculty and staff. Doc. T86-025, "Proceedings of March 19, 1986 Hospital Management Board Meeting," April 8, 1986, p. 2; Doc. T88-077, "Proceedings of the Hospital Management Board for June 15, 1988," pp. 1-2; Doc. T88-065, James B. Hanshaw to Leonard Laster, July 12, 1988, ibid., "Group Practice FY89 Budget," Attachment E, all in Trustees Documents, UM/A; Board of Trustees Committee on Budget and Financial Affairs, "Minutes," April 4, 1989; Board of Trustees Executive Committee, "Minutes," Aug. 1, 1989, p. 4; Board of Trustees, "Minutes," Oct. 4, 1989; Board of Trustees Committee on Budget and Financial Affairs, "Minutes," April 4 and May 18, 1989, Section 1989; Board of Trustees Committee on Budget and Finance, June 5, 1990, p. 3, Section 1990, Trustees online, UM/A.

144 The University Board of Trustees first voted to approve the merger at a special meeting on Feb. 12, 1997. Because of successive amendments and modifications to the agreement, their final vote to approve the merger did not take place until October 1998. Board of Trustees Special Meeting, "Minutes," Feb. 12, 1997, Section 1997; Board of Trustees, "Minutes," Oct. 7, 1998, "Approval of Amended and Restated Definitive Agreement Between the University of Massachusetts and Memorial Health Care, Inc.," Section 1998, both in Trustees online, UM/A.

145 John A. Kastor, *Governance of Teaching Hospitals: Turmoil at Penn and Hopkins* (Baltimore: Johns Hopkins University Press, 2004), p. 89.

146 Doc. T93-056, "Proceedings of the Hospital Management Board for March 24, 1993," Trustees Documents, UM/A.

147 Allison Evans Cuellar and Paul J. Gertler, "Trends in Hospital Consolidation: The Formation of Local Systems," *Health Affairs*, 2003, *22*: 6, 77-87, quotation p. 1, Exhibit 1, accessed online at https://web.archive.org/web/20150812184746/http://content.healthaffairs.org/content/22/6/77.long on Feb. 14, 2014. Cf. "Findings Brief: Hospital Consolidation: Investigating Causes and Consequences," *Changes in Health Care Financing and Organization,* 2006, *IX*:2 (May), 1-4. Based on R. Town et al, "Revisiting the Relationship Between Managed Care and Hospital Consolidation," *Health Services Research*, forthcoming, Feb. 2006. Cf. Town et al, "The Welfare Consequences of Hospital Mergers," *NBER Working Paper No. 12244*, May 2006, p. 1, accessed online at https://web.archive.org/web/20150812185807/http://www.nber.org/papers/w12244.pdf on Feb. 14, 2014.

148 This figure excludes the region's state psychiatric hospital, Worcester State Hospital (now, the Psychiatric Treatment and Recovery Center). Nor did the failed hospitals necessarily close. Doctors' Hospital became AdCare Hospital, a substance abuse treatment center, in 1985, Fairlawn Hospital became Fairlawn Rehabilitation Hospital in 1987, Hahnemann Hospital was merged with Memorial Health Care in 1990, and Holden Hospital was acquired by Memorial and turned into a long term care facility in 1990. Memorial renamed itself the Medical Center of Central Massachusetts until the final merger in this series, with UMass Hospital in 1998, after which the merged entities were named UMass Memorial Health Care, Inc. St. Vincent, after merging with the Worcester-based Fallon Clinic in 1990 was acquired by Tenet Healthcare, a corporation of for-profit health care systems, in 1996. See Massachusetts Hospital Association, "Massachusetts Hospitals: Closures, Mergers, Acquisitions, and Affiliations," accessed online at https://web.archive.org/web/20150812200147/http://www.mhalink.org/Content/NavigationMenu/AboutMHA/HospitalDirectory/HospitalClosuresMergersAcquisitionsandAffiliations/default.htm on Feb. 3, 2014. Many thanks to Robyn Christensen Conroy, Librarian/Archivist of the Worcester Historical Museum, and Richard Irwin, M.D., Professor, UMass Memorial, for assistance in acquiring this information.

149 Chapter 142, July 1991, of the Acts and Resolves transformed the three-campus UMass system into a five-campus system by incorporating what were renamed UMass-Lowell and UMass-Dartmouth. A new Board of Trustees was named that represented all five of the campuses. Robert Karam became the Board chair of the University of Massachusetts from 1996 to 2000. He also became chair of the Memorial board after the merger in 1998. Cf. "Robert S. Karam, '67, '91 (Hon.): University of Dartmouth Chancellor's Distinguished Service Medal," accessed online at https://web.archive.org/web/20150812204022/http://www1.umassd.edu/communications/articles/showarticles.cfm?a_key=3125 on Feb. 14, 2014.

150 Stanton's negotiations resulted in an agreement that lowered the Medical Center's liability by $10 million. Board of Trustees, "Minutes," Oct. 14, 1992; Board of Trustees, "Minutes," Feb. 5, 1992, pp. 5-6; Board of Trustees Executive Committee, Aug. 4, 1992, p. 4, both in Section "1992," Trustees online, UM/A.

151 Board of Trustees, "Minutes," Feb. 3, 1993, Section "1993," Trustees online, UM/A.

152 Cf. Cheeseman, S. H., Sullivan, J.L., Brettler, D.B., Levine, P.H., "Analysis of Cytomegalovirus and Epstein-Barr virus antibody responses in treated hemophiliacs, *JAMA*, 1984, *252*; 83-85; Sullivan, J.L., Brewster, F.E., Brettler, D.B., Dorsberg, D., Cheeseman, S.H., Byron, K.S., Baker, S.M., Willits, D.L., Lew, R.A., Levine, P.A., "Hemophiliac immunodeficiency: Influence of exposure to

Factor VIII concentrate, LAV/HTLV III and Herpes Viruses," *J. Pediatrics*, 1986, *108*; 504-510.

153 Jeffrey Stoff, M.D., Oral History Interview transcript, interviewed by Ellen More, March 17, 2014, pp. 4ff., Worcester, MA, Oral History Collection, UM/W.

154 Board of Trustees, "Minutes," Aug. 11, 1993, Section 1993, Trustees online, UM/A.

155 Aaron Lazare to All Clinical Chairs, Memo: "Clinical Governance at UMMC, An Update," Sept. 1, 1994, Box 5, fol. "Chancellor's Advisory Council, 1993-1996," unprocessed, MAPS, UM/W; Lois Green, Oral History Interview transcript, interviewed by Ellen More, Oct. 19, 2006, Holden, MA, pp. 4-6, Oral History Collection, UM/W [hereafter, Lois Green, UM/W]; Aaron Lazare, M.D., Oral History Interview transcript, Part 5, interviewed by Ellen More, March 3, 2008, Worcester, MA, p. 11 [hereafter, Lazare, UM/W], both in Oral History Collection, UM/W. Board of Trustees, "Minutes, Feb. 3, 1993; Board of Trustees, "Minutes," Aug. 11, 1993; Board of Trustees, "Minutes," p. 8, all in Section 1993; Board of Trustees Special Joint Committee on Administration and Finance and Medical Center Task Force, "Minutes," May 20, 1994 and June 7, 1994; Board of Trustees Special Meeting, "Minutes," Sept. 23, 1994, all in Section 1994, Trustees online, UM/A.

156 Peter Levine, M.D., Oral History Interview transcript, interviewed by Ellen More, Sept. 13, 2006, Worcester, MA, pp. 10-16; Lazare, Oral History transcript, Part 5, p. 8, both in Oral History Collection, UM/W.

157 Stanton, Oral History Interview transcript, Part 1, pp. 11-13, quotation, p. 12.

158 Lazare, Oral History Interview transcript, Part 5, p. 13.

159 Levine, Oral History Interview transcript, p. 14.

160 Personal communication with Richard Glew, M.D., Feb. 20, 2014, Worcester, MA. My great thanks to Dr. Glew for discussing the merger with me, especially his own impressions as a participant in many of the key meetings and as someone who took on a major role in the newly merged Department of Medicine of UMass Memorial Medical Center.

161 Lois Green, Oral History Interview transcript, pp. 4-7, quotation, p. 4; Levine, Oral History Interview transcript, pp. 15-16, quotation, p. 20.

162 John A. Kastor, *Merger of Teaching Hospitals in Boston, New York, and Northern California* (Ann Arbor, MI: University of Michigan Press, 2001), pp. 422-23.

163 "Agents of Change," 1997 *Annual Report,* p. 16, Publications Collection, UM/W. The "definitive agreement," Doc. T98-042, was approved by the Board of the University of Massachusetts on March 31, 1998. The authorizing legislation was passed in November 1997 as Chapter 163 of the Massachusetts Acts of 1997. Board of Trustees, "Minutes," March 31, 1998, pp. 1-2, Section 1998, Trustees online, UM/A.

164 Stanton, Oral History transcript, p. 12. The Ambulatory Care Center, a seven-story building that opened in 2010, houses both ambulatory clinics for the hospital system and a clinical research center for programs run jointly by the two institutions, school and hospital. "Local Impact/Global Reach" (Worcester, MA: UMassMemorial HealthCare and University of Massachusetts Medical School, 2011), p. 5. Many thanks to Gladys McRell Ciciotte for bringing this publication and many others to my attention.

165 She was also excluded from all the powerful board committees. Lois B. Green, *The Last Chapter* (Sarasota, FL: Peppertree Press, 2009), pp. 139-144.

166 One exception was Daniel Lasser, M.D., Family Medicine chair at Memorial, who was named chair of Family and Community Medicine in the new system, while Lynn Eckhert, M.D., a pediatrician who had been the chair of Family and Community Medicine at UMMC, was passed over. She soon left for Harvard. Another exception was Richard Glew who became the Vice Chair for Undergraduate Medical Education and Faculty Affairs as well as the chief of Infectious Diseases of the new Department of Medicine.

167 Board of Trustees, "Minutes," March 31, 1998, pp. 1-2, Section 1998, Trustees online, UM/A.

168 Lazare, Oral History Interview transcript, Part 5, pp. 12, 16.

169 Ludmerer, *Time to Heal*, p. 165-66 (n. 5 above), describes the national context in which academic health centers felt compelled to give clinical productivity priority over teaching or scholarship.

170 Lois Green, Oral History Interview transcript, p. 19; Levine, Oral History transcript, pp. 16-17.

171 Lazare, Oral History Interview transcript, Part 5, p. 16.

Chapter 6
Integrating Primary Care into the Curriculum: Community Medicine vs. Family Medicine

"…the Legislature…extended its support to development of the Medical School for two principal reasons. One…was the Legislature's desire to guarantee opportunity for qualified Massachusetts residents to receive medical education within the Commonwealth….The second principal reason…was its desire to enable the preparation of practicing physicians who are likely to remain in Massachusetts…"
– Dean Lamar Soutter, M.D. to the UMass Board of Trustees, March 6, 1974.[1]

"[The University of Massachusetts Medical School will produce physicians] who are familiar with all basic fields of medicine, but who are trained in primary care medicine and who can be expected to choose to work in underserved communities.
– "Statement of Goals," prepared by the Faculty and Administration, September 1975.[2]

"The original role [of the school]…was primary care…I don't know if it was written, but it was certainly communicated…"
– Frank J. Chlapowski, Ph.D., Professor Emeritus of Biochemistry and Molecular Biology, 2010.[3]

What was the mission of the Commonwealth's medical school? Between 1969 and 1975, that seemingly straightforward question lay at the heart of one of the strangest battles in the school's history: a battle to retain the support of state legislators, to fulfill the school's public mission, to live up to the expectations of its high-quality research faculty and, in short, to define the institution's culture. It is no wonder then that, as these three epigraphs suggest, defining the school's goals or mission presented something of a moving target. In 1975, as described in the previous chapter, an administration desperate to insure support for a new hospital gathered the faculty together to re-write its goals in a way that would fully acknowledge UMass Medical School's commitment to primary care education. Simultaneously, uncertainty among some of the school's early faculty over the curricular importance of primary care delayed its development within

the curriculum and pitted the relatively new field of community medicine against its even younger sibling, family practice.[4] This chapter describes the struggle between these two specialties for dominance in the as-yet-undefined culture of the new medical school, a school that only gradually accepted its given mandate to promote primary care.

Great Expectations, Unclear Goals

A cursory look at the series of statements issuing from the Dean and Board of Trustees between 1966 and 1969 conveys a striking picture of the changing sense of institutional identity that evolved even before the first students arrived in the fall of 1970. At the outset, as was noted in Chapter 3, the Trustees were mostly concerned to produce an excellent institution that would offer more opportunities for Massachusetts residents to become doctors who would, it was assumed, care for the Commonwealth's citizens.[5] The concept of "primary care," as distinct either from general practice or specialization, only began to gain currency in the mid-1960s, the years when the Trustees produced an early statement of their goals for the school. The specialty of "Family Medicine" was not approved until 1969; in the meantime, the term usually signified general practice. In fact, a major report from the AAMC in 1968 specifically expressed the hope that medical schools would redirect their teaching toward "comprehensive, personal, and family health services." But, despite the urging of some academic medical leaders, few schools acknowledged this goal until the following decade. Between 1971 and 1975, both the Bureau of Health Services Research of the U.S. Department of Health, Education, and Welfare and the Institute of Medicine conducted studies to define primary care and consider how to introduce it more widely.[6] The Trustees could not have readily articulated a desire for either "primary care" or "family practice" before then, given the relatively weaker voice in Massachusetts of medical practitioners outside the specialist-saturated environs of Boston.[7] UMass Medical School's original goals thus emphasized the quantity and quality of its graduates with little attention to the precise

characteristics of their future careers – other than a fervent desire for them to practice in Massachusetts.[8]

In "Some Aims of a New Medical School," an article Dean Lamar Soutter published in 1966 on designing a new medical school curriculum, he touched only briefly on the need to promote "family practice," an issue he characterized as "quite vexed." As remembered by biochemist William Butcher, one of the early department chairs, "[Soutter] was an elitist in the sense that the kinds of medicine he was most excited by were the kinds that get into the New York Times, because it's very interesting science, because they can cure obscure diseases, etcetera....But...I would not say that he had closed his mind to anything. I think his response...to people pushing about family practice, or family medicine, would have been, 'Yes, yes, but we also have to have cardiac surgery.'"[9] Soutter's attitude accorded with that of most early faculty recruits–particularly basic scientists like Butcher or research-oriented specialists like the vascular surgeon, Brownie Wheeler. In 1966 Soutter concluded that the most the school could do to promote interest in generalist medical practice would be to "let the students see family practice at its best on the community level, preferably from within the community hospital." In 1967, in his first application for federal construction funding, written with considerable input from Dr. Wheeler, a section titled "Summary of the Aims of the Medical School" presented a more detailed picture. Again, generalist or primary care medicine was accorded only a small role. Instead, the application envisioned faculty and students who pursued lab-based research in the basic sciences and community-based research in fields such as "sociology, public and community health."

By the winter of 1968, Dr. Soutter had expanded his curricular objectives.[10] Somewhat abruptly, in the middle of another list of the school's "Objectives" in the 1968 iteration of the federal construction grant proposal, the following words appeared: "After some consideration, we added to [our] objectives a more clear definition of the type of physician we should try to produce." UMass medical graduates would be qualified to enter "any specialty," but now they would be inculcated with an appreciation for "the health problems

in the slum areas and ghettoes by seeing them first hand. [They] should, through involvement in a program of community medicine, help to try to solve them." Students should learn about health care workers and comprehensive health planning at the state and regional level. Finally they "must see the family physician in action in the usual community setting as well as learning how his services could be applied to provide the health care so badly needed in the poverty-stricken areas of the state." By 1969, the school's "Aims" had evolved even further; now the first item on the list read, "The fundamental purpose of the school is to turn out practicing physicians who will improve the quantity and quality of health services available to people in the Commonwealth." Notably, health services, not family practice, was Soutter's term of choice.[11]

This is not a subtle difference. It foretells a growing tension between the cultures of two relatively young – and potentially competitive – fields, community medicine and family practice, and tension over how to fulfill the school's obligations to the vision of its political stakeholders. Increasingly, as we shall see, that vision centered on providing care – primary care – to all citizens of the Commonwealth. But, how could that best be accomplished – through community medicine's "community-responsive" approach or, through family medicine's patient-centered primary care?

Community Medicine and Medicine for the Community

Lamar Soutter's newly expressed commitment to community medicine had crystallized around the fervor of one man, Dr. Hugh S. Fulmer, one of the school's first department chairs. Soutter hired him in 1969 to establish a department of "Community Medicine," but Soutter had first met him several years earlier. Fulmer was part of a new trend to develop something termed "community-oriented primary care," or COPC. The relationship between COPC and "community medicine" requires a brief detour.

The field of community medicine derives in part from the field of public health or, in the language of the nineteenth century, "Hygiene" and "Sanitary

Science." When the American Public Health Association (APHA) was established in 1872, its founders dedicated it to the prevention, rather than just the cure, of disease. Eventually the APHA was dominated not by physicians but by officers of the many state and municipal health departments that were founded in the late 19th and early 20th centuries. The division between prevention, with its focus on entire communities, and clinical medicine, which focused on specific patients and their families, became quite pronounced. By 1968, physicians comprised only 29% of APHA members. Attempting to mitigate this trend, the American Board of Preventive Medicine had been created in 1948 to legitimize the union of population health and clinical medicine in a new medical specialty. "Preventive Medicine" came to include a diverse group of subspecialties such as occupational medicine, and aerospace medicine, beyond what was termed "general preventive medicine." Physicians who received Board Certification in Preventive Medicine, it was hoped, would create new departments or divisions in medical schools and further the project of infusing the ideology of prevention into American medicine at a time when curative strategies dominated most public discourse about medical care.[12] Until forestalled by the growth of family medicine, the numbers of freestanding community or preventive medicine departments did increase, but as late as 1980 the Association of Teachers of Preventive Medicine still struggled to find a full measure of acceptance within American medical education and health policy.[13]

The challenge remained – how to foster a clinical specialty which addressed itself to a synthesis of population health and primary care, especially one responsive to underserved communities. That was the challenge to which a handful of physicians addressed themselves in the 1950s.[14] They had few models to follow. For example, in 1939 an English country GP with the unlikely name of Will Pickles published a book about his innovative way of practicing. As the only doctor in charge of seven rural villages, he had of necessity learned to combine "traditional public health epidemiology [and] primary care medical practice." Pickles' work was well known to primary care physicians interested in community health, but it was the work of Drs. Sidney and Emily Kark in the 1940s and 1950s

with the Pholela Health Center on a Zulu tribal reserve in Natal, South Africa, that emerged as one of the foundational models for American community health work in the U. S.[15] Sidney Kark is credited with coining the term "community-oriented primary care" in an article published in 1952. In a work published in 1981 he explained that, "the skills of the primary-care practitioner should be based on a holistic concept of individual, family, and community health [yet] little attention has been given to the development of [primary care's] potential for promoting the community health as a whole." Community-oriented primary care (COPC) called for primary care of individuals and families, "health surveillance" of the community, measures to address the community's health needs, participation by the community, and continuing assessment of the measures taken.[16]

Kark defined communities as relatively small, for example a village, a neighborhood, even a collection of city blocks, but especially as a culturally cohesive entity. Geographic coherence might be necessary for a "defined population" but without cultural coherence, mere geographic affinity would not be sufficient. (Jack Geiger, M.D., famed health reformer and, with Count Gibson, M.D., instigator of the first federally funded community health centers at Columbia Point in Boston and Mound Bayou, Louisiana, echoing his mentor, Kark, called this the "geographic fallacy.")[17] In practice, communities targeted for COPC clinics usually were home to a medically underserved population. In the U.S. today the closest approximation to the Karks' COPC model occurs in community health centers, the first of which were started by Geiger and Gibson between 1965 and 1968.[18] But COPC was first put to the test a decade earlier at a clinic established in 1956 by a group from Cornell-New York Hospital under the leadership of Dr. Walter McDermott. McDermott, a renowned infectious disease specialist, had piloted a tuberculosis surveillance and treatment program for the Navajo nation in Arizona in 1952. From that project emerged a demonstration clinic at the Many Farms-Rough Rock tribal political district where a COPC model was applied to a wide spectrum of Navajo health needs.[19] McDermott chose Kurt Deuschle, a physician trained in the principles of community medicine and

health surveillance who had already been working for him in Fort Defiance caring for Navajo TB patients, to head it up.[20] Deuschle, in turn, hired some Navajo community members for health outreach, plus Hugh Fulmer, a young physician he had met when Deuschle was a resident and Fulmer a fourth-year medical student at Syracuse University. (Fulmer was inspired to pursue community medicine by one of Deuschle's lectures.) In 1958, fresh from an internal medicine residency and a fellowship in pulmonary medicine at Syracuse (by then, SUNY Upstate Medical Center), Fulmer needed little persuasion to join Deuschle at the Many Farms community clinic in Arizona.[21]

Hugh S. Fulmer, M.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

Fulmer had been working at Many Farms for two years when Deuschle was hired away to the new University of Kentucky Medical School by its founding dean, William Willard, M.D., one of Deuschle's mentors at Syracuse. Willard was keen to launch a department of community medicine that combined public health and primary care. Willard recruited Deuschle in 1960 to create what became the first department of community medicine at a United States medical school. And Deuschle, in turn, recruited Fulmer to work with him there after first arranging for him to spend a year at the Harvard School of Public Health to learn epidemiology. Fulmer would eventually be hired away from Kentucky by Lamar Soutter. But from 1960-1968, he and Deuschle established a set of innovative medical school courses in community-oriented primary care at Kentucky.

Deuschle also created a residency in preventive medicine. They never established a COPC clinic, however, because the chairs of the other departments thought it would be counter productive to have a satellite clinic located many miles away from the main campus at a time when the school was just getting started. Rather, Deuschle's model, as implemented by Fulmer, was transposed onto the template of a six-week clerkship for second-year students. As Fulmer described it, they had,

> students choosing communities where they would carry out a four-fold approach, in which they would see individual patients in a doctor's office, they would work up families in the home of patients...Then we had every student do a community health center. And we had them each choose an epidemiologic project [following our] very extensive second year course, 'Epidemiology and Medical Care.'

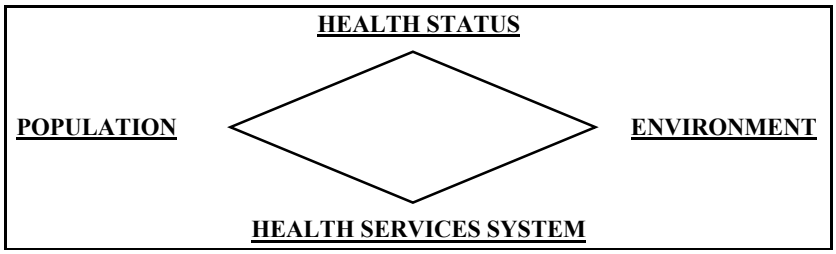
As Fulmer saw it, "[The students] came out as mini epidemiologists."[22] After a few years in Kentucky, however, Kurt Deuschle confided to Fulmer that he was leaving to start a similar program at Mt. Sinai Medical School in New York City. Fulmer decided to return to the Northeast, too.

At just that moment –1967, to be precise – Lamar Soutter paid a surprise visit to Fulmer's Kentucky office. In the aftermath of urban riots and, in Boston, a tense standoff over school integration in the mid-1960s, Soutter was looking for ways to integrate awareness of community health needs into the medical school curriculum. From talking to John Snyder, dean of Harvard's School of Public Health, he learned about Fulmer's work. When another old friend, Dr. Edmond Pellegrino, who was by that time at Yale but previously had chaired the Department of Medicine at Kentucky, also mentioned Fulmer, Soutter flew down to meet him. This meeting seems to have captivated the Dean's imagination, considerably enlarging his vision of the UMass educational mission, as noted above. Fulmer recalls that Soutter just walked over to his office, unannounced. "[Bimi Soutter] just came right into my office and told me about the UMass Medical School... that he was the founding dean of this new medical school and

he was going to set up a department of whatever I might want to call it…" Fulmer added, "[Soutter] knew that he wanted to have something that represented this broad area of social medicine and public health, but he didn't have a very clear idea of what that might be." Fulmer remembered telling him, "Well, if I were going to do that, I would call it community medicine. It's been a beautiful program here and I'd like to do that." By that time, Fulmer added, "there were several schools around the country that had used the title 'Community Medicine,' and discarding 'Preventive Medicine'…so I was going to take that title, if I were going to take a job at Massachusetts." In this context, he wrote to Dr. Soutter that, "'I want to set up two graduate programs. One will be [a] family medicine residency, and the other will be [a] preventive medicine residency. And at some point – I don't know when that would be – I want to merge the two.'" Foreseeing a combined 4 to 5 year residency, Fulmer envisioned a program perfectly suited to carrying out the COPC model.[23] Unfortunately for Fulmer, these plans collided head on with the growing professional independence of family medicine, which gained standing as a board-certifying specialty the same year Fulmer arrived at UMass.

Hugh Fulmer arrived in Worcester with his family in 1969. He was awarded tenure, given the rank of full professor, and enjoyed the full support of the Dean. Indeed Soutter boasted in the construction grant application of 1968 that he had recruited the person who had pioneered this approach to inculcating social awareness in medical students, a clear, if not entirely accurate, reference to Fulmer. Soutter also personally accompanied him in negotiations for student precepting at the Worcester Department of Health. Within his first three years Fulmer established a 3-week clerkship in Community Medicine for the first year students, a 54-hour course for second-year students in "Epidemiology and Medical Care," and a 6-week clerkship for third-year students in Community Medicine, all based on the model established at Kentucky.[24] Only basic science departments were in operation when he arrived at the school, although Brownie Wheeler, the founding chair of Surgery, was on hand (while also heading up Surgery at St. Vincent Hospital in Worcester) working with the Dean on faculty

recruitment and planning the hospital. The basic science department chairs, comprising the vast majority of the school's Executive Committee, needed to approve new courses, but to Fulmer, they seemed uninterested in what he was doing – as long as it didn't threaten their own portion of curricular time. As Fulmer wrote to the Worcester medical community, the field of community medicine "suffered badly in many schools because of insufficient recognition by administration and faculty, poor budgetary support, few and often part-time... faculty, unimaginative and inappropriate teaching programs, and inevitably failure to stimulate and interest medical students."[25] He was determined to avoid those pitfalls.



Community Medicine concept by Hugh S. Fulmer, M.D.
(for complete citation see n. 25)

Thus in the course outline for the first-year clerkship, he analogized Community Medicine to clinical medicine, describing clerkship activities as located in "what might be termed the 'hospital without walls.'" Through observation and participation in the community, the student will "become seriously involved in the identification and solution of many real community health problems...much as hospital clinical clerkships allow the student to participate in finding real solutions of patients' individual disease problems." He went further: "The clerkship is...aimed at demonstrating the responsibility of the physician for leadership as the most broadly educated member of the health care team in the community," a result of having learned about subjects such as biostatistics, epidemiology, and health services delivery. Perhaps because of the absence of outpatient clinics when he first arrived, Fulmer's plans did not touch on primary care at all.[26]

Judging by the recollections of early medical students, Fulmer's

introduction of community health in the pre-clinical curriculum was a huge success. Not only did he incorporate community experience into the students' first two years of medical school – something highly popular and innovative for 1970 – he hired faculty who were experts in epidemiology and biostatistics, but were nonetheless physicians, also a big plus with medical students.[27] One early graduate, Michael Foley (d. 2013), a gastroenterologist in a Boston suburb, a consulting physician for the Boston Red Sox baseball team, and a former member of the Board of Trustees of the University of Massachusetts, explained that:

> Hugh Fulmer was really one of the guiding lights to all of us and... UMass was way ahead of people in terms of putting their first year students out in the community to learn things. I can't remember exactly, but each of the students would pick a community to go to and study the public health and, you know, the medical set-up of each of the communi[ties]...Some people went to the Department of Health. Some people went to different towns that they grew up in or different health systems and stuff – big practices and stuff.

Another early student, Leonard Finn, who eventually became a family practitioner, was sent to the Columbia Point health center in Boston to learn about community health and "how to organize a community for a community health center."[28] All of this took place during the three-week long break that surrounded the Christmas holiday. The students learned a lot. Dr. Foley, for example, decided to return to the town of Amherst where he had been an undergraduate. During his first-year community medicine clerkship, he told me,

> I would go to the Town of Amherst Public Health Department and spend time with the Public Health Officer, and we'd go down to, say, the [supermarket] and close it up for a few days because somebody found a rodent in the roast beef. Or... we'd make calls with the... town Animal Control guy because someone had a rodent coming up their toilet pipe or something. And, so, you saw that aspect of things. You'd spend time looking at health statistics at the state and at the town level. And I personally spent time with Amherst Medical Associates, a big multi-specialty group practice that influenced me to the thought that group practices were a good idea. And, so, we all had varied experiences.[29]

Family Medicine Comes to Massachusetts

Hugh Fulmer always emphasized that the core function of community medicine was to solve the health problems of communities. Yet, to make the entire concept of "community-oriented primary care" workable, family practice needed to be incorporated into the department. Fulmer's original goal had been to create, as mentioned earlier, a department in which family practice ultimately would be aligned with community medicine, particularly at the level of residency training, to produce primary care doctors who were "community-oriented." Two parallel residencies would be developed and, as the residencies matured, they would be amalgamated into a joint program. He was well aware of the need to recruit more than epidemiologists or statisticians. The department needed practicing doctors who were committed to transforming traditional general practice into "family practice" and to supervise medical residents who anticipated earning family practice board certification. As it turned out, however, with his own training as an internist and his special enthusiasm for population-based, rather than patient-centered health care, Fulmer never really won over the family practitioners who were central to this vision. More ominous, he may never have clearly laid out his expectations when he hired the man who, as his second in command, became the moving force behind family practice at UMass.

That man, Richard (Dick) Walton, M.D., had had a highly successful general practice in Holden, a town on the northwest border of Worcester, before serious complications of back surgery forced him to put his practice on hold for a few years. While recovering, Walton was heading the medical department of a large life insurance company whose president had been one of his patients. At the time Fulmer heard about him, Walton had been heavily involved with the Massachusetts Academy of General Practice's efforts to transform itself into an organization of board certified "family practitioners" and to promote the transformation statewide. (The terminology can be confusing: "family practice" was the term used for the clinical activities of physicians who were board certified

"family practitioners." The term "family medicine" signified family practice's academic identity, the academic unit into which family practice was situated in American medical schools. It also came to connote the academic activities of family practice faculty.) Both Walton and Fulmer recall that Walton was hired to teach medical students in the community medicine courses while also running the new division of Family Medicine. This meant, crucially, that Walton was charged with carrying the main responsibility for developing an approved residency in family practice in time for the first class of UMass Med graduates, the class of 1974, to be admitted into it if they wished. This was a tall order, but Dick Walton was no ordinary general practitioner.

Fulmer recalled him this way:

Richard Walton, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

> Dick Walton seemed to be the perfect person to join me...[He] knew all the practitioners in Worcester. And he also knew about the national movement to create a new specialty, family medicine. [He] was a dyed-in-the-wool, local family practitioner who loved to practice medicine. And he didn't visualize himself as being a full-time academician at all. He thought of himself as a practitioner... who was very, very intent on creating a new breed [of] family practitioner.[30]

Before long, however, Fulmer realized that Walton, like many other generalist physicians in the Commonwealth, had very definite ideas about how to develop a family medicine residency. Perhaps more important, his contacts and political connections to general practitioners across Massachusetts – especially the recently renamed Massachusetts Academy of Family Physicians –gave him the kind of credibility that a newcomer – and an internist – like Fulmer never could match.[31] Walton's recollections veer off definitively from Fulmer's. In his re-telling:

> I guess I've always been involved in trying to get things moving... The understanding that I had with Hugh Fulmer was that they needed family physicians badly, they needed a Family Practice residency, and...from my standpoint, I said you can't do that without a department of Family Medicine...it can't be the tail kind of wagging the dog, that sort of thing. So our agreement was, that as I could put something together in Family Medicine and teach in Community Medicine [and] when we had adequate strength in the program, we would start a department of Family Medicine and I would head that up...So that was our agreement; that's where I started...[32]

Within three years, it became clear to Walton that a department of community medicine would not be the right setting for a family medicine program, at least not when headed by someone who was not a family physician. Before we examine the results of the ensuing tug of war, we should first consider the philosophy and goals of the new field of family practice.

From General Practice to Family Practice

"In the U.S.A. the rise of family practice was an unprecedented phenomenon in medical education...As a specialty based more on a function to be served than a new technology or research in the basic medical sciences, family practice developed, in part, as a response to perceived needs in society for better and more equitable distribution of medical services...and as a corrective to the problems of over-specialization and its attendant escalating costs."
— G. Gayle Stephens, M.D. [33]

The clinical specialty of family practice officially came into existence only in 1969, an era of conflicting pressures on the medical profession when a demand for greater patient access to "continuing, comprehensive care" – that is, a demand for more family doctors – openly competed with a drive for more physician-scientists.[34] Since most physicians, as we have seen, became specialists and clustered near major medical centers or the affluent suburbs, communities either too poor or too far from such centers, many of which existed in western Massachusetts, often lacked any health care provider at all. Still, no one wanted – or expected – specialization to disappear. The "old" country GP may have delivered "comprehensive, continuing care" but, by mid-20th-century standards, it wasn't considered good care. Instead, in the words of one influential study, medicine needed "a new kind of specialist, the family physician who is educated to provide comprehensive, personal health care, because of the complexity of modern medicine and the health care system… [T]he preparation of large numbers of such physicians is essential if the public is to receive maximal benefits from American medicine."[35]

Two major reports advocating a shift in medical manpower objectives, the "Millis" and the "Willard" Reports, were published in 1966 with support from, and endorsement by, the American Medical Association. Although no consensus was yet evident about what to call the new specialty, the reports clearly agreed about its social purpose and medical goals. The Millis Report, "The Graduate Education of Physicians," spoke of the "primary physician" who would deliver "continuing, comprehensive care." The Willard Report, "Meeting the Challenge of Family Practice," advocated changes in undergraduate medical education, also for the purpose of increasing the number of primary care doctors.[36] As is sometimes noted, the idea of comprehensive, primary care was itself not new – not only was it the ideal of American general practitioners dating back at least into the 19th century, it was invoked by the venerable Committee on the Costs of Medical Care in 1932.[37] But, whereas the CCMC distinguished between family practitioners and specialists, the Millis and Willard reports termed such physicians "a new kind of specialist, the family physician who is educated to provide comprehensive,

personal health care." Willard et al envisioned the family physician as the "captain of the health team." The Millis Report, similarly, envisioned "him" as a "quarterback who will diagnose the constantly changing situation, coordinate the whole team." Although there appeared to be wide agreement that "general practice" was no longer an adequate model of care, the terms we now use, primary care and family medicine, had not yet achieved general acceptance or stable definitions. The Willard Report authors acknowledged that they were working under the assumption that "family physician," "primary physician," and "personal physician" were synonymous. And indeed, the two reports held a shared conception of primary care medicine.[38] Dr. G. Gayle Stephens, a pioneer in the family practice movement and author of one of that specialty's seminal texts, told an interviewer,

> ... I think we used "family" [practice] as a synonym for general [practice]...And this is still an issue because the name has recently been changed to family "medicine"...I think this has to do with the professionalization of the specialty more than its ideology. We meant that all members of a family could be seen in the same medical facility, either independently or together, for their ordinary medical care. That's what we meant.[39]

The Millis and Willard reports had been in the works for several years. Their main sponsor, the AMA, as well as countless family doctors across the country, eagerly awaited their findings. For nearly 20 years, ever since a concerned group of general practitioners had formed the American Academy of General Practice to try and address a crisis of legitimacy for general practitioners, many older doctors had begun to anticipate a movement to consolidate and professionalize generalist medicine. The AMA had begun sponsoring symposia and reports to encourage more residents to choose general practice. The Millis and Willard reports were products of this effort.[40] Stephens remembered that when the two reports appeared, "We devoured them word by word..."[41] Medical school curricula had increasingly deemphasized general practice over the course of the 20th century; the Advisory Board for Medical Specialties (now the American

Board of Medical Specialties), an umbrella organization founded in 1933, had begun by 1940 to discourage board-certified medical specialists from practicing general medicine at all. Full-time specialization would become the norm. By the late 1960s, when family practice began its serious push for recognition as a board-certified specialty, fewer than 20% of practicing physicians were still GPs. Fewer and fewer GPs, especially on the east coast, held hospital privileges to perform obstetrics; by the same period, only about one-third performed "major surgery" anywhere in the country.[42]

General practitioners tried to fight back. In 1947 they formed the American Academy of General Practice which, by 1970, still retained about 30,000 members. They even attempted to start their own licensure process by launching the American Board of General Practice in 1960. But this battle could not be won. Not only did general practice no longer seem intellectually challenging to many medical students, but on a practical basis its long hours, relatively low pay, and geographic isolation appeared positively burdensome to many younger doctors. Between 1931 and 1965, the numbers of GPs in practice had dropped from 112,000 to 66,000; by 1977, they comprised only 13% of practicing physicians. In Massachusetts, only 3,645 primary care physicians were in practice in 1973.[43] Thus, from the end of World War II until the creation of the American Board of Family Practice in 1969, the fate of the GP became increasingly dire.[44]

Like the field of community medicine, an updated version of general practice would have to adopt the trappings and values of an academic medical specialty. As historian George Weisz has written of American medicine, "It is fair to say that at this point just about every physician is a specialist of one sort or another." The evolution of family medicine bears out this claim.[45] In this context, the clinical specialty known as "family practice," sometimes referred to as the "heir of general practice," is usually distinguished from its academic counterpart, "family medicine."[46] Leading family practitioners insisted on the need for academic credentialing including board certification, and a meaningful presence among the departments of American medical schools. As an academic discipline, family practice was known as "family medicine" by the early 1970s when the first

residency classes would have been graduating from medical school. Yet, as a leading textbook from 1980 acknowledged, precise definitions of family medicine took longer to agree upon than did a common understanding of "family practice," a clinical approach that prepares the physician for a "unique role in patient management, problem solving, counseling and as a personal physician who coordinates total health care delivery." The portion of family practice comprising its academic disciplinary profile – family medicine – took longer to define.[47] What were the salient features of family medicine as an intellectual discipline? Some early commentaries stressed its unique dependence on behavioral science and stressed this as the discipline's core academic feature. By the end of the specialty's first decade, however, family medicine was presented to residents as

> ...that body of knowledge and skills applied by the family physician as he/she provides primary, continuing, comprehensive health care to patients and their families regardless of their age, sex, or presenting complaint. It is a horizontal discipline, sharing portions of all other clinical and related disciplines from which it is derived but applying these derivative portions in a unique way to families. In addition, family medicine includes new, incompletely developed elements, such as family dynamics in health and disease and its own areas of developing research.[48]

The proponents of family medicine were determined, in short, to shape a specialty that would encompass roles as both clinician and researcher.

Unlike community medicine, in which research and practice were directed toward entire communities, family medicine dedicated itself primarily to the individual patient and family as its locus of care giving and research. Clinical relationships rather than epidemiological studies were its coin of the realm, or in the words of one family physician, "'individualized preventive medicine.'"[49] Given the explicitly holistic, anti-reductionist frame of mind of family medicine, what theoretical underpinning grounded its approach? G. Gayle Stephens' book, *The Intellectual Basis of Family Practice*, succinctly described how family medicine could turn the general art of medicine into the focused and research-generating knowledge of a medical specialty:

> Patient management is the quintessential skill of clinical practice and is the area of knowledge unique to family physicians. Family physicians know their patients, know their patients' families, know their practices, and know themselves. Their role in the health care process permits them to know these things in a special way denied to all those who do not fulfill this role. The true foundation of family medicine lies in the formalization and transmission of this knowledge.[50]

Stephens' claim was a simple one: the doctor-patient relationship would be the special area of family medicine's expertise, and the "patient" would be taken to include not only a single individual, but a complex figure embedded in a social, familial environment to which the physician must be attuned. At a time when public policy was calling for more comprehensive, continuous medical care, family medicine based its claim to specialty status on its ability to turn such attunement into a valid field of systematic research.[51]

By 1966, both the Millis and the Willard reports specifically called for primary care physicians who were residency-trained.[52] During the years preceding the acceptance in 1969 of the American Board of Family Practice (the ABFP changed its name to the American Board of Family Medicine in 2005) as the official certification body for the new specialty, several experimental family medicine departments were established in other regions of the country, cohering mainly around the education of residents. One of these, organized by Fitzhugh Mayo at the Medical College of Virginia/Virginia Commonwealth University, was considered a bellwether for programs founded in the ensuing decade; another early program was created by Gayle Stephens in Wichita, Kansas; a third was located at the University of Rochester School of Medicine and Dentistry. (The Rochester residency, which started in 1967, was headed by Eugene Farley, another former practitioner from the Many Farms Navajo clinic where Hugh Fulmer had begun.) With the exception of the Rochester program, the demographic characteristics of most such programs were something of a harbinger: general practice may have been declining, but physicians in

underserved and relatively rural parts of the country were determined to provide health care for their already under-served populations.[53]

Thus farsighted physician-educators with ties to generalist medicine made several attempts during the 1960s to create models for family practice residencies despite signs of strong resistance within the profession. In 1964 a small group went so far as to incorporate the name "American Board of Family Practice" (ABFP) in anticipation of the time when the AMA and the American Board of Medical Specialties would recognize it as the legitimate licensing board for the specialty. But, as has been noted already, opposition from the American Board of General Practice (hastily established in 1960 to forestall such an eventuality) was openly reinforced by opposition from many internists through the American College of Physicians. General internists believed that they, not the dubious new specialists called "family practitioners," should be the rightful heirs of the GP. The executive director of the AAMC, Ward Darley, was a behind-the-scenes supporter of family practice, but in 1965 he wrote to a colleague that he feared it would be "a long road between now and the time when the medical schools will give significant help in training senior people to serve as the quarterback of the comprehensive medical care team."[54]

When political and social pressures did convince organized medicine to support an explicitly primary care specialty, the change was swift and focused on the newer, state-supported schools where family practice was often imposed by legislative mandate. The Liaison Committee for Medical Specialties gave formal approval to the application of the ABFP on February 8, 1969, followed by approval of the full Advisory Board for Medical Specialties, the National Board of Medical Examiners, and the other residency boards whose cooperation was a necessity. The American Board of Preventive Medicine was among those most encouraging to the new Board. Certification initially required competency in general internal medicine, some pediatrics and psychiatry, community medicine, and electives in uncomplicated obstetrics-gynecology, ambulatory surgery, or subspecialty fields. Over the next decade, the number of accredited residencies climbed. By 1975, 219 approved residencies were in operation with 70% of

medical schools having some sort of "academic unit" devoted to family medicine. Passage of the Health Professions Educational Assistance Act of 1976, which created capitated awards to medical schools on condition that the schools – in aggregate or individually – allot up to 50% of residency slots to primary care by fiscal year 1980, pushed these numbers higher. By 1978, approximately 22,000 doctors had become board certified in family practice.[55]

Dick Walton's Umbrella: Founding Family Medicine at UMass

In Massachusetts, however, UMass Medical School was the only school willing to incorporate the new specialty.[56] As a report prepared for the president of the UMass system, Robert Wood, summed up the situation in 1973, "Massachusetts ranks among the top ten states in every category in 15 of the 20 specialties. However… the relative ranking of physicians engaged in general practice is 33rd… [T]his figure is significant for the type of health care that will be required in the Commonwealth in the years ahead."[57] These data were based on a 1970 survey conducted by the Massachusetts Academy of Family Physicians. The survey defined "primary care" to encompass not only family physicians, but pediatricians, general internists, and osteopaths. The inventory, as of December 31, 1973, found 4240 primary care physicians (including 595 in primary care residencies) in active practice in Massachusetts, of whom 1124 were family physicians – slightly more than 26%. But, one-third of the latter were over 60 years of age. Based on these criteria, there existed "a shortage of 1564 Family Physicians in Massachusetts…most prominent[ly] in Essex, Middlesex, and Worcester Counties." The ratio in Worcester was 19.7 per 100,000.[58]

At the same time, a small group of general-practitioners-turned-family-physicians began to actualize the ideals of family practice within their own practices. In the towns and rural counties of central and western Massachusetts, some large practices still were led by doctors who had graduated before World War II and who had never felt the need to continue their postgraduate education (residency) beyond the internship year. Some of them were anxious to move

beyond general practice and involved themselves at the level of their state specialty societies. In fact, a collaborative study group from the recently renamed Massachusetts Academy of Family Physicians, working with researchers from Harvard Medical School, published a report in JAMA in 1971 about the content of current patient visits to general practitioners as a guide to the educational needs of future family practitioners.[59] Dr. Robert Babineau, Sr., the founder of the Fitchburg family practice residency, and a member of the collaborative study group, remembers this period of transition from the perspective of a general practitioner with a thriving practice and an active presence in the Massachusetts Academy of General Practice, the forerunner to the Massachusetts Academy of Family Physicians:

> I'd been in practice from 1951. I got involved with the Massachusetts Academy of what was then called General Practice, you know, just to become involved with what was going on in the medical world, and over the '50s and early '60s, there was a big debate as you know about the future of general practitioners, because this was the era of specialties and everyone was beginning to specialize, in the '50s and '60s. So those of us who were family doctors (well, what we called ourselves was GPs), thought that we should at least get involved in the discussion, because we felt that our type of practice made a lot of sense. You certainly needed specialists, but you also needed people who could kind of function as the primary care physician, to be the quarterback of the team, so called.
>
> So we got involved in that and through that I got involved not only at the [national] level but at the state level, where we were having big discussions about the future of general practice, and through that...of course...the discussions then were about whether it should survive and those of us of course felt it should...[T]hen we had discussions about the name of this new group, and we didn't think "general practice" – it sounded too broad – so we had big discussions at the national level and state levels about the future, and that's when we decided to change the Academy. Along with those discussions were discussions that if we're going to survive, we need more training, so the residency issue was brought up along with the discussions about name change, and eventually we all decided that we needed to develop a residency program to train our future doctors, and we decided that they should be called "family physicians."[60]

By 1973, it was apparent to the UMass Board, the President, and the Legislature, that the school must develop a coherent and positive approach to increasing the numbers of family practitioners in the state. The original vision behind the new school, however, coexisted less than comfortably with these efforts to promote primary care. In the words of Lamar Soutter's successor as Chancellor/Dean, Roger J. Bulger, M.D., the school, "while embracing many of the objectives of newer, so-called community-based schools, has had these goals and missions superimposed on those of a faculty already firmly entrenched, with great strength in the basic medical sciences and a keen interest in pursuing excellence in research."[61] Hugh Fulmer's vision for the Department of Community Medicine had clear plans – and a mandate from the Dean – for educating medical students to understand the big picture of health and disease. The institutional commitment to primary care education was more ambivalent. In 1966 Soutter had written, "The responsibility for providing a healthy climate for family practice in which it can flourish is not ours, but that of the medical profession itself through its state and national societies. Specifically, exactly how far we can go to assist students to develop an interest in this field is hard to say without further study." It is telling that in 1972, when the administration and an extensive array of faculty and consultants wrote a five-year planning document for the Worcester campus, the subcommittee dealing with residency education contained no one identified with primary care; in Worcester, as in most medical schools at the time, attention gravitated toward procedure-oriented specialty training in hospital settings.[62]

A shift in the economic and political landscape, however, brought legislative pressure on the medical school to demonstrate a commitment to family medicine. Between 1972 and 1975, a steady stream of inquiries reached the UMass President, Board of Trustees, and Dean Soutter asking how the medical school was addressing the Commonwealth's need for family doctors. Even the accreditation team for the LCME, which surveyed the school in June 1972, recognized the problem. Among their recommendations for improvement

was the following: "The Dean, clinical faculty and University officials are urged to start studying immediately the problems of ambulatory care at the University Hospital…Unless the necessary decisions can be made soon, the University may find itself by default locked into outmoded patterns and practices in their teaching and service programs." Other pressures were directly linked to the state budget. At a time of growing inflation, Governor Sargent's administration wanted to consolidate the governance of all state education programs which heightened scrutiny of the UMass system. No one could ignore the implications of threatened budget cuts. Legislators wanted to hear about the prospect of more family doctors out in their districts. When the Board of Trustees approved changing the name of the department from "Community Medicine" to "Community and Family Medicine" in 1973, the idea was praised as both "valuable and timely." A memo from President Wood to the Speaker of the House, David Bartley, primed him for a meeting where Dean Soutter would be lobbying for money for the new hospital. He urged Bartley to emphasize the "truly public character of the School, the need for it to be at the forefront of innovation and change in medical education; the need for it to be responsive to public requirements." Wood wanted –needed – to "re-orient" the Dean to a realistic appreciation for the requisite balance between "research as contrasted to family and community service…"[63] Members of the Board of Trustees eagerly questioned Soutter about how many of the school's first graduating class of 1974 were going into family practice. "In actuality, only 4 of the 16, or 25%…," he told them.[64]

In this climate Dick Walton turned most of his attention to creating a family practice residency. It is not possible to know when he set his sights on creating a separate department, but within two years, Hugh Fulmer's plans for a combined Community and Family Medicine department would be turned upside down by the family physicians Walton recruited.

The timeline was a challenge. Between 1972 and July of 1974, Walton needed to recruit faculty, identify residency teaching sites for ambulatory practice that were affiliated with community hospitals, develop a curriculum, obtain provisional accreditation, attract the first class of residents and, even more

important, apply for a federal grant to fund the program so that neither the local residency sites nor UMass Hospital had to pay for the residents themselves.[65] In his initial appointment as a division chief rather than a department chair, Walton had little clout within the school – in sharp contrast to his many contacts in the medical community outside the school. (That would change, however, as he cemented alliances with some of the more powerful clinical faculty around a shared commitment to improved primary care.) In the meantime, articles began to appear in the local paper proclaiming that, "Medical School Here Encourages Students to Enter Family Practice."[66]

In response to the request of both the Dean of the medical school and the UMass Trustees, Walton set about creating a five-year plan for the program. In a 1975 list of institutional objectives for the new residency program, prepared as part of his five-year plan, Walton enumerated the following institutional goals:

1. To develop a statewide network of residency programs...under a University umbrella.

2. To help define and develop a system of health care delivery and the functions of the family physicians under that system.

3. To develop an early and organized continuum of educational exposure to the discipline of Family Medicine for the undergraduate.

4. To increase the supply of well-trained family physicians in Massachusetts and New England.

5. To encourage a closer link between the University and the practicing physicians; including...teaching; [continuing medical education]; and facilitated linkages for patient consultation and referral.

6. To establish in collaboration with the practicing family physicians a strong research base in the training programs in the areas of clinical, operational, educational and basic research.

7. To [better define] the discipline of Family Medicine, and [integrate] those portions of the other specialties and basic sciences that seem most applicable.

8. To develop the basic science and clinical skills of community medicine in... undergraduate, graduate and continuing education...to make the family physician

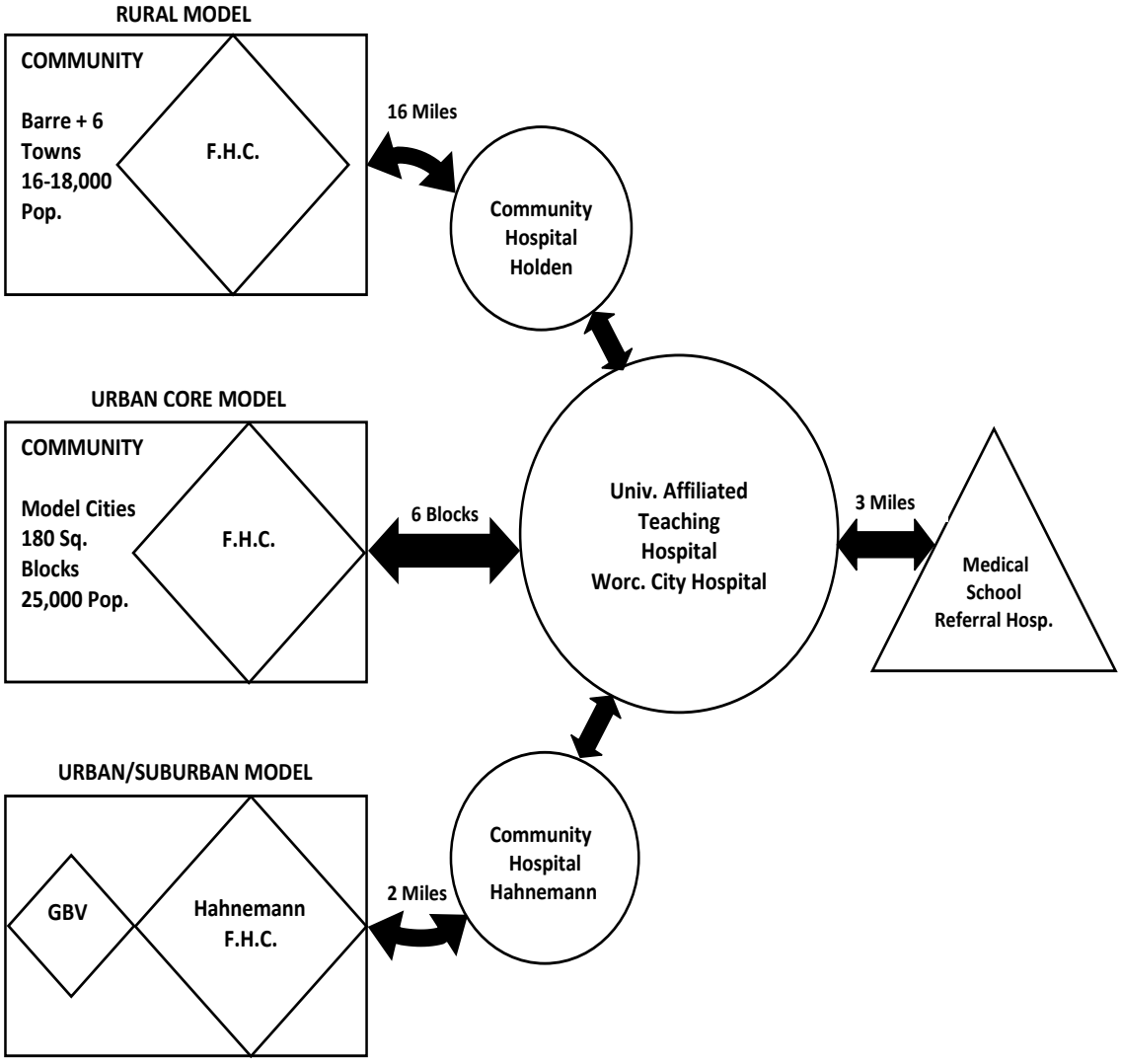
a more effective community physician.

Interestingly, among a second series of educational goals, he included one that specifically addressed the community-oriented primary care model, namely, "To determine the health related problems of the community in which the [family doctor] practices and to utilize [his or her] and others' skills to diminish these problems."[67]

The linchpin of the program, however, was a set of alliances Walton developed with several ambulatory care practice settings. He produced a plan that has been known ever since as the "Umbrella." The residents, Walton decided, should have a choice of three different outpatient sites: one rural, one inner-city, and one urban-suburban location. Each health center would have admitting privileges at the hospital to which its patients lived closest, with the residency's central site at Worcester City Hospital until University Hospital was open and ready for them. Linking the three umbrella "spokes" would be the Family Medicine Department itself. Daniel Lasser, M.D., current department chair, explained the idea behind Walton's structure: "This enterprise was going to be a true partnership and collaboration involving the university, the community and a series of community...hospitals and health centers...it was really going to be a community-based program." Lasser remembers that when he first arrived at UMass as the family practice residency director,

> Dick Walton had these diagrams. I got here in '79 and the first thing people said was, you have to take a look at Dick's diagrams and memorize them and imprint them in your brain. One diagram was a triangle – university, community and health center. The second diagram was an umbrella...The umbrella was a whole series of different training tracks to meet the public need. And so there was going to be an inner city track that was going to be based at a community health center...They were going to develop a rural track [and] a private practice track.[68]

Worcester City Hospital Program*



Worcester City Hospital Program is composed of 3 distinct training Models. Each Training model is composed of 5 training elements: (1) Community; (2) Family Health Center [F.H.C.]; (3) Community Hospital; (4) University Affiliated Hospital; (5) Medical School Referral Hospital.

* Diagram from the "University of Massachusetts Medical School/Worcester City Hospital Family Practice Residency Program" brochure in Box 1, folder "Information Regarding Residency Program," FMCH/UMMS.

Walton persuaded three sites to affiliate with the new residency, while a fourth site, Dr. Babineau's independently credentialed family practice residency at Fitchburg, became formally affiliated five years later. The sites included the Barre Family Health Center (rural; 1973), the community-run, federally-funded Family Health and Social Service Center of Worcester (now, the Family Health Center-Worcester) in downtown Worcester (inner city; 1974), and, the Hahnemann Family Health Center (urban-suburban; 1975). In 1979, the Fitchburg Family Practice Center (later renamed the Community Health Connections Family Health Center) became the fourth site to affiliate with the program, representing a private practice model in a predominantly blue collar small city. The main residency site initially was housed at Worcester City Hospital in the inner city.[69]

In the words of Carolyn Cotsonas, Dr. Walton's departmental administrator:

> It shouldn't be underestimated how effective Dick was as a leader and a negotiator...He was extraordinarily charming...he came on like a farm boy, only he was brilliant. He was the king of aphorisms – you know, 'You can catch more flies with honey than with vinegar,' and 'I sometimes forget that when I'm up to my eyeballs in alligators, I'm here to help drain the swamp,' and so on. He had a wonderful sense of humor and was a wonderful leader. He really rallied people around, and he...was very politically savvy, he made a lot of external alliances that became very important.[70]

Such alliances, especially with administrators at community hospitals like Worcester City and Holden, became especially important because the residents' services and referrals of patients to the inpatient units also meant a lot to the survival of the hospitals, at least for a few years. The first site to be established, the Barre Family Health Center, was greatly facilitated by Walton's personal ties to the administrator and physicians at its affiliate, Holden Hospital, where Walton had had a flourishing practice and had been chief of medicine and pediatrics.[71]

Shaping a new Residency

Walton's powers of persuasion were needed not only to attract faculty and residents, but also to gain commitments from the health centers and community hospitals with which the residency had its affiliations. The curriculum in the early years, when the program was based mostly at City Hospital, demanded a shared spirit of adventure, "making do." As Walton wrote in a 1975 program description,

> The process of residency training is designed to be goal oriented rather than time oriented. Within three years, residents will be evaluated from a set of educational objectives, or goals...It is expected that educational objectives will help both residents and faculty to define [individual resident] needs...Individual resident responsibility will... vary according to the fulfillment of goals...[72]

Residents were expected to master the core aspects of internal medicine, pediatrics, minor (office-based) surgical procedures, preventive medicine, and for some, obstetrics and gynecology. All residents were assigned to a two-person team. Everyone was expected to round during mornings while in the afternoons, half would work the inpatient units and the others would take seminars at the various health centers or at City Hospital; team members on the inpatient wards in the afternoons would cover for their own patients as well as their partners'. At the health centers, residents would meet with social workers, nurses, specialist consultants, and allied health professionals to review patient management questions, or would attend practice management seminars; at the hospital, they would attend seminars on "preventive medicine and patient care."[73]

A less tangible, but crucial goal of the curriculum was the development of the capacity for self awareness and empathy. Most family practice residencies incorporated an explicit curriculum in the behavioral sciences, especially psychology, sociology, and anthropology. A distinctive aspect of their curricula addressed itself to the residents' psychological, rather than intellectual, growth.

At UMass Medical School, as at approximately 60 other programs, a technique known as the Balint group, named for the work of the Hungarian-born English psychiatrist Michael Balint in the 1950s, has been a mainstay of professional development for both residents and faculty. In the Worcester program, three Balint groups were in operation by 1980.[74]

Residents from each program site were assigned to inpatient rotations in the hospitals associated with each different site. The attitudes toward family practice in a given hospital could, therefore, create qualitative differences in the experiences each site provided. Some rotations were notoriously unfriendly to family practice residents; others were more amenable, especially in smaller community hospitals previously staffed by general practitioners. Obstetrics was especially problematic since some OBs clearly viewed family doctors as potential competitors, and lesser-educated ones at that. One of the early graduates remembered that, "In those days...it was a matter of finding places that were receptive to having family medicine residents be involved in OB [Obstetrics]. St. Vincent was receptive but...Memorial was openly hostile to the idea of family doctors being involved in OB. They didn't want family medicine moving into the arena of OB."[75] Likewise, some internal medicine rotations, especially at University Hospital in that period, were quite unfriendly to the family practice residents. General internal medicine was itself just crystallizing as a distinctive subspecialty, something discussed in Chapter 7, and the boundary lines with family practice were not yet established. Dennis Dimitri, who completed his residency in family practice at the Dean Street/Hahnemann site, recalled,

> At Hahnemann, the teams consisted of combinations of Family Medicine and Internal Medicine (IM) residents and we all worked very cooperatively together ...At the University Hospital, it was a little bit different because the Family Medicine residents doing inpatient medicine rotations there were kind of like visitors or interlopers on the Internal Medicine service – there would be one or two of us at a time integrated into what was basically a medicine

> service. So I had good experiences there, and the residents I worked with...I got along with OK, so the experience there was OK on a resident-to-resident basis. But the faculty at the university, not all but some of them, were still not quite sure why there were these Family Medicine residents taking up time on our Internal Medicine service. So that was a less supportive environment.[76]

A distinctive culture bound members of the program together during the first decade of the residency. Many were aware of the precariousness of the new department's financial standing and the still-experimental nature of family practice in the eyes of many specialists. A few of the early cohort explicitly recalled feeling distrusted by the attending physicians they encountered at the hospitals, as in these words from a 1982 graduate of the residency:

> ... it was still an era when family practice was new enough, particularly here in Massachusetts, that there were derogatory comments; frankly, there was active discrimination – oh, the short end of call schedules, a lot of it was subtle stuff... There were comments – well, of course internists will learn more about this than you will, pediatricians are more qualified to deal with this than you are – there were people that took the opportunity to sort of impress upon us that we should regard ourselves as second-class citizens and inadequately trained pediatricians, internists, and ob/gyns as opposed to family docs, and those were clearly the people who didn't get it.[77]

In the face of these conditions, Walton fostered a sense of camaraderie by hosting the residents at his own house (even after nearly 40 years, his wife, Sue, recalled that early group as a part of their family), and they all collaborated on a large garden at the back of the residency director's house.[78] John Frey, M.D., the first residency director, acknowledged that in those days Worcester was not much of a draw for potential residency recruits. But, the idealism of the mission – and their commitment to it – plus a demonstrably familial ethos among many residents and faculty, often did the trick. An iconic photo of the first residency class, replete with spouses and children piled up together at an indoor volleyball court, did double duty as a wall decoration and a recruiting tool.

Family Medicine residents and families play volleyball-from residency brochure, c. 1975 *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Bob Singer, who graduated from the Fitchburg program in 1981, spoke to the group's esprit de corps:

> I do remember that there was a sense of pride that we were family practitioners. We had a distinctive way of dressing which distinguished us... the chief of medicine at that time, whose name I do not recall, said to me at one point that you can always tell the family practice residents because they all look like they're ready to go outside and chop wood. So, many of the male residents would wear working boots, hiking boots, as opposed to regular men's shoes. The men did not wear dungarees but wore more casual khaki pants, there was an agreement that the men in family practice would not wear ties, whereas there was an agreement that the men in internal medicine would wear ties. Very few of the family practice doctors ever adopted the white coat, although there were certain situations in intensive care where it might be worn...

Stepping back, Dr. Singer interpreted these choices as trying to identify more with the patients than with the medical hierarchy. Contrast this with the dress code established for students and residents by Dr. James Dalen, chair of the Department of Medicine at UMMS at the same time: "All the men were expected

to wear ties except on Saturdays, Sundays, and holidays." (Dalen made this exception only after being caught tie-less on a Saturday morning by one of his medical students.)[79]

Such a philosophy of medicine fit well with the atypically egalitarian, counter-cultural moment in American society with which the discipline's early years coincided, an upsurge of political and social activism throughout American society and in many other Western nations. In the United States, the Civil Rights and anti-Viet Nam War movements insistently brought social inequality to the attention of the nation's political leaders and citizens during this same period.[80] Physicians calling for a renewed covenant with the underserved through the mechanism of primary care medicine, what Jack Geiger has called "the use of health care as an instrument of social justice," now found support from outside the profession and growing consensus within it.[81] Many of the first generation of family practitioners, roughly those entering the field from the mid-1960s through the 1970s, shared a philosophy of social activism and a pronounced commitment to the provision of health care to all segments of society. In the words of Dennis Dimitri, M.D., a 1982 graduate of the program,

> [T]he very fact that you were doing family medicine instead of some other more narrow specialized pursuit or an academic pursuit or whatever, was in and of itself...an indication of a different level of social responsibility...I don't want to overstate what we were doing, but I really feel strongly that it was very much more a kind of a social statement and calling to go into family medicine back in the 1970s than it might be today.[82]

Dr. Lucy Candib *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Dr. Lucy Candib, for example, joined the program at the Family Health and Social Service Center as a second-year resident in 1974 after several years of feminist activism while at Harvard Medical School. Considering her future career, she chose Family Medicine because, "I had decided family medicine

would let me develop the medicine side and keep the activist side."[83]

Dr. Dimitri put it this way:

> I think part of why many people went into family medicine at that point in time had a lot to do with the social environment at the time, and there was a lot of feeling about the need to provide a different kind of medical care, medical care that was more responsive to patient needs. As opposed to being driven by the academic needs of the medical school, it was driven by the community needs of the people who needed care. And I saw family medicine as a specialty that really responded to that...I also understood that meant you had to be, not just in a hospital environment but in a community health center, in a place where most people got most of their care.[84]

A major confrontation precipitated by the residents at the City Hospital site in 1976 exemplifies the way that politics and culture shaped the residency. A combination of factors – the seriously deteriorating conditions at Worcester City Hospital and a national movement among residents to unionize for better pay and shorter hours on call – led many residents based at City Hospital (particularly from Family Medicine and Internal Medicine) to demand that the city authorize a larger budget outlay for City Hospital and that the residents be recognized as a collective bargaining unit. Close ties between doctors and residents to their patients were the real strength of family medicine, especially in an impoverished downtown setting such as City Hospital's. In no time, local neighborhood groups mobilized demonstrations and press conferences to support the residents, whom they perceived as acting for the benefit of the entire downtown community. The senior medical staff at the hospital, on the other hand, saw them as troublemakers, upstarts in a system that was struggling for financial support and in danger of being closed down entirely by the city. While Dr. Walton defended his residents behind the scenes, larger economic forces soon made their case moot. As rumors flew that the city would close the hospital because of its own fiscal shortfall, the residents found that their contracts at City Hospital would not be renewed. (City Hospital was closed down in 1991.) By 1978

Family Medicine residents were headquartered at University Hospital, like the residents in other programs. Over the next few decades, explicit political ideology was transmogrified into implicit assumptions about the responsibilities of family practitioners to their patients.[85]

The UMass program was quickly successful, soon filling all its allotted residency slots. (By 1980, the program had graduated 38 residents; by 1981 it reached its full strength of 12 graduates per year.) Yet, for its first few years, program funding was a subject of constant concern. Dr. Stephen Earls, a resident at the Barre Family Health Center from 1974 to 1977 who later became Medical Director there, marveled at the challenges faced by the program:

> In the early days, the whole time I was a resident it was one crisis after another. And... everything was just developing while we were doing it, so rotations would have problems and there'd be an emergency meeting. Grant applications were due. Everybody was new at this so nobody quite knew the pace of getting a grant application ready for the residency and so there was Carolyn Cotsonas [a lawyer and program administrator who was also married to one of the first-year residents, Dr. Leonard Finn] and Dick Walton working long into the night to get the grant done in time. It was all very chaotic and stressful...Lots of morning meetings to plan this, that, or the other thing.[86]

Stephen Earls, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

The Comprehensive Health Manpower Training Act of 1971 (P.L.92-157) provided

funding for training programs in primary care, including family medicine, and Walton was able to apply for such funding. By the late 1970s, the Department was the recipient of its first Title VII grant, administered through the Health Resources and Services Administration (HRSA), a grant to train faculty and community doctors to supervise residents and students learning to be family doctors. That program, which lasted until 2005, was overseen by a UMass Med education specialist named Mark Quirk who began by holding weekend workshops for family medicine educators. This small initiative slowly grew into a major departmental program.[87] Around the same time, and of specific interest to the Family Health and Social Service Center of Worcester (FHCW), Title V of the Special Health Revenue Sharing Act (PL94-63) of 1975 gave financial support to neighborhood health centers.[88]

Family Medicine Secedes from the Union

While Dick Walton was busy starting the residency, his relationship with Hugh Fulmer began to deteriorate as their divergent interests and objectives became clearer. In short order, Walton developed a reputation – at least in the Dean's office – for being too "gung-ho."[89] Fulmer always saw primary care as necessary but insufficient to what he understood as true "community medicine." In 1973, he did agree to rename his department "Community and Family Medicine," but simply to reassure new family practice faculty recruits and ease the accreditation process. From his perspective this signified nothing more than another step toward his original goal of creating a hybrid residency combining both disciplines. To Fulmer, caring for individuals and families, while important, was not the end goal; community surveillance and public health action on behalf of total communities were his beacons.[90]

For Walton, on the other hand, Fulmer's was a vision seen through the wrong end of a telescope. Individual patients and their families represented a nearly sacred responsibility. Whenever possible, data-driven community health initiatives were a valuable addition to a clinic or health center's mix of services.

But they never animated his vision of family practice. Although, like community medicine, family practitioners were committed to practices with deep roots in specific communities, the concept of "community" functioned differently in each one's approach. As Dan Doyle, M.D., a member of the second graduating class of the UMass Family Medicine residency, explained,

> ...there was an ideology of family medicine that had to do with knowing the whole patient. The buzz word 'biopsychosocial' hadn't come around [yet], but really that's what it was, a biopsychosocial approach, knowing the whole person, the importance of the family, caring for families together, so while the ideology of family medicine wasn't politically progressive, [it] was very congruent with that perspective of caring for the underserved and recognizing the importance of the culture of the patient and also trying to minimize the social distance between the doctor and the patient.[91]

Family doctors – especially those who worked in community health centers – aspired to a deep connection with their patients' social communities, but for the sake of enhanced patient care; community change was welcome, but patients, individuals and families, came first. One residency graduate from 1982, who still practices in Worcester, remembered learning this from the example of his mentors in the program:

> One of the things I really remember from [Dr.] Lucy Candib, who was over at Main Street...I remember her talking once [about] the importance of embedding yourself into the community where you practice and not just seeing it as a place where you might come in and have a job for a few years and then move on because you've got some academic aspirations or whatever else, but if you really wanted to do family medicine, that you lived in the community, you joined the community in whatever ways work for you. [92]

More concretely, Walton had expected from the beginning to be given the freedom to develop a department of his own. Instead, he found himself, or so he recalls, unable even to gain access to the department's budget figures. Inevitably, perhaps, he and the other senior family medicine faculty concluded that they

could not work within Fulmer's departmental structure. In the spring of 1974, on the eve of the family practice residency's going "live," Dr. Walton presented an ultimatum to Dr. Fulmer and Dean Soutter: create a separate family medicine department or the residency faculty would resign en masse. Fulmer was shocked and still refers to Walton's actions as a "bombshell," and as "seceding" from his department.[93] Lamar Soutter was furious, having only recently tacked with the political winds, writing in a budget memo for the UMass President that "The most vitally needed physicians at the moment are family practitioners...We regard as one of our primary responsibilities the turning out of family practitioners."[94] With the residency due to open in only three months, Walton gave the Dean little choice.[95] Soutter conferred with his Executive Committee and called a meeting of Fulmer, Walton, and representatives of the Massachusetts Academy of Family Physicians. In a Solomonic gesture, he made Walton the head of a Department of Family Medicine that was limited in scope to graduate education and the residency. Fulmer remained head of Community and Family Medicine with his charge reduced to undergraduate medical education, but with the rights to use the federal training grant for primary care preceptors, a grant that Walton had considered his.[96]

It should be no surprise that the breakup of the original department of Community Medicine left bitter feelings. Fulmer's COPC vision never gained traction after the departmental split. As for the family practice residency, neither the program's strong growth nor even its support by Massachusetts legislators (most of whom were more comfortable with the family practice primary care model than with COPC) insulated Family Medicine against the school's fiscal ups and downs. For several years it could not feel sure of budget support from the medical school. A showdown in 1975 cleared the air somewhat. As Walton described the situation, "They [school leaders] loved to talk about Family Medicine all around the state. And that was our problem. We talked about it and then when the budget came, we were the low person. We didn't get what was promised." Thus, only a year after the program was launched with Dick Walton having promised medical school money for the educational contributions of the

independently operated residency sites, in Dr. Daniel Lasser's words, the "med school turned around and said, 'What money? We never told you [that] you had any money to give to these health centers.' So all of a sudden, these health centers have made commitments, and the health centers were independently owned and operated." Under such circumstances, who could tell how long they would agree to affiliate with the Medical School?[97]

This became a major crisis for family practice in Massachusetts and for the school's relationship with the legislature and with a new governor, Michael Dukakis. In 1975, Walton was in a Boston hospital recovering from spine surgery when he was visited by the assistant to the Chair of the Senate Finance Committee.[98] As Walton tells the story, she asked him:

> ...how we were doing and what was going on. I said, 'We're having difficulty.' I said we were paraded out at budget time, but we're put in the closet the rest of the year. I said that was fine, as long as we get our money... She said, 'Well, I'll talk to the Senator...' Well, the senator put an earmark on the budget which meant that the medical school couldn't spend their money until we got our budget...That made me even more popular than usual.

In short, with lobbying behind the scenes from at least one fellow UMMC chair with excellent political connections, campaigning by the Massachusetts Academy of Family Physicians, and a governor whose administration had made health care access and lower costs a priority, a $750,000 appropriation was earmarked for the Department of Family Medicine for 1976-77. After that, Walton observed, "the budget process was a little bit easier for us. What they said we'd get, we got."[99] Yet the field of family practice, like general internal medicine or pediatrics, would take at least another decade to become as integral to undergraduate medical education at UMMC as it had become to residency training and outpatient care. This will be the subject of Chapter 7.

NOTES

CHAPTER SIX

1 Board of Trustees, "Minutes," March 6, 1974, p. 3, Box "Board of Trustees, Minutes of Full Board and Committees, A-Executive, 1974," fol. "General Meeting, Jan.-Aug., 1974," Board of Trustees Collection, UMass-Amherst Archives and Special Collections, Amherst, MA [hereafter, Trustees, UM/A].

2 "Statement of Goals: The University of Massachusetts Medical Center, as prepared by The Faculty and Administration of the Medical School," Sept. 1975, Box, "Robert C. Wood, Series 5: Worcester, Box 36," fol. "Chancellor/Dean, Jul. 1975-76," Robert C. Wood Papers [hereafter, Wood, UM/A]. Cf. remarks by Chairman of the Board Joseph Healey that "the original intent of the Trustees in establishing the Medical School [was] to provide high-quality education and to try to motivate students to enter the field of primary care." Board of Trustees, "Minutes," Oct. 1, 1975, p. 9, Box "Board of Trustees Minutes of Meetings of Full Board and Committees: A-Budget" [1975], fol. "Board of Trustees General Meeting, Aug.-Sept., 1975," Trustees, UM/A.

3 Frank J. Chlapowski, Oral History Interview transcript, interviewed by Ellen More, Oct. 27, 2010, Worcester, MA, Oral History Collection, UM/W.

4 Holly Robinson to Myrna Baylis, "Re: The UMMC Mission, à la Brownie Wheeler," Feb. 5, 1990, p. 5, Public Affairs Collection [hereafter PA], unprocessed, UM/W.

5 "Construction Grant Application," Feb. 28, 1968, p. 22, Box 13, fol. 1, H. Brownell Wheeler Papers [hereafter, Wheeler, UM/W.]

6 The HEW report distinguished primary care from community medicine as follows: "...one starts with the individual or family as the reference point and then expands or elaborates. We do not start with a community as 'patient.'" The community medicine perspective of Kurt Deuschle, M.D., described in subsequent pages, was explicitly contrasted to the primary care approach. See Joel Alpert and Evan Charney, "The Education of Physicians for Primary Care," U.S. Dept. of Health, Education, and Welfare, Bureau of Health Services Research Pub. No. (HRA)74-3113, Autumn, 1973, p. 1. The AAMC report referred to a general need for "primary medical care." The Institute of Medicine report defined primary care as embodying "accessibility, comprehensiveness, coordination,

continuity, and accountability." Then, as now, calls for primary care providers were closely linked to calls for greater access to care and control over costs. Edmund D. Pellegrino et al, "Communications: Planning for Comprehensive and Continuing Care of Patients Through Education," *J. Medical Education*, 1968, *43* (June); 751-759, quotations, pp. 751, 752; Institute of Medicine, *A Manpower Policy for Primary Healthcare* (Washington, DC: National Academies Press, 1978), p. 16, accessed at https://web.archive.org/web/20150813145300/http://www.nap.edu/openbook.php?record_id=9932&page=13, Jan. 9, 2012. Also see Marc L. Rivo, "Internal Medicine and the Journey to Medical Generalism," *Annals of Internal Medicine*, 1993, *119*: 2; 146-152; Jeremiah A. Barondess, "The Future of Generalism," *Annals of Internal Medicine*, 1993, *119*: 2; 153-160; Joel D. Howell, "Reflections on the Past and Future of Primary Care," *Health Affairs*, 2010, *29*: 5; 760-765.

7 Dominique Tobbell, "Plow, Town, and Gown: The Politics of Family Practice in 1960s America," *Bull. Hist. Med.*, 2013, *87*: 4, pp. 648-680, esp. pp. 654-656, emphasizes the importance of rural practitioners and their legislative influence in states such as Minnesota during the 1960s. This model does not fit the situation in Massachusetts where the influence of Harvard and the Massachusetts Medical Society dominated the state legislative agenda regarding medicine throughout the 1960s.

8 Cf. "Construction Grant Application," Feb. 28, 1968, p. 22. See below in this chapter for more on the concept of "community-oriented primary care."

9 R. William Butcher, Jr., Oral History Interview transcript, interviewed by Ellen More (by telephone), Aug. 30, 2010, p. 21, Oral History Collection, UM/W.

10 Lamar Soutter, "Some Aims of a New Medical School," *Clinical Research*, 1966, *14*:1; 3-6, in Box 13, fol. "HBW, UMMS, Report to Trustees, June, 1966," p. 22, Wheeler, UM/W. Cf. "Report to the Trustees from the School of Medicine, June, 1966," Box, "Board of Trustees, Minutes of Meetings, Full Board and Committees, 1966 (April-Aug.)," fol. "Trustees (Full Board), Minutes, Agenda, etc., June –1966," John W. Lederle Papers [hereafter Lederle], UM/A. "Application for Joint Construction Grant, July 24, 1967, Box "Other Campuses, Medical School, Worcester, 1962- A-D," fol. "Application for Joint Construction Grant 1967 and Site Visits," 55/2, UM/A.

11 "Construction Grant Application," Feb. 28, 1968, p. 22 [italics added]; [Lamar Soutter], "Aims of the Medical School" [c. 1969], Box 43, fol. 541, Lederle, UM/A.

12 The term "Preventive Medicine" is sometimes still used interchangeably with Community Medicine, but today refers specifically to a board-certified medical specialty. Rosemary Stevens, *American Medicine and the Public Interest* (New Haven, CT: Yale University Press, 1971; 1976), pp. 330-331; American College of Preventive Medicine, "Fifty Years of Leadership: Improving Health Yesterday, Today and Tomorrow," pp. 1-60, accessed on June 3, 2011 at https://web.archive.org/web/20150813162952/http://c.ymcdn.com/sites/www.acpm.org/resource/resmgr/About-Files/ACPM_History.pdf; Milton Terris, "Evolution of Public Health and Preventive Medicine," AJPH, 1975, *65*: 2;161-169, esp. pp. 161-163, 165; Shirley K. Longlett, Jerry E. Kruse, and Robert M. Wesley, "Community-Oriented Primary Care: Historical Perspective," *JABFP*, 2001, *14*:1; 54-63. A revelatory study by Kerr White et al demonstrated that throughout the 1950s most health care was not performed within the setting of the university health center or hospital. Kerr L. White, T. Franklin Williams, Bernard G. Greenberg, "The Ecology of Medical Care," *New England Journal of Medicine*, 1961, *265*: 18; 885-892. Re the growth and decline of community or preventive medicine departments, see chapter 7, n. 20.

13 William H. Barker, ed., *Teaching Preventive Medicine in Primary Care* (New York, NY: Springer, 1983), esp. Kenneth P. Moritsugu, "Forward," pp. xi-xiv; Barker, "Preface," pp. xv-xviii, esp. pp. xv, xvii; Steven Jonas, "National Policy for Medical Student Education in Prevention," pp. 251-263, esp. p. 256; Robert L. Berg, "Innovative Teaching of Prevention in Clinical Settings," pp. 264-271, esp. p. 266; Theodore M. Brown, "Primary Care and Prevention: Merging Ideologies in Historical Perspective," pp. 272-288, esp. pp. 273-283. Many thanks to Prof. Theodore M. Brown for alerting me to the Barker volume.

14 In 1954 the American College of Preventive Medicine was chartered to provide a place where the medical practice of prevention could further its unique interests.

15 Their work was well known both because of Sidney Kark's own publications in U.S. medical journals and because Jack Geiger, pioneer of the community health center movement in the 1960s, worked with the Karks at Pholela. Indeed, several of the Karks' colleagues moved to the U.S. to work at the University of North Carolina School of Medicine in the 1960s. H. Jack Geiger, "Contesting Racism and Innovating Community Health on Two Continents," pp. 103-118, in Anne-Emanuelle Birn and Theodore M. Brown, *Comrades in Health: U.S. Health Internationalists, Abroad and at Home* (New Brunswick, NJ: Rutgers University

Press, 2013). Cf. "Against the Odds: Making a Difference in Global Health," National Library of Medicine exhibition curated by Manon Parry, accessed on Aug. 23, 2011 at http://apps.nlm.nih.gov/againsttheodds/exhibit/community_health/model_world.cfm .

16 Shirley K. Longlett, Jerry E. Kruse, and Robert M. Wesley, "Community-Oriented Primary Care: Historical Perspective," *JABFP*, 2001, *14*:1; 54-63. Cf. Will Pickles, *Epidemiology in a Country Practice* (Baltimore: Williams and Wilkins, 1939). Cf. Sidney L. Kark, *Community-Oriented Primary Health Care* (New York: Appleton-Century-Crofts, 1981).

17 On the interrelationship of COPC and community health centers, see Bonnie Lefkowitz, *Community Health Centers: A Movement and the People Who Made it Happen* (New Brunswick, NJ: Rutgers University Press, 2007), esp. pp. 6-7, 53. Lefkowitz believes the major difference between the community medicine approach to primary care and that of the community health center is the latter's adherence to the principle of community involvement, usually through majority representation by community members on a board of directors. This view is strongly supported in the writing of later COPC experts such as Hugh Fulmer, Suzanne Cashman, and Robert Rhyne.

18 The health center at Columbia Point opened on Dec. 11, 1965. Geiger, "Contesting Racism and Innovating Community Health Centers," in Birn and Brown (n. 15).

19 While McDermott and the Navajo TB intervention at Many Farms is almost always lauded in the community/preventive medicine literature, especially for its pioneering of community health surveillance, an orthogonal perspective views such "surveillance" as "intrusive" and often fruitless. McDermott viewed the Many Farms experiment as a success for TB epidemiology and treatment, but much less so in improving comprehensive community health. For the latter, political, public health, and nursing interventions would be more useful, he came to believe. Cf. David S. Jones, "The Health Care Experiments at Many Farms: The Navajo, Tuberculosis, and the Limits of Modern Medicine, 1952-1962," *Bull. Hist. Med.*, 2002, *76*: 4, pp. 749-790, esp. 788-789.

20 David Jones acknowledges the intentions of McDermott and Deuschle at Many Farms, but notes the paradox of using comprehensive health surveillance as a tool of community empowerment. Jones, "The Health Care Experiments," p. 765.

21 "The term 'community-responsive medical practice' denotes a practice that is oriented to serve the particular needs of a *defined population*." This definition is derived from the National Academy of Science – Institute of Medicine report, "'The Community-Responsive Practice' –New Directions for Primary Care," from 1981. The sense of community implied here can be geographic, social, or occupational. It usually is used to suggest the under-served or medically isolated. Quoted in Kurt W. Deuschle, "Community-Oriented Primary Care: Lessons learned in Three Decades," *Journal of Community Health Research*, 1982, *8*: 1; 13-22, esp. 13.

22 Hugh S. Fulmer, Oral History Interview transcript, interviewed by Ellen More (by telephone), July 30, 2009, pp. 1-9, 28-31, Oral History Collection, UM/W.

23 Fulmer transcript, *ibid.*, pp. 10, 13-15. He was writing from Malaysia while doing a transitional year as Program Technical Director for the Peace Corps while waiting for the UMass position to begin.

24 The six-week clerkship in Community Medicine did not last beyond the first three years, however. Once Family Medicine became a separate department, a six-week clinical clerkship in Family Medicine replaced it. Cf. Fulmer, Oral History Interview transcript, p. 23; "Health Department to Train Med Students," *Worcester Gazette,* Aug. 22, 1969, PA/UM/W.

25 Hugh S. Fulmer, "Plans for the Teaching of Community Medicine – University of Massachusetts Medical School," *Worcester Medical News*, 1970 (April), pp. 8-12.

26 Hugh Fulmer, "University of Massachusetts Medical School, Department of Community Medicine, First Year Clerkship: Objectives and Rationale of a Clerkship in Community Medicine," typescript, 56 pp. Quotations pp. 1, 3. The document also contains complete course materials, syllabi, etc. Courtesy of Suzanne Cashman, D.Sc. of the Department of Family Medicine and Community Health, UMass Medical School. I extend my deep appreciation to Prof. Cashman for the use of her files and the opportunity to benefit from her years of experience working in community medicine.

27 These clerkships continue today in slightly modified form. Fulmer, "Plans for the Teaching of Community Medicine," quotation p. 8. As mentioned earlier, his first position went to Dr. William Burke, an internist who was the first graduate

of the Kentucky Preventive Medicine residency. Another early hire was the well-known health policy and biostatistics expert, Dr. Albert Yankauer. Cf. University of Massachusetts Medical School *Catalogue*, 1971-1972; 1973-1974; Fulmer, Oral History, transcript, pp. 28-31, both at UM/W.

28 Daniel Lasser, Oral History Interview transcript, Part 2, interviewed by Ellen More, Sept. 6, 2006, pp. 2-3; Leonard Finn, Oral History Interview transcript, Part 1, interviewed by Ellen More, June 24, 2006, p. 2, Worcester, Massachusetts, both in Oral History Collection, UM/W.

29 Michael T. Foley, Oral History Interview transcript, interviewed by Ellen More, Sept. 24, 2009, pp. 26-28, Framingham, MA, Oral History Collection, UM/W.

30 Fulmer, "Plans for the Teaching," p. 8; Fulmer, Oral History Interview transcript, pp. 14, 16-17.

31 The American Academy of General Practice renamed itself in the American Academy of Family Physicians in 1971, setting the stage. Tobbell, "Town, Gown, and Plow," p. 674.

32 Walton was hired as a consultant to teach the medical students during the first term of the opening year, but by late 1970, he had agreed to become a full time Assistant Professor in Community Medicine. Richard F. Walton, Oral History Interview transcript, Part 1, interviewed by Ellen More (by telephone), Aug. 25, 2011, Oral History Collection, UM/W; "Minutes," Committee on Faculty and Educational Policy," March 15, 1971, p. 2, Box "Board of Trustees Minutes of Meetings of Full Board and Committees, Jan.-April, 1971," fol. "Board of Trustees, General Meeting," March 1971, Trustees, UM/A.

33 G. Gayle Stephens, "Developmental Assessment of Family Practice: An Insider's View," in William J. Doherty, Charles E. Christianson, Marvin B. Sussman, ed., *Family Medicine: The Maturing of a Discipline* (New York: Haworth Press, 1987), p. 2.

34 The phrase "comprehensive, continuing care" was utilized in the Millis Report and then widely invoked over the next 10 years in discussions about the need for primary care physicians. Citizens Commission on Graduate Medical Education, *The Graduate Education of Physicians* [Millis Report] (Chicago: AMA, 1966), p. 44. On the pre-history of the idea of "comprehensive" care in foundation-

supported medical school programs to teach multispecialty outpatient care (including behavioral health), see Theodore M. Brown, "Primary Care and Prevention," (n. 13 above), esp. pp. 280-282. Brown sees this initiative of the 1950s as a continuation of the various foundations' work through the Committee on the Costs of Medical Care (CCMC) of the 1920s and '30s. I am grateful for the comments of Theodore M. Brown based on his own early work on the history of primary care and the CCMC.

35 W. R. Willard, "Meeting the Challenge of Family Practice," *Report of the Ad Hoc Committee on Education for Family Practice*, Council on Medical Education (Chicago: AMA, 1966), pp. 5-6.

36 William Willard, it should be noted, was the Dean of the medical school at the University of Kentucky, where Fulmer had recently worked, as well as a consultant to Lamar Soutter and the UMass Board, as described in Chapter 3.

37 Brown, "Primary Care and Prevention," pp. 275-276. Also see Theodore M. Brown, "American Medicine and Primary Care: The Last Half-Century," in Stephen J. Kunitz, ed., *The Training of Primary Physicians* (Lanham, MD: University Press of America, 1986), pp. 1-58, esp. pp. 2, 5-7, 16.

38 The reports were *The Graduate Education of Physicians*, quotations pp. 37, 39, 44; and, W. R. Willard, "Meeting the Challenge of Family Practice," Report of the Ad Hoc Committee on Education for Family Practice, Council on Medical Education (Chicago: AMA, 1966), pp. 5-6, 7, 11-12.

39 G. Gayle Stephens, M.D., Oral History Interview, interviewed by Heather-Lyn Haley, June 24, 2006, Worcester, MA. Cf. Stephens, *The Intellectual Basis of Family Practice* (Tucson, AZ: Winter Publishing Co., 1982). The ABFP changed its name to the American Board of Family Medicine in 2005.

40 Brown, "American Medicine and Primary Care," pp. 22, 26-27; David P. Adams, *American Board of Family Practice: A History* (Lexington, KY: American Board of Family Practice, 1999), esp. pp. 17-21.

41 Stephens, *The Intellectual Basis of Family Practice,* pp. x, xi.

42 John P. Geyman, *Family Practice: Foundation of Changing Health Care* (New York: Appleton-Century-Crofts, 1980), pp. 7-10, quotation p. 7. George Weisz, *Divide and Conquer: A Comparative History of Medical Specialization*

(NY: Oxford University Press, 2006), pp. 139-144; American Board of Medical specialties, website accessed at http://www.abms.org/About_ABMS/ABMS_History/Extended_History/Advisory_Board.aspx on May 11, 2011.

43 Weisz, p. 249; Adams, *American Board of Family Practice*, pp. 4-9, 17-18; Rosemary Stevens, *American Medicine and the Public Interest*, pp. 362-366, 405-408; Willard, "Meeting the Challenge," p. 4. These numbers were based on the AMA's "annual directory cards." Cf. Robert Roy, M.D., Steven Bourgault, Anthony Cetrone, with Robert P. Lawton, Consultant, *The Citizens of Massachusetts Need – Family Physician Manpower Survey* (Boston: Massachusetts Academy of Family Physicians [1975]), n.p. Box 1, fol. "Information Regarding Residency Program," UMMS Department of Family Medicine and Community Health Papers [hereafter FMCH], UM/W.

44 See Tobbell, "Plow, Town, and Gown," pp. 648-680, for a careful discussion of the role of rural GPs in some states preparing the ground for support of family practice by state legislators.

45 Weisz, *Divide and Conquer*, p. 248.

46 Stephens, "Developmental Assessment of Family Practice," pp. 1-4.

47 The first quotation is drawn from the definitions of family practice and family medicine held in common by the American Academy of Family Practice and the American Board of Family Practice.

48 Geyman, *Family Practice*, pp. 19-20.

49 Collin Baker, "What's Different about Family Medicine?" *J. Med. Ed.*, 1974, *49*:3, pp. 229-235, quotation p. 233, as cited in Brown, "American Medicine and Primary Care," pp. 42-43, in Kunitz (n. 37 above).

50 Stephens, *The Intellectual Basis of Family Practice*, p. 8. Chapter 1, from which the book's title was taken, was originally published in the *Journal of Family Practice*, 1975, as well as being presented at a meeting of the AMA Section on Family Practice that same year.

51 Lynn P. Carmichael, "A Program of Instruction in Family Medicine," *Journal of Medical Education*, 1965, *40*, part 1: 370-374.

52 Adams, *American Board of Family Practice*, pp. 33-34.

53 In Massachusetts, however, unlike Minnesota and other states with a heavier representation of rural legislative districts, the influence of the GP faded in comparison to the clout wielded by the concentration of specialists in the legislatively influential districts in and around Boston. Cf. Tobbell, "Plow, Town, and Gown," pp. 650-651; Adams, *American Board of Family Practice*, p. 27. Other early programs were begun at Kentucky, Oklahoma City, and Miami. Cf. Stephens, *The Intellectual Basis of Family Practice*, ix-x. See Carmichael, "A Program of Instruction in Family Medicine"; Brown, "Family Medicine at the University of Rochester," in Kunitz, pp. 119-120. Willard, cited earlier as the author of the 1966 "Willard Report," also wrote "A Summary of Considerations Leading to the Establishment of the University of Kentucky Medical School and a Preliminary Statement of its Objectives, rev. 9/29/1956," a copy of which was found in the papers of the President of the University of Massachusetts at the time of the debate over founding a similar school in Massachusetts. See Box 43, fol. 532, "Medical School – pre-1960," Lederle/UMA.

54 Adams, *American Board of Family Practice*, pp. 33-41, quotation on p. 35.

55 Barbara J. Culliton, "Health Manpower Act: Aid but not Comfort for Medical Schools," *Science*, 1976, *194*: 4266 (Nov. 12), pp. 700-704; Stephens, *The Intellectual Basis of Family Practice*, p. 17; Adams, *The American Board of Family Practice*, pp. 59, 62, 97-111.

56 Boston University and Tufts medical schools established family medicine residencies in 1997 and 1999, respectively. (Here I am only discussing medical school-based programs.) Accessed at https://web.archive.org/web/20150813182845/http://www.bu.edu/familymed/residency/ and https://web.archive.org/web/20150813183140/http://site.challiance-cms.org/Academics/FamilyMedicineResidencyOverview.aspx/overview/program_history.shtml on Feb. 21, 2008.

57 "Physician Supply and Demand: Memo from Robert Wood to Dean Soutter," Oct. 31, 1973, in Box 21, fol. 11, "Planning, 1971-1977," HBW/UMMS. Robert H. Kroepsch, "A Report of the New England Regional Medical-Dental Education Plan, 1956-1959," New England Board of Higher Education, Winchester, MA [1959], in Box 43, fol. 532, "Medical School, pre-1960," Lederle, UM/A. Also Cf. Adams, *The American Board of Family Practice*, p. 54.

58 They relied on the AMA *Distribution of Physicians in the United States-1973*. They found that MA has more total physicians per 100,000 people than the rest of the U.S. (1790 vs. 145), for primary care, it has fewer: 59 vs. 64 per 100,000. Robert Roy et al, *The Citizens of Massachusetts Need –Family Physician Manpower Survey* (n. 43 above).

59 Brown, J.W., Robertson, L.S., Kosa, J., Alpert, J.J., "A Study of General Practice in Massachusetts," *JAMA*, 1971, 216 (April 12), 301-306.

60 Robert Babineau, Sr., M.D., Oral History Interview, interviewed by Heather-Lyn Haley, Aug. 7, 2007, Brewster, MA.

61 Roger J. Bulger, "The Medical Center: University of Massachusetts," pp. 125-146, quotation p. 133, in *New Medical Schools at Home and Abroad*, 1978. Andrew D. Hunt, "A Time of Change and Reform in Medical Education," pp. 1-13, in Andrew D. Hunt and Lewis E. Weeks, *Medical Education Since 1960: Marching to a Different Drummer*, (Michigan State University Press, 1979).

62 Lamar Soutter, "Some Aims of a New Medical School," *Clinical Research*, 1966, *14*:1, pp. 3-6, quotation p. 5, in Box 13, fol. 3, "HBW, UMMS, Report to Trustees, 6/1966," Wheeler/UMMS; Doc. T73-079, Lamar Soutter et al, "Development of the Worcester Campus of the University of Massachusetts: A Committee Report," 1972, pp. 4, 122-147, Box, "Board of Trustees Documents FY 1973 T001-094," fol. "Trustee Documents T73-079" Trustees, UM/A. Cf. Fulmer, "Plans for the Teaching of Community Medicine" (n. 25 above).

63 [Robert Wood], "Memorandum for Speaker David M. Bartley," Aug. 19, 1973, p. 3, Box "Robert C. Wood, Series 5: Worcester, Box 36, f. 431-437," fol. "Chancellor/Dean, 1971-1973," Wood, UM/A.

64 Of course, the first class contained only 16 students. In actuality, only 4 of the 16, or 25%, ended up as primary care doctors. Cf. Personal Communication, Kendra Vandervalk, Office of Alumni and Parent Relations, UMass Medical School, May 23, 2014; Liaison Committee on Medical Education, "Summary and Recommendations to the School," [Doc. T73-072], pp. 17-19, Box "Board of Trustees Documents FY 1973, T001-094," fol. "Trustee Documents, T73-068-078;" "Minutes, Faculty and Educational Policy Committee," Jan. 20, 1971, Box "Board of Trustees Minutes of Meetings of Full Board and Committees Jan.-April, 1971," fol. "Board of Trustees Committee on Faculty and Educational Policy, Jan. 20, 1971;" "[Handwritten, unofficial notes], Executive Committee, Nov. 21,

1972," Box, "Board of Trustees Minutes, Oct.-Dec., 1972," fol. "Board of Trustees Executive Committee, November 1972;" Robert Wood, "New Realities and New Directions: The University of Massachusetts, 1973," p. 6, Box, "Board of Trustees Minutes of Full Board and Committees Jan.-April, 1973," fol. "Board of Trustees General Meeting, January 1973;" "Minutes," Board of Trustees, Dec. 5, 1973, pp. 7-8, Box, "Board of Trustees Minutes of Full Board and Committees," May-Dec., 1973, fol. "Board of Trustees, December 1973;" "Memorandum of Presentations Made at Informal Meeting of the Board of Trustees, UM/Worcester, Jan. 8, 1974," p. 12, Box "Board of Trustees Minutes of Full Board and Committees, A-Executive, 1974," fol. "General Meeting, Jan.-Aug. 1974," Trustees, UM/A.

65 The Comprehensive Health Manpower Training Act of 1971 (P.L.92-157) provided funding for training programs in primary care, including family medicine, and Walton was able to apply for such funding.

66 Arthur Pappas, M.D., chair of the Department of Orthopedics, for example, was a crucial behind-the-scenes supporter of the Department; he generously shared a faculty line with Family Medicine, not to mention (it was widely rumored), his excellent connections to members of the statehouse. See "Memorandum of Presentations Made at Informal Meeting of the Board of Trustees, UM/Worcester, Jan. 8, 1974," p. 3. On the departmental name change, see "Doc. T74-040, Hugh Fulmer, Memorandum to Dean Soutter re Change in Departmental Title to Community and Family Medicine," Oct. 17, 1973, Box "Trustees Documents FY 1974, #001-077," fol. "Trustee Docs. T74-0360-042," Trustees, UM/A. Jon A, Towne, "Medical School Here Encourages Students to Enter Family Practice," *Worcester Telegram*, March 18, 1973, n.p., PA, UM/A.

67 Richard Walton, "Appendix C, Objectives of University of Massachusetts Medical School Department of Family Practice, University of Massachusetts Medical School/Worcester City Hospital Family Practice Residency Program," [1975], in "Memorandum of Presentations Made at Informal Meeting of the Board of Trustees, UM/Worcester, Jan. 8, 1974," see n. 64 above. Cf. Zimmie Horowitz to Jerry Coley, "Memo: Historical Background – Worcester and Fitchburg Family Practice Residency Programs,", Jan. 12, 1981, both in Box 1, fol. "Information Regarding Residency Program," FMCH/UMMS. The information was compiled by Janet Albrecht, administrative director of the residency, and Zimmie Horowitz, of the Department of Family and Community Medicine.

68 Daniel Lasser, Oral History Interview transcript, pp. 14-15, interviewed by Ellen More, Sept. 1, 2007, Worcester, MA, Oral History Collection, UM/W.

69 The years indicate the start of the residency programs at each site. In the case of the FHSSC of Worcester, the Center opened in 1971 as a Model Cities Neighborhood Health and Social Services Center. In 1974, when UMass and Worcester City Hospital agreed to house the Family Medicine residency at WCH, the family medicine practices in Barre and the Model Cities Worcester site became the first two sites of the residents' ambulatory training program. "License of Health Center to be Boston Hearing Topic," *Worcester Sunday Telegram*, Sept. 30, 1973; Jon A. Towne, "Hospital, Med School to Join in training of Practitioners," *Worcester Telegram*, Jan. 7, 1974, both in PA, UM/W. Cf. Zimmie Horowitz to Jerry Coley, "Memo: Historical Background – Worcester and Fitchburg Family Practice Residency Programs."

70 Carolyn Cotsonas, J.D., Oral History Interview transcript, interviewed by Ellen More, June 24, 2006, Worcester, MA, Oral History Collection, UM/W.

71 Richard Walton, Oral History Interview transcript, Part 1, pp. 7, 19 (n. 32 above).

72 Stephen Earls, Oral History Interview transcript, interviewed by Heather-Lyn Haley, Aug. 21, 2006, Barre, MA, Oral History Collection, UM/W.

73 Richard Walton, "Objectives of University of Massachusetts Medical School Department of Family Practice, n.p. (n. 67 above).

74 Alexander Blount, Silvia DeGirolamo, and Kathy Mariani, "Training the Collaborative Care Practitioners of the Future," *Families, Systems & Health*, 2006, *24*, pp. 111-119; Ellen More, "Empathy as a Hermeneutic Practice," *Theoretical Medicine*, 1996, *17* (Fall), pp. 243-254; Roger Bibace, "Groups Facilitate Self-Reflective Practice," *Family Medicine,* 2004, *36*:4; pp. 297-299. In the early days of the Worcester program, Balint work became a feature of residency recruitment, according to several interviewees. Cf. Oral History interviews with John Frey, M. D., Richard Walton, M. D., and Lucy Candib, M.D., Oral History Collection, UM/W.

75 Lucy Candib, M.D., for example, who entered the program as a second-year resident in 1974 and was hired as a member of the faculty in 1976, wanted to qualify in obstetrics sufficiently to gain privileges at Memorial Hospital. The only thing for her to do was to take an extra four months' work out in western Massachusetts at Berkshire Medical Center. Stephen Earls, Oral History

Interview, Oral History Collection, UM/W.

76 Dennis Dimitri, Oral History Interview transcript, interviewed by Heather-Lyn Haley, n.d. but c. 2007, Worcester, MA, Oral History Collection, UM/W.

77 Kenneth Fabert, Oral History Interview, interviewed by Heather-Lyn Haley, June 24, 2006, Worcester, MA. Dr. Fabert was located at the Family Health and Social Services Center in Worcester.

78 Videotaped interview recorded by Dr. and Mrs. Richard Walton, June 2006, FMCH/UMMS.

79 Robert Singer, Oral History Interview, interviewed by Ellen More, June 24, 2006, Worcester, MA; James E. Dalen, *University Hospitals: Doctors and Patients* (San Diego: Aventine Press, 2009), p. 132.

80 See Birn and Brown, *Comrades in Health*, passim; H. Jack Geiger, "Contesting Racism," in Birn and Brown, n. 14 above; Fitzhugh Mullan, *White Coat, Clenched Fist: The Political Education of an American Physician* (New York, Macmillan, 1976); Naomi Rogers, "'Caution: The AMA May be Dangerous to Your Health'": The Student Health Organizations (SHO) and American Medicine, 1965-1970," *Radical History Review*, 2001, *80*:5-34; Leroy and Lee, *Deliberations and Compromise*, pp. 255-256. Also see Stephens, *The Intellectual Basis of Family Practice*, p. 99; John P. Geyman, *Family Practice*, pp. 6-7, 14 (n. 42 above); Lefkowitz, *Community Health Centers* (n. 17 above).

81 Geiger, *Contesting Racism*, p. 103. For a fuller account of the family medicine residency sites and the job action at WCH, see Ellen S. More (text), Heather-Lyn Haley, and Robert VanderHart, "The People's Medicine Comes to Massachusetts," https://web.archive.org/web/20150813183812/http://library.umassmed.edu/omha/fmch/index.cfm .

82 Dennis Dimitri, Oral History Interview transcript, p. 34.

83 Lucy Candib, Oral History Interview, interviewed by Ellen More, Jan. 16, 2007, Worcester, MA, Oral History Collection, UM/W. Cf. Lucy Candib, "Women, Medicine, and Capitalism," in *Our Bodies Our Selves: A Course by and for Women*, ed. The Boston Women's Health Course Collective (2nd printing, Boston: New England Free Press, 1971), pp. 134-136; and Mary Rollston Stern and Norma Meras Swenson, based on work by Barbara Bridgman Perkins, Lucy Candib, and

Nancy Todd, "Women and Health Care: The American Health Care System," in The Boston Women's Health Book Collective, *Our Bodies, Our Selves: A Book by and for Women* (1971; New York: Simon and Schuster, 1973), pp. 337-344. Cf. G. Gayle Stephens, "Family Medicine as Counterculture," *Family Medicine*, 1989, *21*:2, pp. 103-109.

84 Dennis Dimitri, Oral History Interview transcript, p. 6.

85 On the development of the Family Medicine residency sites at the Family Health and Social Service Center, Barre Family Health Center, and Hahnemann Family Health Center, see "The People's Medicine Comes to Massachusetts: The Family Medicine Residency at UMass Medical School, 1974-1986," (n. 81 above). For Walton's departure, see Board of Trustees, "Minutes," Oct. 6, 1976, Box "Board of Trustees Minutes of Meetings of Full Board, June-Dec., 1976," fol. "Board of Trustees General Meeting Oct.-Dec., 1976," Trustees, UM/W.

86 Stephen Earls, Oral History Interview (n. 72 above).

87 Dr. Quirk's program is described in Chapter 7.

88 Adams, *American Board of Family Practice*, p. 116 (n. 40 above). Alice Sardell, *The U.S. Experiment in Social Medicine: The Community Health Center Program*, 1965-1986 (Pittsburgh: University of Pittsburgh Press, 1988), p. 89; Zimmie Horowitz to Jerry Coley, "Memo: Historical Background.," Jan. 12, 1981 (n. 67 above).

89 "Dick Walton was an awfully nice guy, but he was...gung-ho." Hugh Fulmer, on the other hand, was "laid back...And, of course, he was head of the department." Muriel Sawyer Harrington, Oral History Interview transcript, interviewed by Ellen More, Aug. 31, 2011, Worcester, MA, p. 23. Before she married and retired from UMass, Mrs. Harrington was Dr. Soutter's first employee at the school, his only executive secretary throughout his time there.

90 Hugh Fulmer, personal communication (telephone), July 16, 2009.

91 Dan Doyle, M.D., Oral History Interview transcript, interviewed by Ellen More, June 24, 2006, Worcester, MA. The term "biopsychosocial," when used in reference to primary care, is most often associated with the work of George Engel, M.D., especially in George L. Engel, "The need for a new medical model: a challenge for biomedicine," *Science*, 1977, *196*:129–136.

92 Dennis Dimitri, Oral History Interview. G. Gayle Stephens, "Family practice: The renaissance is over," *Journal of the Royal College of General Practitioners*, 1981, *31*, pp. 460-466; quotation, p. 464. John Berger, with photographs by Jean Mohr, *A Fortunate Man: The Story of a Country Doctor* (1967; New York: Vintage, 1995), was mentioned to me as a key source for the identity formation of the specialty of family medicine by numerous family practitioners as well as in print by Gayle Stephens. Other "classics" of the early literature on family practice not previously mentioned include, among others, Ian Renwick McWhinney, "Beyond Diagnosis: An approach to the Integration of Behavioral Science and Clinical Medicine," *New England Journal of Medicine*, 1972, *287*:384-387; J. Tudor Hart, "The Marriage of Primary Care and Epidemiology," *Journal of the Royal College of Physicians London*, 1974:299-308; I. R. McWhinney, "The Naturalist Tradition in General Practice," *The Journal of Family Practice*, 1977, *5*:375-378.

93 Hugh Fulmer, Oral History Interview transcript, p. 28, interviewed by Ellen More (by telephone), July 30, 2009, Worcester, MA, Oral History Collection, UM/W.

94 Lamar Soutter, [Memo]: "U. of Mass. 1975 Budget for the Medical School," Feb. 19, 1974, Box, "Robert C. Wood, Series 5: Worcester, Box 36, f. 431-437," fol. "Worcester, Chancellor/Dean, 1974," Wood, UM/A.

95 In October 1974, the Board of Governors of the Massachusetts Academy of Family Practice surveyed physicians across the state to see "if there exists a deficit of primary care physicians, and if so, what the deficit is, and where it exists in the Commonwealth." The inventory, as of December 31, 1973, found 4240 primary care physicians, including 595 in primary care residencies (out of 2312 medical residents in all in Massachusetts) in active practice in Massachusetts, of whom 1124 were family physicians. But, one-third of the latter were over 60 years of age. Based on these criteria, there existed "a shortage of 1564 Family Physicians in Massachusetts...most prominent in Essex, Middlesex, and Worcester Counties." The ratio in Worcester County was 19.7 per 100,000. Relying on the AMA *Distribution of Physicians in the United States-1973*, they found that Massachusetts had more total physicians per 100,000 people than the rest of the U.S. (170 vs. 145), but for primary care, it had fewer: 59 vs. 64 per 100,000. Roy et al, *The Citizens of Massachusetts Need – Family Physician Manpower Survey* (1975), see n. 43 above.

96 Publicly, Dr. Soutter put the onus on the accreditation report for his decision to split the department. Doc. T75-009, Lamar Soutter to Robert Wood, July 3, 1974, Box "Board of Trustees Documents, FY 1975, #001-073," fol. "Trustees Docs. T75-001-025;" Board of Trustees, Minutes," Aug. 7, 1974, Box, "Board of Trustees Minutes of Full Board and Committees, A-Executive, 1974," Trustees, UM/A. Cf. Oral History interview with Hugh Fulmer, M.D., p. 28; Richard Walton, Oral History Interview transcript, Part 1, p. 11.

97 Richard Walton, Oral History Interview transcript, Part 2, p. 8.; Daniel Lasser, M.D., Oral History Interview transcript, Part 1, p. 16, interviewed by Ellen More, Sept. 1, 2006, Worcester, MA, Oral History Collection, UM/W.

98 For the rewriting of the medical school's Goals, see Chapter 5.

99 Roger Bulger, "The Medical Center: University of Massachusetts," pp. 125-146, esp. p. 131 (n. 52 above); Richard Walton, Oral History Interview transcript, Part 2, pp.7-9; Zimmie Horowitz to Jerry Coley, "Memo: Historical Background.," p. 2.

Chapter 7
Primary Care Education Hits its Stride

From UMass Medical School's current vantage as an institution nationally ranked among the top 10% of U.S. medical schools for primary care education since 1995 – at times ranking third or fourth – it may be difficult to believe how long it took UMass to focus on primary care.[1] In contrast to some state medical schools, especially those with rural constituencies such as Minnesota or North Carolina, or even a few private schools such as Case Western or Rochester, it required more than a decade for primary care to fully take hold in the undergraduate medical curriculum.[2] Family medicine, as was noted earlier, endured many battles before winning its place at the table. But family practice neither was, nor is, the only primary care discipline to which medical students might be drawn. The UMass departments of Medicine and Pediatrics are an important part of this story. They, however, did not actively promote primary care residency education, outpatient services, or even primary care undergraduate medical education until the mid-1980s.[3] This chapter will describe the gradual process by which primary care came into its own at UMMC.

Eventually, the intensifying call on both the state and national level for more ambulatory care could not be ignored.[4] On the state level, in 1984 the UMass Board of Trustees approved the medical school's first iteration of the "Learning Contract," whereby two-thirds of a student's tuition would be forgiven if she or he committed to practicing in Massachusetts for a year following residency; often this entailed practicing in a medically underserved region – by definition a location lacking primary care doctors. Further, as noted in Chapter 5, University Hospital devoted itself during the late 1980s and 1990s to the cultivation of ambulatory care clinics for specialty and generalist medicine both to generate inpatient referrals and as a fiscally desirable end in itself. Finally, as also noted earlier, the rise of various mechanisms to contain national health care costs all had in common a faith in the role of the primary physician as a "gatekeeper" controlling access to more expensive, specialized care. In

response to all these trends, the period between the mid-1980s and the mid-1990s witnessed the creation of new, cross-disciplinary approaches to promote primary care among students and residents at UMass Medical Center. By then, family practice was merely one of several departments with strong primary care interests.[5]

An important first step occurred when Community Medicine and Family Medicine reunited as a single department. Parallel initiatives developed by the departments of Medicine and Pediatrics ultimately converged with programs from the unified department of Family and Community Medicine. Their shared enterprise of faculty development and curriculum reform was further spurred by the university's winning a total of eight years of funding from the Generalist Physician Initiative of the Robert Wood Johnson Foundation from 1992 to 2000. The 1990s thus were years where the medical school generated a coherent culture of primary care education, a cultural inflection that is now accepted as part of the school's core identity. Indeed, given the national recognition UMass has received for its primary care education programs for the past two decades, few UMass Med faculty members today realize that this was not the case from the outset. The institutionalization and growth of primary care at UMass reflects nothing so much as its evolution beyond the fears of its founding generation that it not become "trapped" in the mold of a "community" medical school. After the school's first two decades, faculty and administrators could feel reasonably confident that UMMS could successfully incubate both primary care and research. Moreover, they had little choice.

Reuniting Family Medicine and Community Medicine

Although the school's 1975 "Statement of Goals" mentioned "primary care" internal medicine and "primary care" pediatrics, as well as family practice, the former two were at best in a formative state the late 1970s. In reality, the principal exemplars of primary care were the family practitioners out in the community. Within the school, primary care had not fully matured. For the

moment, the bifurcation of Community Medicine and Family Medicine into separate departments presented an embarrassing reminder of the distance between goals on paper and their actualization. True, the family practice residency had begun to flourish. By the end of June 1976, the program graduated its first four family practitioners and was on track to graduate eight more in 1977, by which time three ambulatory care sites were operating as residency training centers.[6] Over the next five years, however, even as the residency sites developed and the numbers of family practice graduates grew proportionately, the unfinished business of integrating primary care into the Medical School's hierarchy faltered.

Richard Walton had resigned as department chair for health reasons and soon moved to a new position as director of the University of North Carolina Medical School's Area Health Education Center (AHEC) based in Asheville. Soon after, residency director John Frey also decided to leave UMass for the University of Wisconsin.[7] A sense that the department was "going through a lot of leadership transitions [and] turmoil..." in the words of one former resident, was hard to ignore. In 1979 Dr. Daniel Lasser, a family physician from the National Health Service Corps previously stationed in western Massachusetts, succeeded Dr. Frey as the residency director, which may have assuaged the residents' unease. But the status of family medicine as an academic discipline at UMass did not soon recover from the turmoil.

With the Family Medicine department focusing on the residency and patient care, on the one hand, and Community and Family Medicine concentrating on research and undergraduate teaching, on the other, a message was conveyed that family medicine was not really ready for prime time as an academic field. In Chancellor Roger Bulger's words, "The split has been confusing to students, faculty and outsiders, uneconomical, divisive, and generally counterproductive. The divisions and bad feelings separating the two groups were sufficiently deep so as to prevent reunification until recently." Not until Dr. Fulmer proposed stepping down as chair of Community and Family Medicine was it possible to unite the two departments under a single chair.[8] In

the spring of 1977, this was accomplished. The Board of Trustees was asked to agree to a new structure for the departments under the name of "Family and Community Medicine," with the family practice residency as an integral part. This realignment reflected the rising profile of the specialty of family practice in Central Massachusetts and on Beacon Hill. Dr. Robin Catlin, a British-born family practitioner who had been first hired by Dr. Walton but had developed a reputation as a researcher, was named the new department's chair with the responsibility of unifying it in practice as well as in name. One change with major significance for the school's future identity as a place for both primary care education and basic sciences research was the development of a new undergraduate course, "An Introduction to Patient Care," reintroducing the principles of primary care – especially family practice – into the curriculum in the first two years of medical school. A community medicine residency was also planned to begin in July 1977. Still, as Catlin wrote in a memo to Dr. Bulger, "One of the goals of restructuring is to provide family physicians as role models for undergraduate [medical students]." That goal took much longer to accomplish.[9]

The program took more than a decade to flourish within the school. Some faculty and former residents remember that, from their outposts at the various community health centers in central Massachusetts, they viewed the Medical Center as a *Star Wars*-like "Evil Empire" or, in a reference to the dark gray granite on the original facade, as the "Death Star."[10] Adding to Dr. Catlin's difficulties, although legislative support for primary care continued strong, support for the school was always subject to legislative second thoughts. Thus, when a nearly million-dollar budget cut was threatened by the Governor's office in 1981, the Medical School's Chancellor, Robert Tranquada, M.D., who succeeded Dr. Bulger in 1979, dared to hold the family practice residency hostage unless his budget was restored. Putting on his best poker face, he told the Worcester legislative delegation that without those funds, "The family practice residency will have to be closed as soon after July 1, 1981 as possible [eliminating] all 48 residents in the only accredited Family Practice program in Massachusetts." Adding substance to the threat, the residency program could demonstrate that, of 38

family practice graduates, 23 (more than 60%) chose to remain in Massachusetts after completing the program. Behind "closed doors," Tranquada told the faculty, "I'm doing that because if I identified it as your money, maybe they won't cut it."[11]

Given the department's shaky history at the School, the residents didn't share Dr. Tranquada's confidence. Here is how one of the residents remembered the showdown:

> When I was a third year resident...there was a typical legislative battle going on about the budgetary constraints, and I guess the legislators were making some noise about what they were going to do with whatever portion of the medical school budget they used to contribute in those days, and... our impression was that [the Chancellor] was using us, the Family Medicine residents, as a pawn in his financial battle, because he said [to the Legislature], 'Well, if you do that, the first thing I'm going to do is I'm going to have to eliminate the family practice residency.'
>
> So as you might imagine, we were all pretty distraught and upset about that, so in my role as the [co-]chief resident I was charged by my fellow residents...to meet with Dr. Tranquada...to present to him sort of this manifesto from the Family Medicine residents, displaying our displeasure with being used and tossed around in this battle, and I just remember making an appointment, having to go there, and waiting in this big office, and feeling like a little pipsqueak sitting there, and in the end having this very pleasant talk with Dr. Tranquada and sort of being reassured that everything would be OK and that the Family Medicine residency was really very important to the school and that they'd never do anything to jeopardize it . . .[12]

The Chancellor's tactic worked. By the end of July, the Legislature overrode Governor King's budget reductions for higher education, including the appropriation for the family practice residency. That the medical school's chancellor could feel reasonably confident his tactic would succeed eloquently attests to the esteem in which family practice was held in Massachusetts. The standoff of 1980-1981 was the last occasion when the school's support for the residency seemed in doubt. For one thing, all the hospitals with which the residency sites were then affiliated – City, Holden, Hahnemann, and Memorial –

either closed, as in the case of Worcester City Hospital, or merged with Memorial, as was the case with University Hospital. Many family practice residents' patients were referred back to the Medical School's affiliated hospitals, thereby reinforcing the value of the residency to generate patient referrals. Second, many family practice program graduates remained in Central Massachusetts after their residencies. Indeed, research into the demographics of the first 30 years of the residency has shown that about 50% of program graduates chose to remain in the state – as the school's founders had hoped – while another 16% remained in New England. Over a period of about 15 years, a residency that began as a community-based initiative became more tightly knit within the UMass hospital system.[13]

Ironically, however, the Department was not fulfilling its mandate to promote family practice among the school's own students. After Dr. Catlin's departure from UMass, Dr. Lynn Eckhert, M.D., M.P.H., a pediatrician, became first the acting chair in 1982 and then the permanent chair of the department from 1984 to 1998. As she approached her new role, she considered the overall situation in which the department found itself. Again, as mentioned above, the department's success in recruiting UMass students to family practice residencies, compared with graduating classes' interest in other primary care specialties, had stayed low, possibly a result of the Department of Family Medicine being "exiled" from the undergraduate medical school curriculum by Dr. Soutter in 1974. In 1979, for example, only 7% of graduates, or about seven students, entered family practice residencies; for the next few years, the trend was downward.[14] Clearly, relegating undergraduate family medicine courses to community medicine faculty was increasingly detrimental to the reputation of family practice as a career choice among medical students. Even

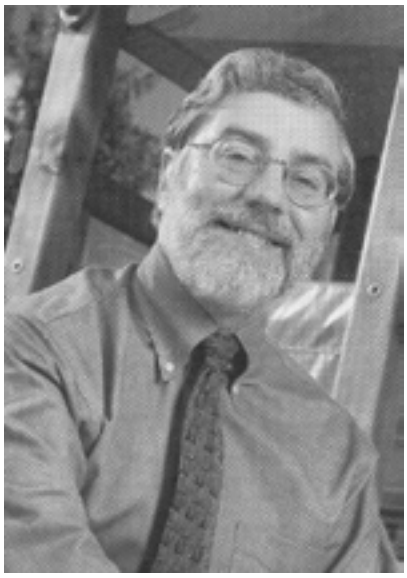
Lynn Eckhert, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

after the reunification of the two departments, students were sometimes actively discouraged from choosing family practice for their residencies. Dr. Eckhert, was dismayed to find that only 3% of UMass Med graduates chose to specialize in family practice after graduation. A graduate of the school from the class of 1989 remembered specifically hearing that he was "too smart" to go into the field. One year, the annual medical student show depicted the department as an outhouse. And, since the Departments of Medicine and Pediatrics had begun developing their own generalist tracks, the family practice residency now had to compete with these specialties to attract UMass students into primary care.[15] Something had to be done within the walls of the school to bring the same enthusiasm from UMass students for family medicine as was being generated for the other primary care specialties by the late 1980s.[16]

That became Dr. Eckhert's first goal. During the 1990s, when the AAMC's medical workforce goals aimed to send 50% of medical graduates into primary care, she noted that "Family Medicine had decided that half of those people would be in family medicine." The department, in other words, had set a goal of 25% of UMass Med graduates entering family medicine residencies. By the late 1990s, family medicine residencies were attracting more students, partly because of overall changes across the curriculum and partly, according to Eckhert, because of the department's success in achieving grant funding to develop primary care teaching from the first year of the student's work. "We started this longitudinal clerkship," Dr. Eckhert recalled, "which was eventually taken over by the medical school, and now it's done in Family Medicine, Ped[iatrics] and... Medicine." One of the original Family Medicine preceptors for the program, Dr. Michele Pugnaire, eventually became Senior Associate Dean for Educational Affairs.[17]

In research, the Department was beginning to hold its own. It had always been hoped, as Dr. Lasser put it, that "if you got the people with academic backgrounds and they sat next to the people who were the clinicians, somehow this *mind-meld* would take place..." That is not what happened. By the end of its first decade, the department had incorporated, along with family practice

physicians, researchers in community medicine (some of whom were originally hired by Hugh Fulmer) and a group specializing in the behavioral sciences. These groups, particularly in concert with a preventive medicine residency, an occupational health residency, and a Master's of Public Health program run through UMass-Amherst, developed their own lines of research in areas such as smoking prevention targeted at children and adolescents, the effects of second hand smoke, problems of the homeless, effective behavioral health interventions suited to primary care settings, and so forth.[18] One outstanding, core member of the department's preventive medicine faculty was Alfred Yankauer, M.D., M.P.H. (1913-2004). Yankauer joined the department in 1973 as a full professor, having already worked for the New York City and the Rochester, New York departments of public health, the New York State Department of Maternal and Child Health (as Director), the World Health Organization in Madras, India, and the Pan American Health Organization. He came to UMass from a position as senior researcher at the Harvard School of Public Health. His work steadily addressed the issues of health inequities, especially those resulting from racial segregation and other forms of discrimination. Two years after coming to UMass Medical School, he began a 15-year stint as the editor of the *American Journal of Public Health*. At his retirement from the editorship he was awarded the APHA's Award of Excellence, one of many such awards he received over the course of a productive career (at his retirement from UMass, he had published 209 articles).[19]



Joseph DiFranza, M.D. studied the ease with which children and teens could purchase tobacco products. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

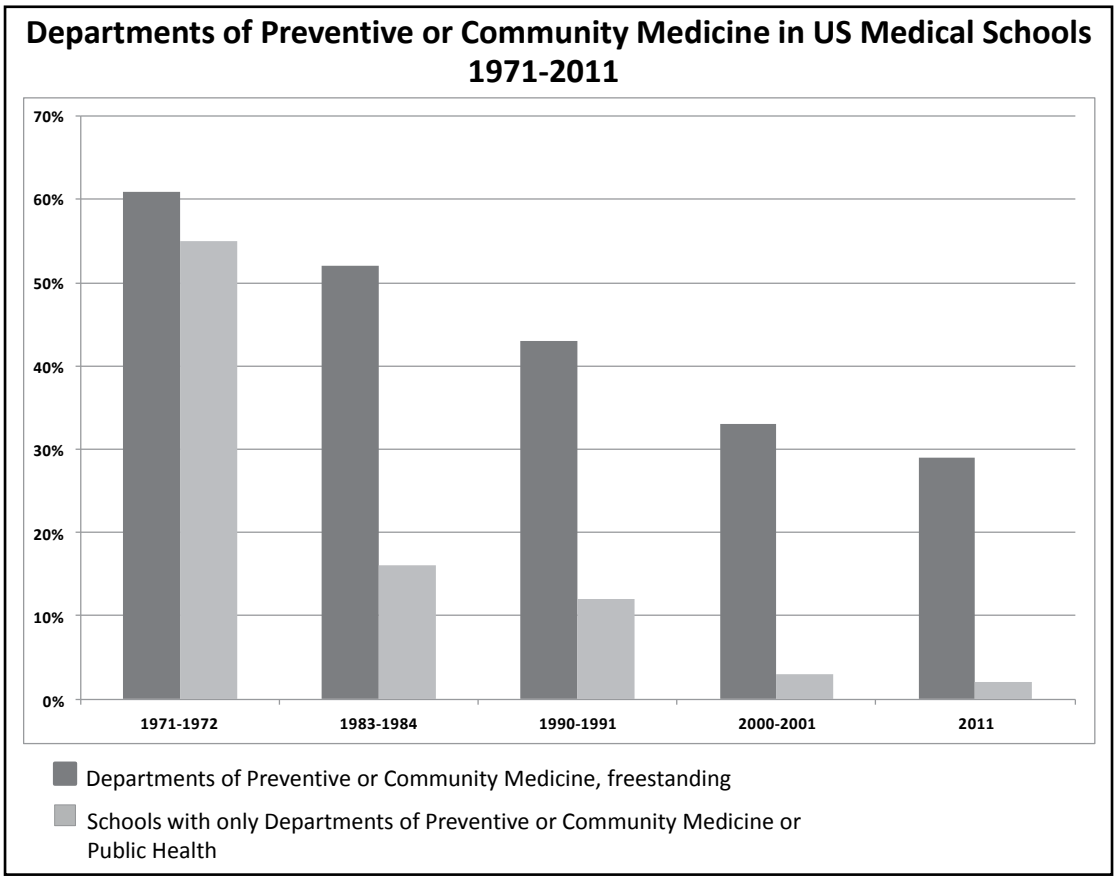
By the time Dr. Lasser succeeded Dr. Eckhert as chair in 1998, the department had achieved sufficient visibility and acceptance to sustain a thoroughgoing restructuring, the product of a department-wide strategic

planning retreat in 1998.[20] The results were far reaching. Foremost, the department tackled the longstanding disconnection between the disciplines of family practice and community health. In Dan Lasser's words,

> The connection between family practice and community health was broken. And it had always been broken – broken in the sense that, while people were coexisting in the same department, on the same floor, there wasn't a lot of interaction that was taking place. And then from the student's point of view, there was very little understanding of the difference between family practice and community health.[21]

Daniel Lasser, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

This reflected a national trend. In the U.S., departments of community or preventive medicine, which were represented in nearly two-thirds of all accredited medical schools in 1970, declined steadily as freestanding departments as reflected in both numbers of FTEs and overall spending from the mid 1970s to the present. Departments of family medicine, encouraged by federal project grants and capitation payments, proliferated. By 2011 community or preventive medicine departments existed as freestanding departments in fewer than one-third of accredited medical schools.[22] In the majority of cases, they were subsumed under departments of family medicine (see table below).[23]



As a direct result of its restructuring at UMass in 1998, the department changed its name. Now known as the Department of Family Medicine and Community Health (FMCH), it encompassed multiple disciplines as distinct but full-fledged partners. Divisions were established in which, despite their individual identities as Clinical Services (family practice), Community Health, Research, and Education, one common theme linked them all to a central departmental identity: a focus on caring for vulnerable or underserved populations. After all, again quoting Lasser, "…family medicine and community health are complementary disciplines. They're both based out in the community. But family medicine really focuses on individuals and families, although most of the time on individuals…And community health [has] a different set of issues." To better reinforce the linkages among them, Lasser decided that every division head should have had previous experience working in the Public Health Service, the Indian Health Service, the National Health Service Corps, or in community health centers – in short, should have had experience with medically underserved

populations.

Interestingly, this emphasis also made possible increased support for COPC-like initiatives. As a group of FMCH researchers from UMMS wrote in 2009, "With the specialty's founders feeling strongly that family physicians should be the doctors for their communities, the specialty of family medicine has committed to instruction in numerous community-related skills meant to complement clinical training." Over time, the UMass residency has increased its explicit coverage of community-involvement skill instruction for residents.[24] In these ways, the department acknowledges the original vision of both Hugh Fulmer and Dick Walton, one in which clinical practice responds to the needs of individuals and families within communities.[25]

In from the Margins: Primary Care in Internal Medicine and Pediatrics

The issue is not whether the country has a sufficient supply of physicians but whether the physicians that our academic medical centers produce are congruent with our country's health needs. We aren't educating the kind of physicians needed by society. (Robert Petersdorf, M.D., President, AAMC, 1990)[26]

Some of the same social forces that buoyed the creation of family practice also contributed to the establishment of primary care residencies in the specialties of internal medicine and pediatrics a few years later. For internal medicine, cultivating a generalist orientation overturned a long tradition. The formation of the specialty of internal medicine was intended – from the outset – as a rejection of the culture of Victorian general practice. Rosemary Stevens writes that the term "internal medicine" in the U.S. denoted, "a focus on the physiological and chemical bases of disease rather than on the family, generalist, more folksy approach of general practice." Thus the American College of Physicians, founded in 1915, was intended explicitly as a spur to the adoption of "biological medicine." Despite exceptional figures such as Dr. Francis Peabody – whose famous plea to "care for the patient" was intended as a corrective to these

newer trends in medicine – by the time of the creation of the American Board of Internal Medicine in 1936, the field had come to signify specialized, technology-inflected, 20th century medicine.[27] One exemplar of the turn toward the technological during the first quarter of the 20th century was Dr. Richard Cabot, who ran a private practice in Boston from 1896 to 1926. Cabot's approach to practice was built upon a reputation for diagnostic sophistication grounded in the ostensibly objective data of laboratory analysis. He ultimately chose to "delegate" the responsibility for deep knowledge of the patient's life circumstances, the core of the generalist approach, to medical social workers and pastoral counselors. He is credited with the idea for the first hospital department of social work.[28]

After World War I, many internists, following the availability of new diagnostic technologies, became subspecialists, focusing on particular organ systems and treating patients mainly for acute occurrences. Eugene Braunwald, M.D., renowned cardiologist, researcher, and professor of medicine at Harvard, described internal medicine during the first three quarters of the 20th century this way: "First and foremost, the internist was a generalist with a capacity to integrate multiple and complex medical problems, to elucidate difficult diagnoses (internists were often called 'diagnosticians'), and to establish therapeutic strategies for patients with serious illnesses."[29] Inpatient care comprised a major component of the internist's work. Analyzing the course taken by general internal medicine, two academic internists wrote in 2006 that "internists, especially academic internists, were deeply ambivalent about primary care, feeling that it did not measure up in intellectual rigor to traditional Oslerian internal medicine."[30] Bruce Weinstein, M.D., who held the first general internal medicine fellowship at UMass Medical Center, remembered that, "It was very unusual to go into general internal medicine or to go practice in the community," even as late as 1983 when he came to Worcester.[31]

To some extent, therefore, the creation of primary care internal medicine residencies in the U.S. during the 1970s cut against the grain. It was foremost a response to external pressures, the national concern over a lack of, generically speaking, family physicians. Likely, too, it evidenced recognition that the new

opportunities for growth of outpatient care ought not to be yielded to family practitioners without a fight. Publication of the Institute of Medicine's report on primary care, *Report of a Study: A Manpower Policy for Primary Health Care* in 1978 may have been another impetus.[32] Before 1970, fewer than 5% of medical school "primary teaching hospitals" had functioning general internal medicine units; by 1979, such units could be found in 77% of such hospitals. Two-thirds of these were founded between 1975 and 1979. The Society for General Internal Medicine, with assistance from the Robert Wood Johnson Foundation, was organized in 1978.[33] According to a survey conducted in 1979, the need to staff ambulatory clinics as well as to teach generalist residents was the primary reason for establishing these units. It is sometimes claimed that the development of generalist residency tracks in internal medicine and pediatrics resulted mainly from the availability of federal funding through the Health Professions Educational Assistance Act of 1976. However, most programs were founded before the legislation was on the books. At least in their first decade, clinical revenues, not federal grants, seem to have supplied the bulk of the funding for general internal medicine divisions.[34]

Despite the proliferation of primary care units of some kind in a majority of medical schools, the largest number of primary care practitioners emerged from schools that were fundamentally committed to primary care in the first place. The characteristics of such schools, one study indicated, included being "publicly owned, relatively new, and located in states with a proportionately larger rural population; [having] formal departments of family medicine; and [receiving] more Title VII funding for their primary care programs." The "values and reward structures" of a particular institution, however, were even more important as a predictor of a school's contribution to the pool of primary care physicians. The history of UMass Medical School suggests that another characteristic, implicit in the foregoing, was a state legislature determined to get its money's worth in the form of generalist physicians for its constituents.[35]

One site with a pronounced early involvement in cultivating a generalist approach to patient care was the University of Rochester, in part an outgrowth

of the work of the psychosomaticist George Engel, M.D., in promoting a "biopsychosocial" approach to the clinical encounter in general and, to the act of diagnosis specifically. Interestingly, Engel's well known explicit formulation of the "biopsychosocial model" in 1977 was intended to counter what in his view had become the dominance of a reductively biomedical approach to illness and disease.[36] Another of the early generalist tracks in internal medicine, and one of the most influential, was created in 1973 by William T. Branch, Jr., M.D. at the Peter Bent Brigham (now Brigham and Women's) Hospital, an affiliate of Harvard Medical School. An early recruit to the Department of Medicine's Primary Care division at UMMS, Dr. Lynn Li, began her residency at the Brigham in 1975. She recalled, "...there were four of us residents who wanted to do more primary care, because if you know traditional medical residency training, it's all ICU and inpatient, and a lot of very intensive medicine...[But, when] you actually go in the office, you're faced with a patient who is walking and talking. You don't know what to do with them!"[37] The Brigham program included a substantial component of office medicine in years two and three. In 1982, after nearly a decade running the program, Branch published a widely known textbook of the major problems of ambulatory care from the general internist's perspective. The chapters were designed to follow the patient's presentation of a problem, and the differential diagnostic process that should ensue from there, followed by analysis of lab and other diagnostic tests, the "approach to the patient, and the management of the illness." Diagnostic tests were to be discussed in light of their predictive value and cost effectiveness; clinical problems were to be "considered in light of their epidemiology."[38] For the sake of comparison, a comparably prominent textbook for family practice residents from the same period, written by the chair of a department of family practice, aimed to "produce a primary physician trained to treat the whole

Lynn Li, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

patient and not merely a diseased part." This included, "preventive and health maintenance," family dynamics, medical sociology and anthropology, medical records and "family charts." Both authors invoked the terms "continuing" and "comprehensive" care, but reflected the distinct differences in emphasis that characterize the two specialties.[39]

During its first decade or so, general internal medicine nationally and, as we will see, at UMMS, did not thrive. For the national picture, one can draw on several studies that were published in 1985 in an attempt to assess the status of such programs after about 10 years experience. The picture did not look good. Less than 5% of internal medicine residency slots were allotted to general internal medicine at the time. According to one study, general internists on medical school faculties accomplished little research; nor, on average, did they spend much time in outpatient clinics. Like most internists, in fact, they spent a large percentage of time caring for inpatients. In the ambulatory setting, they were judged to be doing well with the sickest of their patients, such as those with acute diabetes, hypertension, and so forth, but not so well with chronic cases requiring continuing care.[40]

With the passing of another decade, however, the fortunes of general internal medicine turned for the better. The Accreditation Council for Graduate Medical Education's (ACGME's) Residency Review Committee for Internal Medicine "mandated a continuity clinic experience for all internal medicine residents." As more generalists were hired to cover these clinics and as more intense exposure to ambulatory general medicine increased, general internal medicine became a feature of departments of medicine in academic medical schools. Research, too, became possible as new funding for health outcomes research provided apt subject matter for general internists.[41] Furthermore, in 1996 the Institute of Medicine "revised the definition of primary care to include 'the community context of medical practice'."[42] Just as important, perhaps, were the opportunities for professional development offered by the Robert Wood Johnson Foundation's Generalist Physician Initiative, a program that began in 1989 and lasted until 1997 and that, as I will show, was critical to the

flourishing of generalist medicine at UMass Medical Center.[43] Whereas in 1980, 68 medical schools in the U.S. had formal general internal medicine divisions, by 2010, the number had more than doubled. At present, the Council of the Society of General Internal Medicine (SGIM) views its members' strengths to be "practice innovation," clinical research, medical education, and quality and safety initiatives. It faces the same challenges as the specialty of family medicine in the persistent under-reimbursement of primary care in relation to more procedurally-driven specialties, but it also must contend with the strong preference for basic science research that prevails among subspecialty internists. Family medicine, as a primarily community-based specialty, is not generally held to that standard. In 2013, the Council of the SGIM claimed as its mission:

> General internal medicine aims to achieve health care delivery that is comprehensive, technologically advanced and individualized; instills trust within a culture of respect; is efficient in the use of time, people and resources; is organized and financed to achieve optimal health outcomes; maximizes equity; and continually learns and adapts. [44]

Among American pediatricians, organized resistance to a growing bias against generalist practice began relatively early, in 1953, when a group of pediatricians gathered informally at an American Pediatric Society meeting to discuss the lack of attention to "outpatient" pediatrics. In 1960 they founded the Association for Ambulatory Pediatric Services (renamed the Ambulatory Pediatric Association in 1969). During these years, the pediatrician Robert J. Haggerty lead an initiative at Boston Children's Hospital to orient his program toward a comprehensive, "patient-oriented" approach that even extended to pioneering interdisciplinary care teams and a family medical record.[45] Evan Charney, M.D., chair of Pediatrics at UMass Medical School during the years leading up to and including the Generalist Physician Initiative, of which more will be said below, recalled that period as "a little bit of the feeling of a group huddled together to...determine whether or not there was a legitimate place for ambulatory pediatricians within the academic pediatric community." Through

the early 1980s this trend consolidated into the creation of residency tracks, national meetings, and professional publications, including an influential volume on the essentials of residency education for primary care pediatrics co-authored by Evan Charney. Other members of the Pediatrics Department at UMass at the time also played prominent roles on the national scene. Thomas DeWitt, M.D., for example, served as president in 1993 of what was by then called the Association for General Pediatrics (the name change was initially voted down as too risky for academic pediatricians). DeWitt and Kenneth Roberts, M.D., the pediatrics residency director at UMMC, co-edited the manual Pediatric Education in Community Settings during DeWitt's presidency, an indication of the growing professionalism of community-based pediatrics education. It was the first of its kind. By the late 1990s, in parallel with general internal medicine, general pediatrics had become a presence in academic health centers.[46]

Primary Care at UMass Med: Beyond Family Practice

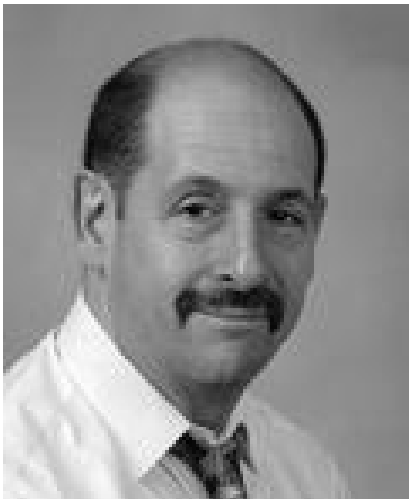
At UMass Medical Center, the responsibility for primary care, as described above, was initially taken on by the family practitioners, as was happening nationally in the early 1970s. When Roger Bulger, M.D., was named Chancellor/Dean in 1976, his Vice Chancellor for Health Affairs, Philip Caper, M.D., specialized in health care policies designed to maximize community-based primary care, a close fit with family practice. A prime example was the launch of the Area Health Education Centers, or AHECs, a program funded through the Health Professions Educational Assistance Act of 1976 and, at UMass Med, spearheaded by Caper. AHECs were intended to disperse primary care professional development opportunities to regions of the United States experiencing shortages of generalist physicians. Early on, as at the University of North Carolina School of Medicine as well as UMass, AHECs were implemented in conjunction with departments of family medicine. In all cases, they were designed to augment generalist physicians' professional development. For the duration of the 1970s, the AHEC program along with the swift expansion of

family practice residencies comprised UMass Medical Center's main primary care initiatives. UMass partnered with Tufts and Boston University who held subcontracts to run AHEC programs established in Springfield and Boston. Caper's successful application for AHEC funding in 1978 placed the medical center among only five successful applicants, in part a reflection of Caper's own connections to the U.S. Department of Health, Education, and Welfare (HEW), as HHS was called at the time, and to insiders such as Senator Edward Kennedy who were working for enhanced access to primary care. The campus visit in 1978 by Joseph Califano, then Secretary of HEW, signaled this growing emphasis on primary care education and outreach. Califano lauded the medical center's work as "the wave of the future."[47]

The "future" did not arrive for another 15 years. Primary care was far less visible in the departments of Medicine and Pediatrics than in Family Medicine during UMMC's first decade, a period when the medical center's highest priority (aside from giving the appearance of devotion to primary care) actually was the successful launch of its tertiary care hospital. In 1978 Dr. Lynn Li was the first physician hired at UMass Med directly from a primary care internal medicine residency. The year after she arrived, her group was explicitly named the General Medicine and Primary Care division within the Department of Medicine. Of the four or five doctors in it, however, she was one of two trained to be a generalist. (Hugh Fulmer, who directed the division from 1979 to 1983, was the other.) Three of Dr. Li's colleagues ultimately returned to their original specialties of infectious diseases and gastroenterology as soon as those divisions were formally established. In those days, the General Medicine clinic was located next to the hospital's main entrance on the first floor. Bruce Weinstein, M.D., who in 1983 became the first general medicine fellow at UMass, first with Hugh Fulmer, then with Harry ("Moe") Green, was the Chief of General Medicine and Primary Care at UMass for many years. He remembers the institution during his first years as "a very subspecialty-dominated institution…the subspecialists ruled."[48]

Pediatrics did not differ in this regard.Dr. J. Barry Hanshaw, M.D., a pediatrician and microbiologist from the University of Rochester arrived to

become chair of Pediatrics in 1975, months before the hospital ever admitted its first patient. He emphatically described the plight of his Pediatrics inpatient unit during the first years of the hospital: "We certainly had nothing like volume. You know, on a good day we might have had six patients." He needed to build up a strong academic department where the combination of good care and specialized expertise would draw inpatient referrals and help build up the hospital. During that first decade after the hospital's opening, neither the Department of Pediatrics nor Medicine could afford to put much effort toward their outpatient work; the hospital's inpatient wards demanded their attention.[49]



Bruce Weinstein, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, Universityof Massachusetts Medical School)*

Dr. Weinstein echoed these views. Of Medicine he insisted, "the Department at that time was very heavily driven by inpatient medicine... we were avid for patients, everyone was...the two giants were Memorial Hospital and St. Vincent. And UMass was really trying to get patients. We had a patient shortage..." The division of General Medicine and Primary Care had a very different feel in the 1980s. "I don't remember how much time we had to see a patient. I'm going to guess it was probably about a half-hour or so, and maybe 45 minutes or an hour for a new patient, but it was much more generous than we [have] now, and we just didn't have that many patients. I don't remember being harried or rushed or frantic at those times. I remember a little bit of twiddling my thumbs and not being that busy."[50] Thirty years later, the ambulatory caseload for internal medicine at UMass is extremely heavy.

J. Barry Hanshaw, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Weinstein likens the transformation to a "mom-and-pop" store that turned into a "Macy's":

> We [General Medicine] have a very large budget in the Department of Medicine, which has about 15 different divisions, depending on how you count them. We're probably very – close to the very top, in terms of number of patients we see, cash receipts. We're just big. We're big and bustling. We have over 50,000 visits a year. We have 25,000 patients....We could see 300 patients a day downstairs... We have 33 residents...We're very, very large. So we're not the poor stepchild anymore...And so we have parity now, and respect.

In Weinstein's words, "for the institution to thrive, the specialties needed us – they needed patients coming in through us, and that was not only with our division [but also] from Worcester and the outskirts."[51] Yet, as late as 1984, even the Liaison Committee on Medical Education (LCME) site visitors to the medical school expressed concern that primary care be better integrated across several departments. Under "Concerns," they wrote: "The [UMMS] institutional goals and objectives should be made consistent with the school's program development, and the scope of primary care should be expanded to include Internal Medicine and Pediatrics, as well as Family Medicine."[52]

During the 1980s, a gradual convergence of the departments of Family Medicine, Medicine, and Pediatrics around primary care faculty development grew out of the needs of newly busy outpatient clinics. As noted in Chapter 5, the growth of ambulatory services far outstripped projections. Residents were needed to help staff the clinics and these residents, in turn, needed to learn community-based practice skills if they were to handle outpatients competently. As had become clear at national meetings of internists and pediatricians, community-based practices were the best place to train residents for generalist practice. But first, someone must train practitioners in how to teach residents these skills. Such teaching did not come naturally, especially to doctors not based at medical centers. Innovative programs to train faculty to teach family medicine, general medicine and pediatrics became essential aspects of the growth of generalist medicine at UMMS and elsewhere.

Faculty development programs came into their own at UMMC under the direction of Mark Quirk, Ed. D., an educational psychologist in Family Medicine and Community Health. Quirk, who came to the medical school in 1978, catalyzed the growth of interdisciplinary collaboration focused on faculty development. He first arrived as a doctoral candidate in educational psychology and cognitive development from Clark University in Worcester. He was hired to assist the original director of the New England Faculty Medical Education Development project, an innovative, federally funded program to train faculty to precept medical students in family medicine. After the project director left UMass, Quirk took it over, built it up, and eventually helped expand its scope beyond the Family Medicine department faculty and residents. Initially, the program brought together faculty from all New England medical schools with family medicine departments four times a year for workshops focused on "teaching and learning." Over the years, even as it expanded to include other faculty, its goals remained constant. In Quirk's words:

Mark Quirk, Ed.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

> How do you take a student in your office or at the bedside, a learner – could be a student, resident, or a fellow – and how do you teach? How do you understand what they need? How do you develop your goals and objectives based on those needs? What's the array of teaching styles and methods that you use to assess those needs... And how do you provide feedback and evaluation? [53]

As Daniel Lasser explained, "It runs parallel to the clinical process. You walk in the room and you say, 'What is the purpose of the visit, what does the person need, in the next 5 minutes what do I need to accomplish? How am I going to accomplish it, and how will I know whether or not I accomplished that?'"[54]

Meanwhile, the Department of Pediatrics initially generated its own

primary care faculty development program independent of Quirk's. Under the leadership of Evan Charney, M.D., chair of Pediatrics, and pediatrician Thomas DeWitt, the department had introduced community-based faculty development as early as 1986. They realized that a community-based residency, increasingly the trend in U.S. pediatrics departments, depended on having a cadre of trained pediatricians out in the community to teach the residents. In 1987 they won a Health Resources and Services Administration (HRSA) faculty development grant. These grants were initially intended for family practice, but in 1981 they were opened to general internal medicine and general pediatrics applicants.[55] DeWitt also began collaborating with Quirk's faculty development program. Kenneth Roberts, residency director for Pediatrics, who arrived in 1988, devised the acronym GNOME to summarize and condense the Community Faculty Development Program's basic pedagogic structure (described by Daniel Lasser above): Goals, Needs, Objectives, Methods, Evaluation.[56] Decades later, one can still find images of gnomes sprinkled through the program's teaching materials as well as gnomic figurines on the shelves of the Clinical Faculty Development program office.

Evan Charney, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Within a few years of Roberts' and DeWitt's collaboration with Quirk in community faculty development, the Department of Medicine decided to join them, with Drs. Sarah Stone and David Hatem leading the effort. In 1994 the three departments successfully obtained the first *inter*departmental faculty development grant funded by HRSA.[57] That program, known as "Teaching for Tomorrow," became the basis for the Community Faculty Development Center. Eventually it was renamed the *Clinical* Faculty Development Center as it came to include hospital-based faculty, too. At the time of writing, it trained faculty from 15 or 16 medical schools in New England and New York State. By 2013, the Center had trained more than 1000 clinical educators, including physicians and

others.[58]

Thomas DeWitt, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Kenneth Roberts, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library. University of Massachusetts Medical School)*

A parallel initiative for residents was formalized in 1987 as the "Resident Education in Office Practices" program. Susan Starr, Assistant Professor of Pediatrics and the program educator, explained its rationale:

> So, the idea was that...since time began, if you were trained in Pediatrics, you were trained in hospital medicine. That's how it was. Yet eighty percent, at least, of the pediatricians who were trained went out and worked in the community, but they were never trained in the community. So Ken [Roberts] and Tom [DeWitt] got together and said, "This makes no sense. Let's have a major portion of the training be in community offices...It caught on like wildfire...every place has a Community Pediatrics [program with] residents out in community offices...When they graduate, they hit the ground running.[59]

Susan Starr, M.Ed. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Evan Charney wrote, "It is rapidly becoming the national model for continuity practice experience for pediatric residency education..."[60] The program held a 10-year celebration in 1997, a mark of its success. By this time, residents who had graduated from the program were themselves

hosting residents in their own community practices.

Primary Care in the Undergraduate Medical Curriculum

From the late 1980s, medical students, too, benefited from the revitalized commitment to primary care education at UMass Medical School. For example, a course called "Communication Skills" utilized standardized patients (SPs) with small groups of students, an initiative introduced by Paula L. Stillman, M.D., the Associate Dean for Curriculum. Stillman is widely credited with being one of the earliest medical educators to develop the use of SPs in medical education, something she began in the early 1970s as the clerkship director in Pediatrics at the University of Arizona-Tucson. Over the course of her 11 years at UMass from 1982-1993, the use of SPs for medical student education expanded from the atypical to the norm at most medical schools, including UMass. At UMass, Stillman also developed a 45-minute session for residents utilizing SPs. SPs could mimic actual patients but were superior to them in their ability to standardize the illness presentation for every student as well as feedback encompassing both physical and psychosocial data, a bulwark of primary care, but of course, crucial for all clinicians.[61]

Paula Stillman, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

The collaboration of the chair of the Psychiatry department (and future Chancellor/Dean), Aaron Lazare, M.D., with Mai-Lan Rogoff, M.D., a psychiatrist and soon-to-be Associate Dean for Student Affairs, and a relatively new assistant professor of medicine, Sarah Stone, M.D., also played an important role in the flowering of primary care in undergraduate medical education. By many accounts, the late Sarah Stone (1956-2001), a general internist, became the linchpin of interdepartmental programs in primary care undergraduate medical education. Colleagues remember Stone almost reverently for her

"gorgeous smile," her sense of humor "like one of the boys," and her "visionary" commitment to teaching community-based ambulatory care. Bruce Weinstein,

Aaron Lazare, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Mai-lan Rogoff, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

who succeeded her as chief of the division of General Medicine commented that she "left very big footprints in the medical school. I think a lot of people consider her one of the real pioneers in medical education here...Sarah...really developed the idea of patient-centered care." The Sarah Stone Excellence in Medical Education award, given annually at UMMS since 2002 to honor faculty educators, attests to her legacy.[62]

Sarah Stone, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Stone and Aaron Lazare began collaborating soon after her arrival as a young faculty member in 1986. Lazare had come to UMass from Harvard four years earlier to chair the Department of Psychiatry. Lazare, both before and after becoming Dean of the Medical School in 1990 (and Chancellor in 1991), was internationally known for his work on the psychology of the physician-patient relationship and of the medical interview through

articles such as "Hidden Conceptual Models in Clinical Psychiatry," "Shame and Humiliation in the Medical Encounter," and texts on the psychosocial underpinnings of the medical interview. Lazare's experience at Harvard Medical School and Massachusetts General Hospital (MGH) appear to have contributed directly to the success of his partnership with Stone on primary care curriculum reform at UMMS. For example, in addition to directing the operation of the MGH inpatient psychiatric unit and, subsequently, all six outpatient psychiatric clinics, Dr. Lazare held major teaching responsibilities for both residents and undergraduate medical students. Opportunely, from 1968 to 1976 Dr. Lazare worked with John Stoeckle, M.D., the renowned internist and advocate for primary care who at the time was the Director of Internal Medicine at MGH. Lazare served as the Psychiatry Coordinator for Stoeckle's "Introduction to Clinical Medicine" course. As Lazare's insights into interviewing psychiatric outpatients coalesced during this period, so did his realization that they could be adapted to primary care. Just as the internist George Engel, based in the Psychiatry Department at the University of Rochester, crafted a "biopsychosocial model" for students learning the art of the medical interview, Lazare, two decades later, adapted a psychiatrically derived, multidimensional approach to interviewing into the undergraduate primary care curriculum at UMass Medical School. His multi-dimensional approach proceeded from the premise that the patient brought his or her own explanatory framework into the doctor's office. No interviewer should neglect to find out "what the patient believes is wrong with him [or her] and what he [or she] expects should be done about it." Second, he believed, "the problem should be viewed from four points of view: the biologic, the psychodynamic, the sociocultural, and the behavioral." Finally, Lazare recognized the need to resolve a potential conflict between the patient's understanding of the problem and that of the physician through a process of negotiation.[63]

Drs. Stone and Rogoff, too, were interested in the dynamics of the clinical encounter, a perspective that converged with that of both Lazare and with the Family Medicine residency's use of Balint groups, described in Chapter 6, to

help physicians face so-called "difficult patients." Bruce Weinstein described the situation faced by many generalists in internal medicine:

> ...as our practices grew, we started getting very tough patients that were making us crazy. We didn't know why...We just knew that there are some patient interactions that are as smooth as silk, and some that leave you scratching your head or give you a headache, or you see them on your schedule and you cringe. And so [Dr. Stone] said, 'Well, I'm going...to try to better understand that.'[64]

Soon after her arrival, Drs. Stone and Lazare joined forces to hold weekly case conferences for members of the General Medicine and Primary Care division. From this period dates the emergence of general internal medicine onto the larger stage of primary care medical education at UMMC. Both physicians were committed to the idea of patient-centered care. Lazare had written about this since the 1970s, in particular on the advantages of asking the patient, "How are you hoping I can help you today?" Their weekly conferences evolved into "bringing actual patients in, some tough patients, with [Lazare] conducting interviews in a way that we'd never seen...before...from a psychiatric perspective but with a medical model..."[65] From these case conferences evolved a new course, "Medical Interviewing and Clinical Problem Solving," which Stone and Rogoff created in 1990 for first-year students that combined interviewing and problem-solving. In Stone's words, "We use real or simulated patients and talk about their clinical problems...A lot of things can make an interview difficult...including a discussion of a patient's sexual history, a situation where you have to give a patient bad news, or an ethical dilemma."[66]

Out of this early course, the format of the "Physician, Patient, and Society" course took shape. From 1975, a multidisciplinary course called "Introduction to Patient Care" introduced students to the behavioral and social sciences along with "family and community medicine, human sexuality, ethics, emergency medical training and introductory physical diagnosis."[67] The new "PPS," which was required for first- and second-year students, was organized around small groups of 10 or 12 students with two faculty members from any field who worked

to develop the students' patient-centered interviewing skills. In Dr. Weinstein's view, before the late 1980s, patient-centered interviewing "did not really exist [here] except in little pockets...the school has always had this sort of charge to train primary care physicians, and this was really a core change in what they were doing...getting trainees very early in their career – their pre-clinical years – to kind of learn how to talk to patients and see them as human beings and not as diseases." Typical cases might include a patient with a terminal illness, one who needed an interpreter, "a patient with vague complaints that ...are just all over the place," or, "a rambling patient you can't rein in." It became foundational for UMass students. According to Weinstein, for a while it was known at UMass as "the Sarah Stone course..."[68]

The Generalist Physician Initiative

I strongly believe that we can be a national leader in keeping with this initiative, and still maintain our stellar reputation for biomedical research and clinical services. (Aaron Lazare, M.D., 1994)

With these words, Chancellor/Dean Lazare placed a public bet that research and primary care could flourish in tandem at UMass Medical School. His remarks heralded the School's recently awarded Generalist Physician Initiative (GPI) grant from the Robert Wood Johnson Foundation, a six-year project lasting from 1994 to 2000 to reinvigorate primary care medical education at U.S. medical schools.[69] The school successfully applied for a GPI planning grant in 1992, the culmination of the previous five or six years' preliminary work, described above. The two-year grant, given to only five medical schools in the United States, enabled UMass Med to align its educational and admissions programs to support the intensive work that, it was hoped, would lead to a full six years of funding. The school's pre-planning efforts began in 1991 when a multidisciplinary group including Mick Huppert from Family Medicine and Community Health and Evan Charney, learned of the Foundation's call for proposals. The opportunity coincided with curriculum changes such as the

new "Physician, Patient, and Society" course with its emphasis on the patient interview. In 1993, as part of preparations to apply for the full GPI grant, the Office of Medical Education was reconfigured as the hub of curricular matters across all departments. A major restructuring of the curriculum in 1994 (to be discussed further in Chapter 10) capped these efforts.[70]

In 1994 the school was one of 14 nationwide to be awarded the full implementation grant. With Chancellor Lazare as Principal Investigator, the departments of Medicine, Family Medicine and Community Health, and Pediatrics partnered with three local health care entities: UMass Medical Center, the Fallon Healthcare System, and the Medical Center of Central Massachusetts (renamed Memorial Health Care in 1997), all of which contributed significant support, both monetary and in faculty time. The GPI goals can be summed up as:

- Changes in admissions policies and procedures, resulting in a larger proportion of students with a predisposition to primary care;
- A restructuring of the undergraduate curriculum, to increase student exposure to generalist role models and community-based experience, resulting in at least 50% of graduates intending to pursue generalist careers;
- An increase in the number of generalist residency positions, and changes in residency program curriculum, resulting in an increase in the number of residents entering generalist practice;
- Practice environment initiatives, including strategies to assist transition into practice of primary care residents.[71]

By the end of 1996, year three of the GPI, UMMS had become recognized as a leader among medical schools for its success as an incubator of primary care doctors. The school's three primary care divisions joined forces to promote a new approach to admissions, medical education, residency training, and faculty development in the community. The admissions office, for example, under the leadership of Dr. Jeffrey Bernhard, a dermatologist, and from 1996 under Dr. Michele Pugnaire, a family physician, added five generalists to the Admissions Committee as well as a supplemental "Generalist Orientation" appraisal form for interviewers to standardize the assessment of candidates.

Additionally, a new Primary Care Advisor program paired up generalist faculty with incoming students predisposed to becoming primary care doctors.

Michele Pugnaire, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Masssachusetts Medical School)*

Community-based physicians increasingly were enlisted to interview prospective students.[72] Not only did the "Physician, Patient and Society" course emphasize primary care, but ambulatory clerkship experiences during the students' clinical years proliferated. Helpfully, the state's Learning Contract with students, which had promised tuition reimbursement for one post-residency year of practice in the Commonwealth, was redrawn in 1994 to reward a four-year commitment to primary care in the state. [73]

Added to the increased emphasis on primary care in the medical school curriculum, residency slots for general internal medicine, general pediatrics and family practice were augmented (or realigned). Overall, 63% of residents in all programs were placed in community-based practices for continuity clinic experiences. A new residency track with eight slots for general medicine/pediatrics also was established. These innovations in turn reinforced the work of the Community Faculty Development Center, where, as noted above, community-based physicians were given training so that they could competently and comfortably become teachers for the medical students and residents who now clamored for community-based office experience. An innovation of Susan Starr helped to focus awareness on the issue of mentor competency: she created a scale to measure "Teacher Identity" in community preceptors as a first step toward increasing the commitment to teaching of intensely busy clinicians out in the community.[74]

The early 1990s marked another milestone for primary care at UMass, the opening of the Joseph T. Benedict Primary Care Building in 1992. The Trustees agreed with Chancellor Lazare's suggestion to dedicate it to Benedict, the founding chair of the University Hospital Management Board, a devoted

supporter of the school – especially with his friend Senator Edward Kennedy – and also a grateful patient. Benedict had started out working in Worcester at the American Steel and Wire Factory while in high school (where his Polish immigrant father also worked) until a baseball scholarship (he was a pitcher) took him to the University of New Hampshire. After stints as a teacher and school principal, he worked at the Worcester Housing Authority where his exceptional leadership in the aftermath of the Worcester tornado of 1953 led to his offer of a job at a bank specializing in home financing. Ultimately he became president of the Boston Federal Home Loan Bank and then returned to Worcester as head of Freedom Federal Savings. As Benedict saw it, his support for the Medical Center allowed him to repay a debt to the hospital (and to Dr. Brownie Wheeler) for having saved his life 20 years earlier after a disastrously botched treatment (elsewhere) for a life-threatening condition.[75]

The Benedict building housed the ambulatory divisions of the departments of Medicine, Pediatrics, Family Medicine and Community Health and, at the time, Psychiatry and Employee Health. Since the day in 1979 that the Governor

Chancellor Aaron Lazare with Joseph and Mary Benedict at the dedication of the Joseph T. Benedict Primary Care Building *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

vetoed approximately $800,000 for construction of an ambulatory care unit at the medical center, acquiring such space had become an increasingly pressing need. Ambulatory patient demand grew dramatically between 1980 and 1990 – from 87,000 adult and pediatric patient visits to 200,000 visits. The opening of the building coincided with UMass's award of the GPI planning grant and gave

an added boost to the enlivened spirit of primary care services and education.[76] In 1995 the medical center opened the Dr. John Meyers Primary Care Institute, honoring Meyers, who was president of the Worcester-based Fallon Clinic for two decades, for his staunch commitment to primary care. The Institute's first director, Dr. Jerry Gurwitz, oversees a two-year fellowship in "managed primary care" as well as research projects on primary care practice and quality improvement.[77]

As a result of these broad and deep innovations, UMass Medical School has been ranked in the top 10% of medical schools for primary care education since 1995. According to AAMC figures, in 1987 UMass Medical School matriculants were no more likely than the national average to list primary care as their intended specialty. In contrast, by 1995 the percentage far exceeded the national average, 53.6% vs. 41.1%. Of its graduating class for 1995, 50.8% stated an intention to enter primary care, placing UMMS in the top 5 nationally. Turning to residency graduates, by 1995, 59% were entering primary care practices. That same year, the AAMC ranked the school #4 in the percentage of graduates of the classes of 1989-1991 currently in primary care practice.[78] In 1996, UMMS ranked second out of the 62 U.S. medical schools that graduated the highest share of M.D.'s entering primary care, according to the March 1996 issue of *U.S. News and World Report*. Nationally, the picture is less promising. According to a 2010 report by the Council on Graduate Medical Education, physician participation in primary care practice has declined and seems to not be reviving; in general internal medicine, numbers of available residency slots have declined by 900 between 1998 and 2008. According to a study from 2012, "Currently, 31% of U.S. physicians practice in primary care specialties, but less than 25% of physicians in training are currently entering primary care practice...20% of general internists care only for inpatients."[79]

At UMass, however, despite a difficult gestation, primary care came into its own by the end of the 1980s, genuinely living up to the school's commitment to primary care education in the 1975 Statement of Goals. In 2007, 55% of UMMS graduates entered primary care residencies; family practice was the choice of 9%

of that number, or 5% of the total class.[80] Primary care does not completely define the culture of the school, nor was it intended by its founders to do so. But for close to a quarter century, it has more than held its own.[81]

NOTES

CHAPTER SEVEN

1 UMass Medical School was ranked as #3 for primary care education in the *U.S. News and World Report's* rankings for 2005. See Board of Trustees Committee on Academic and Student Affairs, "Minutes," April 21, 2004, University of Massachusetts Board of Trustees, Digitized Minutes, Section "2004," accessed at https://archive.org/stream/universityofmass2004univ#page/n177/mode/2up [hereafter, Trustees online]. In 2013 UMMS ranked #4 and in 2014, #5 for primary care education. In 2014, the top 10 schools in primary care were all state universities. See *U.S. News and World Report*, "Best Graduate Schools, 2015," released in March 2014. Accessed online on March 11, 2014 at: http://grad-schools.usnews.rankingsandreviews.com/best-graduate-schools/top-medical-schools/primary-care-rankings. Cf. Jim Fessenden, "*U.S. News and World Report* ranks UMMS fifth in primary care," *UMassMed Now*, March 11, 2014, accessed online at https://web.archive.org/web/20150813201116/http://www.umassmed.edu/news/news-archives/2014/03/US-News--World-Report-ranks-UMMS-fifth-in-primary-care/ on March 17, 2014. These rankings were initiated in 1994.

2 For the efforts of some private medical schools to revive the generalist tradition as early as the 1950s, see Theodore M. Brown, "American Medicine and Primary Care: The Last Half-Century," pp. 1-58, esp. pp. 19-20," in Stephen J. Kunitz, ed., *The Training of Primary Physicians* (Lanham, MD: University Press of America, 1986). Many thanks to Prof. Brown for discussing with me his understanding of the generalist tradition in 20th century medicine.

3 By contrast, the Society for General Internal Medicine was founded in 1978.

4 William G. Rothstein, *American Medical Schools and the Practice of Medicine* (New York: Oxford University Press, 1987), pp. 324-330.

5 Since 1994, the Learning Contract has covered four years of practice in the state. Board of Trustees, "Minutes," June 6, 1984, Section "1984," Trustees online, UM/A; "The Generalist Physician Initiative, Phase II (Years -04-06)," Proposal to the Robert Wood Johnson Foundation, submitted by the University of Massachusetts Medical School, Jan. 31, 1997, Aaron Lazare, M.D., Principal Investigator, p. 108, Office of Education Collection [hereafter OE], UM/W.

6 These figures are courtesy of the administration of Department of Family Medicine and Community Health. My thanks are extended to Daniel Lasser, M.D. and Chair, and Melissa McLaughlin. In 1976, two residents each graduated from the urban Family Health and Social Services Center in Worcester and the rural Barre Family Health Center in Barre, MA.

7 Marc L. Rivo, "Internal Medicine and the Journey to Medical Generalism," *Annals of Internal Medicine*, 1993, *119*: 2; 146-152, esp. p. 147.

8 Acting Dean Butcher had designated Hugh Fulmer an Associate Dean of Clinical Education and Primary Care, and he continued in that role from 1976 until 1979, working with the chairs of Internal Medicine and Pediatrics to create residency tracks in primary care. From 1979 until he left the University in 1983, Fulmer was appointed to head the General Primary Care Division in Internal Medicine, an extension of the work he was doing as a dean. In 1983, Fulmer left the institution to develop a COPC approach to internal medicine at Carney Hospital in Boston. Hugh Fulmer, Oral History Interview transcript, interviewed by Ellen More (by telephone), July 30, 2009, pp. 48-49, 52-54, Oral History Collection, UM/W.

9 "Minutes, Committee on Health Affairs," April 22, 1977, p. 1; Roger J. Bulger to Robert C. Wood, April 27, 1977; "Memorandum," from Robin J. O. Catlin to Roger Bulger, April 5, 1977, all in Box, "Board of Trustees Minutes of Meetings of Committees: Policy-Long Range Planning, 1977," fol. "Board of Trustees, Health Affairs, 1977;" Board of Trustees, "Minutes," June 1, 1977, Box "Board of Trustees Minutes of Meetings of Full Board, 1977," fol. "Board of Trustees General Meeting, Jan.-June, 1977," all in Trustees, UM/A. Office of Student Affairs, "UMMS Student Handbook," Sept. 1, 1979, p. 17, Microbiology and Physiological Systems (MAPS) Collection [hereafter MAPS], UM/W.

10 The author was told this by residents at the Department of Family Medicine and Community Health 30th Anniversary Residency Reunion, Worcester, MA, June 4, 2006.

11 "Statement by President Knapp to the Board of Trustees, May 13, 1981," Board of Trustees, "Minutes," p. 5, Section "1981," Trustees online, UM/A. "Missing a Million," *Evening Gazette,* Feb. 11, 1981, PA, UM/W (unprocessed); Robert D. Wetmore to Paul R. Barrette, July 30, 1981; Zimmie Horowitz to Jerry Coley, "Memo: Historical Background, etc.," Jan. 12, 1981; Robert E. Tranquada to UMMC Faculty, May 21, 1981; Robert E. Tranquada to Members of the Worcester Delegation in the Great and General Court, May 20, 1981; "Impact of Family Practice Training in Massachusetts," 1981, typescript, 3 pp.; all in Box 1, fol. "Information Regarding Residency," FMCH, UM/W. For quotation, see Daniel Lasser, Oral History Interview transcript, Part 1, interviewed by Ellen More, Sept. 1, 2006, Worcester, MA, p. 26, Oral History Collection, UM/W.

12 Dennis Dimitri, Oral History Interview transcript, interviewed by Heather-Lyn Haley, Worcester, MA, 2006 [n.d.], p. 41.

13 Warren Ferguson, Suzanne Cashman, Judy Savageau and Dan Lasser.,

"Family Medicine Residency Characteristics Associated with Practice in a Health Professions Shortage Area," *Family Medicine*, 2009, *41*:6, pp. 405-410; *idem.*, "Thirty Years of Family Medicine Residency Training," presentation handout, FMCH Departmental Research Forum, April 20, 2007, UMass Medical School, Worcester, MA. Personal collection, Suzanne Cashman, D.Sc., Professor and Director, Community Health, Department of Family Medicine anmd Community Health, UMMS.

14 "UMass Draws Fire on Family Practice," [*Worcester Telegram*, n.d.], Public Affairs collection [hereafter PA], unprocessed, UM/W. In 1980 77% of 96 UMass Med graduates entered primary care residencies, although many would eventually become subspecialists; 9% of the class entered Family Practice. Cf. *Centerscope*,1980, *IV*: 35 (March 21), PA, UM/W.

15 In his role as Associate Dean of Clinical Education and Primary Care, Hugh Fulmer helped develop an external community health center for primary care residents and physicians to work outside the ambit of Family Medicine. The Tri-River Family Health Center in Uxbridge was founded in response to the request of a largely rural community for a health center. It was designed to operate as a "satellite" of the medical school. See "Program to Develop a Rural Primary Care Teaching Practice in Uxbridge, MA," Box "Board of Trustees Minutes of Meetings of Committees: Policy-Long Range Planning, 1977," fol. "Board of Trustees Committee on Health Affairs, 1977," Trustees, UM/A.

16 Dimitri, Oral History Interview transcript, p. 7; Lynn Eckhert, M.D., D.P.H., Oral History Interview transcript, interviewed by Ellen More, Aug. 27, 2007, Southborough, MA, p. 49, Oral History Collection, UM/W.

17 Eckhert, Oral History Interview transcript, pp. 22-28, quotations p. 26.

18 Eckhert, Oral History interview transcript, p. 22; Lasser, Oral History interview, Part 2, interviewed by Ellen More, Worcester, MA, Sept. 5, 2006, Worcester, MA, pp. 2, 5, 9, 28. For an outsider's perspective, see Rosemary A. Stevens, "The Americanization of Family Medicine: Contradictions, Challenges, and Change, 1969-2000," *Family Medicine*, *33*:4, pp. 232-243. In one famous case, Dr. Joseph DiFranza enlisted an 11-year-old girl to investigate the efficacy of new anti-smoking laws by attempting to buy cigarettes at 100 different convenience stores in Massachusetts. She was successful, unfortunately, 75% of the time. Joseph R. DiFranza, Billy D. Norwood, Donald W. Garner, and Joe B. Tye, "Legislative Effort to Protect Children from Tobacco," *JAMA*, 1987, *257*: 24 (June 26); 3387-3389.

19 Susan Ladwig and Theodore Brown, "Alfred Yankauer (1913-2004): Advocate for Public Health and Social Justice," *AJPH*, 2015, *105*: 2, pp. 282-283; "In Memoriam: Alfred Yankauer, MD, MPH," in Department of Family Medicine and

Community Health, "Annual Report," 2004, p. 54. My thanks to Prof. Ted Brown for alerting me to the first of these sources, and to Prof. Suzanne Cashman and Ms. Linda Hollis for the second.

20 Family Medicine Integration Committee, "Agenda," May 5, 1998, Family Medicine and Community Health Papers [hereafter FMCH], unprocessed, UM/W.

21 Lasser, Oral History Interview transcript, Part 2, p. 27.

22 Milton Terris, "Evolution of Public Health and Preventive Medicine," *AJPH,* 1975, *65*: 2, pp. 161-169, esp. p. 168; "Undergraduate Medical Education," *JAMA*, 1970, *214*:23 (Nov. 23), pp. 1510; "Undergraduate Medical Education," *JAMA*, 1980, *244*:25 (Dec. 26), pp. 2810-12, 2818, 2822, 2829. Between 1970 and 1980, Community Medicine faculty increased from 998 to 1019; Family Medicine faculty grew from 0 to 1556. Family Medicine within the academic health science center in the '70s and '80s, as Rosemary Stevens has discussed, redirected itself towards fulfilling the requirements of academic medical specialty departments rather than aligning itself with community-responsive initiatives, although since the passage of the Patient Protection and Affordable Care Act of 2010, with its requirement for electronic health records and gradual institution of capitated care, many more are attempting to revive population health initiatives. Cf. Stevens, "The Americanization of Family Medicine: Contradictions, Challenges, and Change, 1969-2000," *Family Medicine*, 2001, *33*: 4 (April), pp. 232-243.

23 Figures in table derived from "Undergraduate Medical Education," *JAMA,* 1970, *214* (23), p. 1510; "Undergraduate Medical Education," *JAMA*, 1980, *244* (25), pp. 2810-12, 2818, 2822, 2829; "Educational Programs in US Medical Schools, 1989-1990," *JAMA*, 1990, *264*:7 (Aug. 15), pp. 802, 803; "Educational Programs in US Medical Schools, 1999-2000," *JAMA,* 2000, *284*:9 (Sept. 6), pp. 1115; *AAMC Directory of American Medical Education, 1971-72* (Wash., DC: AAMC, 1972); *AAMC Directory of American Medical Education, 1983-84* (Wash., DC: AAMC, 1984); *AAMC Directory of American Medical Education, 1990-91* (Wash., DC: AAMC, 1991); *Directory of American Medical Education, 2000-01* (Wash., DC: AAMC, 2001); *Directory of American Medical Education, 2011* (Wash., DC: AAMC, 2011). Between 1970 and 1980, community medicine faculty increased only from 998 to 1019; family medicine faculty grew from 0 to 1556.

24 Suzanne B. Cashman, Judith A. Savageau, Warren Ferguson, Daniel Lasser, "Community Dimensions and HPSA Practice Location: 30 Years of Family Medicine Training," *Residency Education*, 2009, *41*: 4, pp. 255-261, quotations p. 255. Interestingly, however, residents from more recent cohorts were less likely to either practice in a HPSA or to engage in explicit community-oriented activities.

25 Lasser, Oral History Interview transcript, Part 2, pp. 27-30, quotations, p. 27; *idem.*, Oral History Interview transcript, Part 3, interviewed by Ellen More, Sept. 29, 2006, Worcester, MA, pp. 10, 11, 12, 19, quotation, p. 10; Cashman et al, "Community Dimensions," ibid. The Department also built strong ties to UMMS's Commonwealth Medicine program, something that began during the chairmanship of Lynn Eckhert and was revitalized around 2000, overseeing clinical services in the state Correctional Health system. For a different take on COPC and family practice, see Ellen S. More, "Whatever Happened to Community-Oriented Primary Care?" *MDAdvisor*, 2015, *8*:2, pp. 24-30.

26 Robert Petersdorf, "How Healthy is American Medical Education?" *Med. Health Perspect.*, 1990 (suppl. Dec. 10), p. 1, quoted in Roger Rosenblatt, Michael Whitcomb et al., "The Effect of Federal Grants on Medical Schools' Production of Primary Care Physicians," *AJPH*, 1993, *83*:3, pp. 322-328, quotation p. 325.

27 The internist Francis Peabody's essay, "The Care of the Patient," has been cited innumerable times as the desideratum for humane care. F.W. Peabody, "The Care of the Patient," *JAMA*, 1927, *80*: 877-880. It is important to note that even though a minority among academic specialists, such as G. Canby Robinson or Walter Cannon, emphasized the potential value of a holistic approach to the understanding of illness and disease, their efforts did little to alter the overall development of internal medicine as it was taught and practiced for decades. Moreover, "holism" should be distinguished from generalism. Cf. Theodore M. Brown, "George Canby Robinson and the 'Patient as a Person'," in *Greater than the Parts: Holism in Biomedicine, 1920-1950*, Christopher Lawrence and George Weisz, ed. (New York: Oxford University Press, 1998), pp. 135-160, esp. pp. 152-53; Stephen J. Kunitz, "Holism and the idea of general susceptibility to disease," I*nternational J. of Epidemiology*, 2014, *31*: 4, pp. 722-729, accessed online at https://web.archive.org/web/20150813201643/http://ije.oxfordjournals.org/content/31/4/722.full on March 23, 2014.

28 Cabot was not indifferent to his patients; he simply carried specialization to a previously unheard of degree. On Richard Cabot, see Christopher Crenner, *Private Practice in the early 20th century medical office of Dr. Richard Cabot* (Baltimore, MD: Johns Hopkins University Press, 2005), quotation, p. 77. And see Rosemary Stevens, *American Medicine and the Public Interest* (New Haven, CT: Yale University Press, 1971; 1976), pp. 93-94.

29 Rothstein, *American Medical Schools*, p. 326, n. 4 above; Eugene Braunwald, M.D., "Forward," in William T. Branch, Jr., M.D., ed., *Office Practice of Medicine* (Philadelphia: W.B. Saunders, 1982), p. xi.

30 Samuel Morrison, M.D., "Prologue" to Llewellys F. Barker, "History of Internal Medicine," rev. by Samuel Morrison, *Maryland State Medical Journal*, 1981, May; pp. 43-44 ff, quotation, p. 43. Robert M. Centor and Thomas S.

Huddle, "Academic General Internal Medicine: Past, Present, Future," *The American Journal of Medicine*, 2006, *119*:2, pp. 173-175, quotation. p. 173.

31 Bruce Weinstein, Oral History Interview transcript, interviewed by Ellen More, Sept. 12, 2012, Worcester, MA, p. 1, Oral History Collection, UM/W.

32 Jacqueline Kosecoff, Arlene Fink et al, "General Medicine and the Education of Internists in University Hospitals," *Annals of Internal Medicine*, 1985, *102*: 2 (Feb.), pp. 250-257.

33 Society of General Internal Medicine, "SGIM History," accessed online at https://web.archive.org/web/20150813202424/http://www.sgim.org/about-us/about/history-and-bylaws , on Feb. 1, 2013.

34 Robert H. Friedman, Janet T. Pozen, A. Lynn Rosencrans, John M. Eisenberg, and Paul M. Gertman, "General Internal Medicine Units in Academic Medical Centers: Their Emergence and Functions," *Annals Internal Medicine*, 1982, *96*:2, pp. 233-238, esp. pp. 233, 234.

35 The work of Dominique Tobbell on the University of Minnesota School of Medicine reinforces this conclusion. See Dominique Tobbell, "Plow, Town, and Gown: The Politics of Family Practice in 1960s America," *Bull. Hist. Med.*, 2013, *87*: 4, pp. 648-680; Roger Rosenblatt, Michael Whitcomb et al., "The Effect of Federal Grants on Medical Schools' Production of Primary Care Physicians," *AJPH*, 1993, *83*:3, pp. 322-328, quotations pp. 322, 325; However, although Title VII provided for "predoctoral education, departmental support, and faculty development," before a reorganization of the act in 1998, only family medicine departments were eligible for all three components. George E. Fryer, Jr., David S. Meyers, David M. Krol et al., "The Association of Title VII Funding to Departments of Family Medicine with Choice of Physician Specialty and Practice Location," *Family Medicine*, 2002, *34*:6, pp. 436-440.

36 Elaine F. Dannefer, Edward M. Hundert, and Lindsey C. Henson, "Medical Education Reform at the University of Rochester and the Biopsychosocial Tradition," pp. 135-147; Theodore M. Brown, "George Engel and Rochester's Biopsychosocial Tradition: Historical and Developmental Perspectives," pp. 199-219, esp. pp. 210-214, in Frankel, Richard M., Timothy E. Quill, and Susan H. McDaniel, eds., *The Biopsychosocial Approach: Past, Present, Future* (Rochester, NY: University of Rochester Press, 2003) .

37 Lynn Li, M.D., Oral History Interview transcript, interviewed by Ellen More, Jan. 10, 2013, Worcester, MA, p. 1, Oral History Collection, UM/W.

38 Branch, *Office Practice of Medicine*, pp. xiii, xi; William T. Branch,

Jr., M.D., Faculty web pages, accessed online at https://web.archive.org/web/20150814132649/http://medicine.emory.edu/general-medicine-geriatrics/faculty-directory/branch-jr-william.html on Feb. 3, 2013. This text book is currently in its 4th edition.

39 Robert E. Rakel, M.D., *Principles of Family Medicine* (Philadelphia: W.B. Saunders, 1977), Preface, p. v-vii.

40 Stephen J. McPhee, Thomas F. Mitchell et al, "Training in a Primary Care Internal Medicine Residency Program," JAMA, 1987, 258: 11, pp. 1491-1495, esp. p. 1491; Kosecoff, Fink, et al., "General Medicine and...," pp. 250, 256; Robert H. Friedman and Janet T. Pozen, "The Academic Viability of General Internal Medicine," *Annals of Internal Medicine*, 1985, *103*:3 (Sept.), pp. 439-444, esp. p. 439.

41 Centor and Huddle, "Academic General Internal Medicine," p. 173.

42 Cashman, Savageau et al, "Community Dimensions," quotation, p. 255 (n. 22 above).

43 The Robert Wood Johnson Foundation had helped found the Society for General Internal Medicine in 1978, undoubtedly helping the field gain a stronger foothold in academic medicine. Society of General Internal Medicine, "SGIM History" (n. 31 above).

44 Katrina Armstrong, Nancy Keating, Michael Landry et al. for the Council of the Society of General Internal Medicine, "Academic General Internal Medicine: A Mission for the Future," *Journal of General Internal Medicine*, 2013, Jan. 16 [ePub ahead of print], accessed at http://link.springer.com/article/10.1007%2Fs11606-013-2334-3 on Feb. 25, 2013, n.p.

45 Brown, "American Medicine and Primary Care: The Last Half-Century," pp. 19-20 (n. 2 above).

46 Kenneth B. Roberts, Ruth E. K. Stein, and Tina L. Cheng, "The Academic Pediatric Association: The First 50 Years," 2011, *Academic Pediatrics*, *11*:3 (May); Joel J. Alpert, "The Ambulatory Pediatric Association," Pediatrics, 1995, 95: 3; both accessed online at http://www.academicpedsjnl.net/article/S1876-2859%2811%2900024-6/fulltext , April 15, 2013. Cf. Alpert, J. and Charney, E., *The Education of Physicians for Primary Care* (Rockville, MD: DHEW, 1973); DeWitt, T.G. and Roberts, K.B, eds., *Pediatrics Education in Community Settings: A Manual* (Arlington, VA: National Center for Education in Maternal and Child Health, 1996); Roberts K., DeWitt T., "Pediatric residency education in community settings," *Pediatrics*, 1996, *98* (suppl.), pp. 1249–1301.

47 Doc. T76-062, April 7, 1976, Box "Board of Trustees Documents, FY-76, #001-101," fol. "Trustees Docs., T76-054-063;" Board of Trustees, "Minutes," Aug. 2, 1978, pp. 13-17; Board of Trustees, "Minutes," Nov. 1, 1978, both in Box "Board of Trustees Minutes of Meetings of Full Board and Committees: A-Budget and Finance, 1978," fol. "Board of Trustees General Meeting, July-Aug., 1978," Trustees, UM/A; Board of Trustees Long-range Planning Committee, "Minutes," Nov. 8, 1978, pp. 8-10, Section "1978-Committees," Trustees online, UM/A.

48 Weinstein, Oral History Interview transcript, pp. 6-7.

49 J. Barry Hanshaw, M.D., Oral History Interview transcript, interviewed by Ellen More, May 4, 2009, Worcester, MA, pp. 8, 10-11, Oral History Collection, UM/W.

50 Weinstein, Oral History Interview transcript, pp. 6, 11.

51 *Ibid.*, pp. 7, 30.

52 Robert E. Tranquada to UMMC Department Chairs, Chairman, Faculty Executive Council, Chairman, Faculty Council, April 9, 1984, "LCME re-Accreditation Summary of Surveyors' Observations [re] Strengths and Concerns," Feb. 23, 1984, pp. 167-168, Box 1, fol. 5, "Correspondence: Robert Tranquada, Chancellor/Dean, 1979-1986," unprocessed, in MAPS, UM/W.

53 Mark Quirk, Ed. D., Oral History Interview transcript, interviewed by Ellen More, Oct. 3, 2012, Worcester, MA, pp. 1, 2-6, quotation, p. 3, Oral History Collection, UM/W. Starting in late 2012, Quirk became Vice President of Educational Outcomes at the American Medical Association.

54 Daniel Lasser, M.D., Oral History Interview transcript, pp. 22-24.

55 Warren Newton and Jane E. Arndt, "Learning from History: The Legacy of Title VII in Academic Family Medicine," *Family Medicine*, 2008, *83*: 11 (Nov.), pp. 1031-1038, esp. p. 1031.

56 Private communication from Kenneth Roberts, M.D. to Susan Starr, April 26, 2013, cited with permission. Starr, a professional educator for both the community-based Pediatrics residency and the interdepartmental faculty development program, arrived in 1994. Many thanks to Professor Starr for her donation of materials and personal knowledge pertaining to the Community Faculty Development and Pediatrics Residency programs.

57 Program booklet, "UMass Department of Pediatrics: The First Ten Years of Resident Education in Office Practices," June 19-20, 1997," Susan Starr

Collection, UM-W; Susan Starr, Oral History Interview transcript, interviewed by Ellen More, April 10, 2013, Worcester, MA, pp. 2-3, Oral History Collection, UM/W.

58 On Dr. DeWitt, see "In the Lead with Primary Care," UUMC *Annual Report*, 1993, p. 4. Quirk's research during these years complemented his work by elaborating a process of "metacognition" whereby teachers/clinicians learn to think about the needs of their students or patients. Mark Quirk, *Intuition and Metacognition in Medical Education: Keys to Developing Expertise* (New York: Springer, 2006); Quirk, Oral History Interview transcript, p. 5, 15-17; Starr, Oral History Interview transcript, p. 7.

59 Susan Starr, Oral History Interview transcript, p. 3.,

60 Letter from Evan Charney, Chair of Pediatrics, to Aaron Lazare, Jan. 14, 1997, pp. 156-57, in "The Generalist Physician Initiative, Phase II (Years 04-06)," Proposal to the Robert Wood Johnson Foundation, submitted by the University of Massachusetts Medical School, Jan. 31, 1997, Aaron Lazare, M.D., Principal Investigator, p. 1, OE, UM/W.

61 As of this writing, Dr. Stillman is the Vice President for Health Care Services at Temple University Health System. On Stillman, see "Paula Stillman, M.D., M.B.A.," *Changing the Face of Medicine: Celebrating America's Women Physicians*, accessed online at https://web.archive.org/web/20150814140726/http://www.nlm.nih.gov/changingthefaceofmedicine/ on April 8, 2013; "Origin of Standardized Patients in the United States," Office of Medical Education, University of Kentucky College of Medicine, accessed online at https://web.archive.org/web/20150814141044/http://meded.med.uky.edu/origin-standardized-patients-united-states April 8, 2013. Dr. Howard S. Barrows, then of USC School of Medicine, developed the first standardized patient program in 1963. Many thanks to John Congdon, Administrative Manager, Office of Faculty Affairs, UMMS, for information on Dr. Stillman's career at UMMS.

62 Weinstein, transcript, pp. 27-28; Stephen Erban and Bruce Weinstein, "UMass Establishes Sarah L. Stone Professorship in Medical Education," *Society for General Internal Medicine—Forum*, 2001, *24*:9 (Sept.), pp. 4, 7.

63 Aaron Lazare, M.D., Oral History Interview transcript, interviewed by Ellen More, Feb. 6, 2008, pp. 10-11,Worcester, MA, Oral History collection, UM/W; Thomas P. Hackett, M.D. to James B. Hanshaw, M.D., April 26, 1982, quotations p. 6, in Aaron Lazar Collection, UM/W. For major examples of Lazare's work, cf. Aaron Lazare, ed., *Outpatient Psychiatry, Diagnosis and Treatment* (1979;

Baltimore: Williams and Wilkins, 1988); Aaron Lazare, "Hidden Conceptual Models in Clinical Psychiatry," *New England Journal of Medicine*, 1973, *15*: 288 7, pp. 345-51; Aaron Lazare, "Shame and Humiliation in the Medical Encounter," *Archives of Internal Medicine*, 1987, *147*: 9, pp. 1653-8; Mack Lipkin, Jr., Samuel M. Putnam, and Aaron Lazare, ed., *The Medical Interview: Clinical Care, Education, and Research* (New York: Springer Verlag, 1995). On Engel and the biopsychosocial model, see Theodore M. Brown, "George Engel and Rochester's Biopsychosocial Tradition: Historical and Developmental Perspectives," pp. 199-219, in Frankel, Quill, and McDaniel, eds., *The Biopsychosocial Approach* (n. 34 above); Nasir Ghaemi, *The Rise and Fall of the Biopsychosocial Model: Reconciling Art and Science in Psychiatry* (Baltimore, Johns Hopkins University Press, 2012), esp. pp. 40-41; George L. Engel, "On the Need for a New Medical Model: A Challenge for Biomedicine," *Science*, 1977, *196*: 4286 (April), pp. 129-135. Engel first began developing the biopsychosocial model in the 1950s.

64 Weinstein, Oral History Interview transcript, p. 22.

65 Lazare, Part 1, Oral History Interview transcript, p. 10; Weinstein, Oral History Interview transcript, pp. 37-38.

66 "A Doctor who Listens, Learns," UMMC *Annual Report*, 1993, p. 6; Mai-Lan Rogoff, Oral History Interview, interviewed by Ellen More, July 7, 2015, Worcester, MA, Oral History collection, UM/W; Mai-Lan Rogoff, *Curriculum Vitae*, p. 13, Mai-Lan Rogoff papers, UM/W.

67 Report of the Institutional Self-Study Task Force, University of Massachusetts Medical School. Submitted to the Liaison Committee on Medical Education of the Association of American Medical Colleges, Sept. 11, 1978, pp. 34-36, unprocessed, OE, UM/W.

68 Erban and Weinstein, "UMass Establishes Sarah L. Stone Professorship," quotation p. 4; Weinstein, Oral History Interview transcript, quotations, pp. 23, 34.

69 Aaron Lazare, "A Generalist Partnership," *UMMC Magazine*, 1994 (Fall/ Winter), p. 24.

70 "Generating More Generalists," *One Voice*, 1994, *XIV*:1, p. 4.

71 "The Generalist Physician Initiative, Phase II," p. 1. Mick Huppert, Director of the Office of Community Programs, served as Executive Director of the Grant and Emily Ferrara as Project Coordinator; Alan Chuman, Associate Director of the Office of Community Programs, wrote the grant itself. "Generating More

Generalists," p. 24.

72 Michele Pugnaire, M.D., to Aaron Lazare, Jan. 22, 1997, in "The Generalist Physician Initiative, Phase II," pp. 158-161.

73 Board of Trustees, "Minutes," Dec. 7, 1977, p. 10, Box "Board of Trustees Minutes of Meetings of Full Board, 1977," fol. "Board of Trustees General Meeting (Full Board), Aug.-Dec. 1977," Trustees, UM/A; Deborah M. DeMarco, M.D., Program Director, Housestaff Training Program, Assistant Professor of Medicine, to Aaron Lazare, Jan. 17, 1997, in "The Generalist Physician Initiative, Phase II, pp. 178-179.

74 Starr, Oral History Interview transcript, p. 11; Starr, S., Haley, H.-L., Mazor, K., Philbin, M., Ferguson, W., Quirk, M. "Initial development and testing of an instrument to measure teacher identity in physicians," *Teaching and Learning in Medicine*, 2006, *18*: 2, pp. 117-25.

75 Board of Trustees Executive Committee, "Minutes," Oct. 13, 1992, p. 1, Section "1992," Trustees online, UM/W. Dr. Lazare described Mr. Benedict as "a great friend and a benefactor." Also see Aaron Lazare, "Joseph T. Benedict, 1912-1995," *UMass Medical Center Magazine*, 1995 (Spring/Summer), pp. 6-7; H. Brownell Wheeler, "Remarks About Joseph Benedict [at the Joseph T. Benedict Building Re-Opening and Rededication]," May 15, 1998, typescript; Mary Benedict to H. Brownell (Brownie) Wheeler, May 19, 1998, all in Box 8, fol. 3, Publications Collection, UM-W.

76 "Benedict Building," UMMC *Annual Report*, 1992, p. 4, in Box 1, fol. 8, Publications Collection, UM-W.

77 Board of Trustees Committee on Buildings and Grounds, "Minutes," June 20, 1979, p. 1, Section "1979," Trustees online, UM/A. "Major gift establishes new Primary Care Institute," *UMass Medical Centerscope*, 1995, *XX*: 4 (Oct. 6), p. 1. In 2009, the Center for the Advancement of Primary Care, was established as the result of work by the Office of Primary Care System Integration (2004-2009) directed by Barbara Weinstein, MBA, with Ron Adler, M.D., co-director; it focuses on coordinating primary care services at the university clinic, the off-campus clinics such as community health centers, as well as ambulatory services at affiliated hospitals. All three primary care departments are represented on the Center's Executive Committee. Cf. Dan Lasser, M.D. to Nick Morse, "UMass/ UMass Memorial Center for the Advancement of Primary Care," personal communication, July 6, 2009. Many thanks to Barbara Weinstein for emailing me her copy of this communication following our meeting on Oct. 23, 2012. Cf. Jerry H. Gurwitz, M.D., Executive Director, Meyers Primary Care Institute, Dr. John Meyers Endowed Chair in Primary Care Medicine, UMass Medical School,

to Aaron Lazare, M.D., Jan. 13, 1997, in "The Generalist Physician Initiative, Phase II," pp. 185-187.

78 "Summary of Data from AAMC Matriculation Questionnaire: UMMS and U.S., by Year: Percent of Respondents Who have Definitely Decided on a Specialty or are Considering One or More Specialties Who List Primary Care as their First Choice (Question 14)," Attachment B, pp. 118, 123, in "The Generalist Physician Initiative, Phase II (Y ears -04-06)," Proposal to the Robert Wood Johnson Foundation, submitted by the University of Massachusetts Medical School, Jan. 31, 1997.

79 Robert L. Phillips and Barbara J. Turner, "The Next Phase of Title VII Funding for Training Primary Care Physicians for America's Health Care Needs," *Annals of Family Medicine*, 2012, *10*: 2 (March/April), pp. 163-168, esp. pp. 164, 165.

80 "University of Massachusetts Medical School Postgraduate Positions, Class of 2007," Match Day," courtesy of Len Levin, Head, Education and Clinical Services, Lamar Soutter Library, to Ellen More, March 23, 2010, unprocessed. It should be noted that only retrospective counts can determine how many medical graduates actually continue in primary care careers rather than pursuing further training and becoming subspecialists.

81 "The Generalist Physician Initiative, Phase II,", pp. 1, 98, 104-108, 117, 124.

Chapter 8
Becoming a Research University, Part 1: Securing a Place for Basic Research, 1970-1990

Introduction

This chapter and Chapter 9 will describe UMass Medical School's surprising emergence during the 1990s from its predicted trajectory as predominantly a "community" medical school in which primary care education was its main raison d'être, to a health sciences center reputed nationally and internationally for its contributions to biomedical research. I will examine the crucial steps taken by early leaders in the basic science departments to lay down a foundation for future growth. Indeed distinguished work was produced here in the school's first two decades. UMMS leaders in the bench sciences accomplished this in spite of—or possibly because of—the "laissez-faire" attitude of early chancellors, most of whom were too busy fighting off fiscal threats to both the school and the hospital to be able to give much attention to strategic growth in the basic sciences.[1] As this chapter shows, a fundamental change in expectations for the school was a precondition for the controversial decision in 1988 to appoint as chancellor someone who was not primarily a clinician but a researcher, Leonard Laster, M.D. Chapter 9 will then trace the surprising repercussions of Dr. Laster's brief chancellorship.

Research on a Shoestring

It takes a vivid imagination from today's vantage to grasp the fragility of the research enterprise at UMass Medical School during its first dozen or so years. All school activities, with the exception of one or two faculty labs, were housed in the modest quarters of the Shaw building until the new medical sciences building opened in October of 1973. By then, the Shaw building was filled to capacity with students, faculty, administrators, staff, and custodians, including a grand total of 25 who were basic science faculty. Not that the Shaw

building had been fully converted from its modest origins as a candy and tobacco products warehouse. Faculty, staff, and students tolerated a building in which the roof leaked and the heating and air conditioning malfunctioned.[2] There was little choice but to use it since the school's main building, housing its clinical and basic science wings, would not be ready for occupancy until 1973-1974.

Administrative quarters were established immediately in the Shaw Building. Dean Soutter, his secretary, and his administrative assistant, Muriel Sawyer (Harrington), all occupied one office suite in a corner at the front of the building. The early researchers, however, found the setting a bit more challenging. R. William "Bill" Butcher, one of the first department chairs to arrive, remembered it—albeit fondly—as "basically kind of a dump." The Medical Science building, where laboratories would be housed, opened floor by floor. The faculty adapted in a variety of ways. During his first year or two, Butcher's laboratory was housed at the campus of the Worcester Foundation for Experimental Biology in Shrewsbury—not at the Shaw building. Graciously, he also arranged for the handful of early faculty members to eat lunch at the Foundation, especially on Saturdays. Another of the early chairs, Sam Clark, M.D., head of the Department of Anatomy, retained his research lab at Harvard until the summer of 1970. Allan Jacobson, who was a post-doctoral fellow at MIT working on the regulation of gene expression when he was recruited in 1973, kept his MIT lab until his permanent laboratory in the Medical Sciences building was ready in 1974.[3]

Basic Science Departments and Chairs, c. 1972-1973

Anatomy	**Sam J. Clark, Jr., M.D.**
Biochemistry	**Reginald W. Butcher, Ph.D.**
Microbiology	**Donald J. Tipper, Ph.D.**
Pathology	**Guido Majno, M.D.**
Physiology	**H. Maurice Goodman, Ph.D.**

Nevertheless, the departments of Anatomy, Biochemistry, Microbiology, Pathology, and Physiology set up rudimentary working laboratories in the Shaw Building. The building also contained preliminary versions of the library, headed by Donald Morton, Ph.D., the dissection lab, the morgue, and an animal room. H. Maurice ("Moe") Goodman, Ph.D., chair of the Department of Physiology from 1970 to 2006, described the scene this way:

> Across the hall from us, Sam Clark, who was the initial Chairman of Anatomy, had two young faculty people. One was Sandy Marks, the other was Frank Chlapowski, and Shirwin Pockwinse was his technician...It was really very friendly, and very congenial... the warehouse had a fairly high ceiling, and the wall between the labs didn't go all the way up; it went like three-quarters of the way up. So things would occasionally fly over the wall, and certainly conversations and so forth. It was a very friendly kind of environment...And we had one classroom there. There was one large room also that was used by the Purchasing Department, and Personnel Department, and all; they were all in one big room. We had one room for lecturing, and then another one was being developed for when we had the second year...we had to have two lecture rooms—we had two classes! Bench work was downstairs and at the back of the building.[4]

One wonders how any work was accomplished at all. Shirwin Pockwinse, who was hired by Dr. Clark as a technician straight out of college, ran his lab's transmission electron microscope, the lab's scanning electron microscope, and eventually supervised electron microscopy for faculty and trainees in Anatomy and other departments. She worked there for more than 40 years. Pockwinse remembered that additional offices were carved out of the Shaw Building as needed but that young faculty such as Merrill Kenneth Wolf, M.D. and Susan Billings-Gagliardi, Ph.D. of the Anatomy Department were in a lab that was next door to the department office: "They kind of set up on desks there...but it worked! I mean, we got a lot of research done. We had our electron microscopes there. We had just one and Pathology had one."[5]

Crowded and under-equipped laboratories were not the major threat

to the early faculty's optimism. Within two years of the School's opening, the government of Massachusetts experienced one of its periodic budget crises, producing reduced outlays to the medical school just at the time it was on the brink of expanding to its anticipated full size. This resulted from the so-called "Shepard Amendment," designed on behalf of the Massachusetts Taxpayers' Foundation by former Commissioner of Administration and Finance under Governor Sargent, Charles Shepard. As one commentator noted, "In passing the Massachusetts State Budget for Fiscal Year 1973, the State Legislature adopted a plan drawn up by the Massachusetts Taxpayers Foundation resulting in the freezing of $67 million of the $2.2 billion State budget. This freeze affects every department in the State. Under the terms of the freeze, Governor Sargent cannot spend more than 15% of the $67 million without legislative permission." Dean Soutter expressed his disappointment in his budget testimony to the Board of Trustees: The resultant budget cuts, he noted, coincide with "the start of clinical education, six new departments, increased student body from 40 to 64, preparation for opening the Power Plant, preparation for opening the new $64,000,000 Basic and Clinical Science building [i.e. the Medical Science building], operation of the entire Shaw Building and newly created labs for a full year..."[6] The Liaison Committee on Medical Education (LCME), the accrediting body for U.S. medical schools, also expressed concern. Its "Summary and Recommendations" in 1972 starkly observed, "It is not clearly apparent that the authorities recognize the magnitude of the financial support which this institution will require in coming years"[7]

H. Maurice Goodman,Ph.D. *(photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

All things considered, it should not be surprising that a spirit of adventure, of pioneering and starting something *new*, characterized the ambitions of many of the early faculty, something that persisted for at least a decade. For example, Moe Goodman remembered that in January 1970, with snow thick on the ground, accompanying Lamar Soutter from the partially renovated Shaw building up

Plantation Street to view the main campus site. Goodman stood with Dean Soutter, "looking down on this huge hole, and the lake on the other side. And as [Soutter] was talking—and he was so charismatic—as he was talking about the building, and what it was going to look like, I could see it sort of rising out of the ground!" Goodman remembered thinking, "I'll take this job. This is exciting! This is a chance to do something new." Neal Brown, who arrived in 1973 as a professor in Biochemistry and soon moved into the position of chair of Pharmacology, remembered Lamar Soutter as a very "assuring fellow." When the Boston medical schools resumed attacks on the school just before University Hospital was completed, "Soutter was the kind of guy who said, 'Eh, you know, it's a little artillery coming in. It'll stop. Don't worry about it.'"[8] To Brown, UMass Med seemed:

> a very welcoming place. You had the sense that it was just wide open...When I got here there were like 40 total staff—the animal care guy to the professors—only 40 of us. And the school—the class size had just led into 40...So you had a feeling, you know, all this empty space, and oh, the sky's the limit. And it was. And it was wide open. The dean let you do anything. It was so non-bureaucratic.[9]

Goodman, a physiologist from Harvard who became the backbone of early efforts to generate a vibrant research community here and is widely viewed as one of the most important figures in the school's first two decades of development, was also attracted to the new and untried.[10] He had been in one of the early classes at Brandeis as an undergraduate and from there moved on to a "relatively new" integrated doctoral program in medical sciences at Harvard. The chance to do things "for the first time" was part of the attraction of UMass for Goodman, as it was for many of his fellow faculty members in the school's first decade. (He also valued the "goal of providing the opportunity of a medical education for children of working-class parents," something he found "compelling.") Allan Jacobson was attracted here by the prospect of starting a new lab, with all-new equipment, and even being promised the opportunity to participate in future recruitment. Dr. Guido Majno, a world renowned pathologist, was recruited in 1973 by Dr.

Soutter and Maurice Goodman to chair the department of Pathology after less than satisfying experiences at Harvard and then Geneva. He and his wife, Isabelle Joris, Ph.D., also a faculty member in Pathology, remained at UMass until 2002. Michael Czech, Ph.D., who was recruited in 1981 as the chair of Biochemistry, had been at Brown University. He remembered that, "what I saw here was just an astounding, almost a blank slate, at least in the Biochemistry Department, based on the availability of tremendous amounts of space, tremendous amounts of resources, and an opportunity to do things in my own research interests that were either not possible, or highly improbably to be done in the environment at Brown."[11]

One reason these scientists could feel so optimistic was their understanding of the Medical School's mission. Dr. Goodman recalled his first meeting with Lamar Soutter in 1969, for example, when Soutter told him that the "charge from the legislature was to create a medical school whose quality would be second to none in New England." As Chapter 5 has already described, that goal meant different things to different people. In the case of Governor Michael Dukakis, it meant different things at different points in his career. But to the cadre of scientists brought to UMMS during its first decade or so, even the fight to win the hospital from the state legislature did not dissuade them from a core belief that primary care medical education should and could coexist with a first-rate research enterprise. Neal Brown understood the tension this way: "...although the institution was formed around the concept of primary care...it was still clear that research was going to be held at a premium eventually—that UMass would become known for its research because it was the way you relate to the...outside world as a medical school. That's what most American medical schools do."[12]

In 1984 Dr. Goodman surveyed the evolution of the Medical School's mission for his department's external site reviewers. He wrote,

> The original mission of the medical school, as interpreted by Dr. Soutter, was to provide excellence in medical education and in patient care in order to equip our graduates to pursue those aspects

> of medicine that best suited their talents and desires. Subsequently pressures mounted and political support for the school was marshaled among those groups that favored increased primary care, and the development of a strong family practice orientation... The basic science departments, nevertheless, continued to regard their mission in the more traditional light of providing excellence in teaching and the development of a strong research base. Although research ranked rather low in the enunciated goals for the medical school in the early seventies, this view was never subscribed to by the basic sciences departments and has been substantially reversed in recent years.[13]

It would be no exaggeration to write that the history of research at UMass Medical School hinges on the faculty's and administration's success in, as Goodman wrote, *substantially reversing* the limitations seemingly imposed on the school during its early struggle to win funding for the hospital.

Fortunately, two of the first basic science chairs to be recruited, Moe Goodman of Physiology and Bill Butcher of Biochemistry, were sufficiently experienced and canny to size up the situation almost immediately. Equally fortuitous, Dean Soutter did not stand in the way of their devising a plan to circumvent state-mandated institutional obstacles to growth. Bill Butcher, whose research concerned metabolism in white adipose tissue, had been the student of Earl Sutherland, who became a Nobel Laureate in 1971 for research on the action of hormones. Butcher had followed Sutherland to Vanderbilt, where he was an Associate Professor and an Investigator of the Howard Hughes Medical Institute before being recruited to UMMS in the spring of 1969. He was originally hired for the chair of Physiology but when James Ashmore, the chair of Biochemistry and the man who had introduced him to Lamar Soutter, decided not to stay at such a seemingly high-risk institution, Butcher moved over to Biochemistry to which he felt a more robust affinity.[14]

Of course, he then had to find a chair for Physiology. Butcher had known Maurice Goodman from national meetings, given their common interest in hormonal regulation of metabolism. Butcher alerted Lamar Soutter to the possibility that Goodman, at the time a young Associate Professor in the

Physiology department at Harvard, would be a good choice for the job. Goodman was already establishing a distinguished career in metabolic physiology. His thesis advisor, Ernst Knobil, a renowned reproductive endocrinologist who had shown that growth hormone is species-specific and later isolated the regulatory mechanism for one of the reproductive hormones, "had an interest in growth hormone, and we started looking at metabolic responses to growth hormone. And I did my thesis on growth hormone and free fatty acid mobilization from adipose tissue, in both monkeys and rats. And we published, I think, five papers based on that thesis work." Goodman, who remained chair of Physiology at UMMS for 36 years, went on to an extremely productive career. Indeed, one of the first two NIH grants awarded to a UMMS researcher, Goodman's proposal to study "Growth Hormone Action on Fat Metabolism," was continuously funded for decades beginning in September 1970.[15]

Butcher and Goodman together laid the foundation for all subsequent research administration at UMass Medical School. As active researchers and chairs of young departments with untried faculty—in Physiology, for example, the original faculty members were just out of graduate school—they understood the need to establish an infrastructure to support research. Even more urgent, in their view, was the need for money to help establish their younger, as-yet unfunded, faculty members. Between the two of them, they set up nearly every formal structure for the research enterprise on campus over the course of the next 10 to 15 years. Some of their ideas proved inordinately innovative. For example, according to Goodman, sometime in 1971 or early 1972 during a meeting of the (handful of) basic science chairs, Butcher hit on an idea that is still credited by scientists at UMMS as, simply, a stroke of brilliance. Dr. Goodman described the plan they came up with, courageously approved by Lamar Soutter, to bolster ongoing basic research using the indirect cost monies returned to the school by NIH for each NIH grant:

> And we came up with the idea that if we want to really develop research here, why not use that money as investment in research? This was Bill's idea, but I think the three of us, Bill, Sam, and I—

> Sam Clark—went to Lamar with the proposal that we, the basic scientists, be allowed to keep all of the overhead money to develop research, and we would handle it in a way that half of it would stay in a central pool, and the other half would go back to the earning departments, for the development of research. This was a unique situation in the country, and Lamar agreed...[16]

By 1980, the practice was well institutionalized of dividing up indirect cost funds so that the 50% retained by the Dean's office was directed to the administrative body Butcher and Goodman also devised, known as the Scientific Council, of which more will be said below, to use for establishment of core facilities, grants administration, small-scale repairs and maintenance, and so forth. But the other half was returned to the departments in proportion to the amounts of money each had generated in grants. Of that 50%, half went toward incentive rewards for the grants' principal investigators (PIs)—not something to underestimate—and the remainder was used to help sustain the vibrancy of their department's research environment.[17] As John Sullivan, M.D., who was hired in 1978 as the first physician investigator in the Pediatrics department and went on to a renowned career as a viral immunologist, summed it up, "And... in my opinion, that is the single most important event, historically, in allowing the research enterprise to grow and develop at this institution. Because based on everything I know from serving on study sections and visiting universities across the country, there is no other institution that had that kind of investment."[18]

The primary administrative instrument for carrying out interdepartmental research initiatives was, as mentioned above, the Scientific Council. The Scientific Council included faculty members from all the research departments. Particularly in its first decade, its workings reflected a shared sense of institutional solidarity. Department chairs like Goodman, Butcher, and Donald Tipper (of Microbiology) took care to hire faculty who would be collegial and who shared at least some overlapping research interest with others in their departments—Allan Jacobson called this the "no jerks" principle, although he didn't use the word "jerk." Likewise, the Scientific Council was run as "politics, as it ought to be done.

Meaning… 'You vote for my thing; I'll vote for your thing. We all need this, and let's just work on convincing Moe that he can go over his budget.'"[19] Again, quoting Jacobson,

> …in those days, the Scientific Council was a very influential body. So Moe ran the Scientific Council…and it was the…research body on campus that thought long-term. We had a lot of money…And so we started developing the notion of core facilities, and that meant that we were looking for ways to help research be subsidized, whether it be with equipment or technical help, or whatever. And everybody was, again, very socialistic, looking for ways to develop facilities and expertise here that we needed to make this place better.[20]

Initially, Butcher and Goodman shared responsibility for grants administration; during the semester in which one or the other was responsible for a medical school pre-clinical course, the other would step in and do the administrative work. But the Scientific Council always seems to have been Moe Goodman's charge. Moreover, in 1975, when Lamar Soutter resigned unexpectedly, Butcher was made acting Chancellor. At that point, Goodman took on both the grants administration office and head of the Scientific Council. He was widely appreciated for the skill and fairness with which he carried out this important role: "Moe was an excellent steward. [He] was reasonable, but he also had high standards."[21] Goodman's recollection of the group culture of the time echoes Jacobson's:

Allan Jacobson, Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

> We, as a small group of faculty, were embattled by a variety of outside forces which, on occasion, threatened our very existence as a Medical School. This led to a great deal of cooperation and interdependence, for faculty within any given department and between departments. There developed a sense that individual strength depended upon collective strength…In addition, much of the basic needs for research were provided on a communal basis

within the department by initial startup finds. This fostered a sense of sharing…"[22]

Once Bill Butcher's term as acting Chancellor ended with the arrival of Chancellor/Dean Roger Bulger in 1976, he was appointed Associate Dean for Scientific Affairs, a position that had "overall responsibility for support of the research community including oversight of the few communal facilities that were available then. In its early years it did some long term planning and managed the small overhead fund. The dean of Scientific Affairs also served as an advocate of the research community in dealing with the accounting, the purchasing, personnel, physical plant, library, and computer departments."[23] Three years later, when Butcher left UMass, Goodman succeeded him as Associate Dean for Scientific Affairs while retaining an influential role on the Scientific Council. Decision-making with regard to investment in equipment remained squarely with the Scientific Council. (Goodman remembered that the "first expensive piece of machinery they bought was a cell-sorter, for about $30,000.") By the 1980s, the Council included some researchers from the clinical departments such as the well known endocrinologist Lewis Braverman, M.D., and pediatric immunologist John Sullivan, M.D., whose work on HIV infection will be discussed in Chapter 9.[24] By 1994, when Goodman stepped down from his responsibilities as Associate Dean for Scientific Affairs (while continuing to chair a large department), the Medical School was ready to institutionalize the apparatus of scientific administration as a "strongly top-down" organization under a Vice Chancellor of Research.

In truth, the growth of research at UMass increasingly benefited from—one might even say depended on—attention and support from top-tier administrators to galvanize and pay for key recruiting and program initiatives. That simply did not occur until the end of the school's first decade. Chancellor Roger Bulger (1976-1978) had devoted most of his energies—appropriately—to the challenge of launching the hospital and related clinical outreach efforts such as the AHEC program, the opening of the Tri-River Family Health Center in Uxbridge, and committing UMMC to staffing the Commonwealth's various

state schools for developmentally delayed children and adults. Bulger strongly supported the faculty's push to establish a doctoral program, discussed in Chapter 10, but research, in these early years, was largely left to the management of researcher-administrators such as Butcher and Goodman.[25]

Growing Pains: the 1980s

The 1980s comprised a decade of subtle growth in sponsored research at UMMC. Significant progress occurred on diverse fronts, yet not until the end of the decade did the campus engage in a coordinated strategy to expand research activity on campus. By the mid-eighties, a number of researchers were beginning to express concern. Although some faculty regarded Bulger's successor, Robert Tranquada, M.D. (1979-1986), as taking a "laissez-faire" attitude toward research, in fact he led the Medical School to take several significant steps toward the maturation of research.[26] The clinical system required much of Tranquada's energy and vigilance, as described in Chapter 5. Tranquada was nevertheless quite mindful of the campus' need to nurture its research infrastructure and strengthen the numbers of active researchers on campus. Three milestones of the campus's emergence as a mature research institution were established during Dr. Tranquada's administration: transforming a doctoral "program" in medical sciences, first approved during Roger Bulger's chancellorship, into a full-fledged Graduate School of Biomedical Sciences (GSBS), described in Chapter 10; addressing the need to accumulate resources to recruit a critical mass of researchers; and helping to create—and then utilize—expanded, flexibly designed space for research at the newly built Worcester Biotechnology Research Park.

As Dr. Tranquada understood the situation, "the state-funded faculty positions numbered 200 when I arrived, and they numbered 200 when I left. So the challenge was how do you finance additional faculty positions without any additional state money?" Moreover, state law forbade supplementing full-time state salaries by any means other than clinical revenue or the Chancellor's fund derived from practice plan revenues and from state contracts. As a first step,

the Faculty Practice Plan members agreed to donate approximately 10% of their earnings to the Chancellor's Fund for use in hiring. But, Tranquada emphasized, researchers also needed to earn a "substantial amount of their revenues from competitive grants and contracts. So we began to look for highly qualified and successful basic science faculty, to add to the very competent faculty that we had, but it was a small faculty."[27]

In the more successful basic science departments, this approach was viewed as advantageous because whatever money a researcher received from sponsored research to offset his or her salary would be redirected for that department's use in either recruiting non-tenure track faculty or other basic needs such as equipment or lab personnel. And through ingenious strategies of resource management, some early researchers managed to have a national impact rapidly. Fredric Fay, whom Goodman recruited as a newly-minted Ph.D. from Harvard, was a good example of how excellent research could proceed even while the school was still gestating a research culture. Fay worked on the physiology of smooth muscle tissue. The department's first external site review (1978), described Fay and his research as follows: "His research concerns the generation and regulation of contractions in single, isolated smooth muscle cells. He has had continuous NIH support for this work and also holds an RCDA [Research Career Development Award, or K-04]...His studies...have attracted International attention, and he is now the recognized authority in his area of research." Fay became a full professor within six years of his arrival. His prominence was made possible by unusual technological ingenuity as well as an ability to reach out to other researchers. Fay was renowned for applying imaging techniques far in advance of what was in general use at the time. Through financial support from overhead trust funds dispensed by the Scientific Council and the Physiology department, crucial donations of equipment from DEC (Digital Equipment Corporation, at the time headquartered in Massachusetts) in 1983-1984, he was able to bring together a digital microscopy team, the Division of Biomedical Imaging, to measure the intracellular force of smooth muscle cell contraction.[28]

As Allan Jacobson explained,

> [Dr. Fay] cobbled together an imaging group that included physicists and programmers [and] people who had microscopy expertise. The goal was to pursue his smooth muscle studies at really high resolution. He had people who were using space program software to deconvolute images that were otherwise blurry, and things like that....[29]

When UMMC created the Program in Molecular Medicine in 1989, Fay, along with his imaging group, was among the first to move into the new and explicitly interdepartmental setting. At the time of Dr. Fay's sudden death in 1997, he was internationally known for his work.[30]

Dr. Susan Leeman, also a professor of Physiology (1980-1992) was the first scientist at UMass Medical Center to be elected to the National Academy of Sciences (in 1991) for her isolation and characterization of the two peptides "substance P" and neurotensin. Although Leeman's neuropeptide discoveries were largely made prior to her coming to UMMC, she was highly regarded not only for that work but also as a potential link among neuroscience researchers on campus and to the immunology research being carried out by Aldo Rossini, M.D. and others. Goodman wrote to Chancellor Tranquada of Leeman, "She is...a major institutional resource and asset." Like Fay's work on digital imaging, Leeman's research generated an interest in establishing an interdepartmental program, in this case dedicated to neuroscience research, which she led from 1984 through 1991 when she left to take a position at Boston University.[31] The cell biologist Lydia Villa-Komaroff, Ph.D., said to be the third Mexican American woman to receive a U.S. doctorate in the sciences, in 1978 was recruited to the Microbiology department (renamed Molecular Genetics and Microbiology in 1980, it become part of Microbiology and Physiological Systems, or MAPS, in 2010), after having worked with Harvey Lodish and David Baltimore at MIT, followed by a postdoctoral fellowship at Harvard. Earlier in 1978, she was lead author on a paper describing the successful use of bacteria to clone insulin, a worldwide first. In 1985 she returned to Harvard to spend more time on research.

After a distinguished career there and at Northwestern University, she became the CEO and Chief Scientific Officer of the Whitehead Institute in Cambridge, Massachusetts. In 2011 she became a member of the governing board of the Massachusetts Life Sciences Center.[32]

Despite the presence of outstanding researchers in both basic science and clinical departments at UMass Medical Center within its first decade,[33] and despite the gratitude some felt for the amplitude of the resources available to them in those early years, by the time Chancellor Tranquada had been in Worcester for a few years many researchers were beginning to feel impatient about the pace of growth. Maurice Goodman surveyed the situation for Tranquada a few months after the latter's arrival. In December 1980, the Chancellor held a strategic planning retreat with all department chairs and senior administrators to discuss the fiscal situation of the medical center. Research productivity was high on the agenda. Tranquada focused on the addition of "active clinical investigators and a Center grant" to better integrate clinical and basic research in areas such as immunology, endocrinology and specifically, diabetes.[34] Several months later, a memo in preparation for a research retreat from John Howe, III, a cardiologist, Academic Dean and Provost, and an influential member of Tranquada's senior leadership group, proposed, for starters, to beef up the institution's "Research Goals." His proposed version began: "*To strive for excellence in research as the only legitimate foundation upon which to structure our programs in service and education.*"[35]

Fredric Fay, Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

At the retreat, held in the winter of 1982, an explicit comparison was laid out for the faculty of revenue from all sources at UMMC, the average revenues of

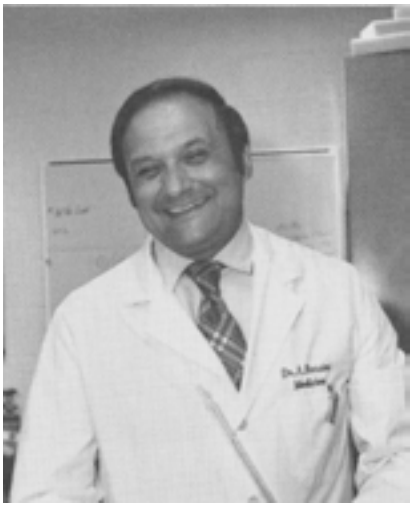
other "new" medical schools, and the average of "established" medical schools. The figures for federal grant funds showed UMMC exceeded the average of all new schools in the current fiscal year ($8.9 million in direct costs for UMMC versus a comparison figure of $7.8 million on average for all "new" medical schools).[36] Significantly, the majority of these funds were generated by the basic science departments, not through clinical research. Compared to the average figure listed for more established schools ($11.2 million), the figure looked rather meager. These were not easy times for public medical schools; an article in *Time Magazine* in 1983 described the declining support for state university systems across the U.S.[37]

Susan Leeman, Ph. D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

As part of UMMC's drive to strengthen its research output, a process of long-range planning was undertaken in 1984. In elucidating (once again) the institution's mission, the document noted that, "A major corollary of our mission in health science education is the underlying philosophy that the primary underpinning of excellence in medical education is excellence in research."[38] Although the long-range planning process remained incomplete throughout the 1980s, this particular attempt signaled a new resolve to give as much attention to research as to the clinical enterprise. One sign of this new resolve was Dr. Tranquada's all-out effort to recruit a leading researcher in diabetes to strengthen an area where several productive lines of research already were in place. Thus, in 1980 and 1981 initiatives were launched to bring Michael Czech, Ph.D., a noted insulin researcher, from Brown University to UMass Medical School. In Czech's words, Tranquada and Howe were, "very excited

Lydia Villa-Komaroff, Ph. D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

about the area of diabetes, very enthusiastic about amplifying the diabetes field here." Endocrinology was already strong in the clinical departments due to the presence of Lewis Braverman, M.D., director of Endocrinology and Metabolism, chair of the department of Nuclear Medicine, and a world renowned thyroid researcher and co-author of the standard text The Thyroid.[39] With assistance from Braverman, Aldo Rossini, M.D., a highly respected diabetes researcher, had just been recruited from the Joslin Clinic in Boston and planned to collaborate with Arthur Like, M.D., who had come to UMass from the Joslin Research Laboratory. As Michael Czech put it, they were aware that their research "had the potential to translate into the clinical arena in a really major disease. [Diabetes] became a very very important disease to tackle."[40] Dr. Like had had the opportunity to bring a unique colony of experimental animals, the bio-breeding, or BB, rat to UMass in collaboration with Errol Marliss of the University of Toronto. The BB rat has "a spontaneous autoimmune disease" in which it destroys its own pancreatic beta cells, the cells required to produce insulin—both in rats and in humans. Rossini and Like, with other colleagues at UMMC and elsewhere contributed importantly to demonstrating that Type 1 diabetes is an autoimmune disease. Rossini's research was directed toward understanding how to foil the autoimmune response to the transplantation of insulin-producing islet cells. His research was funded for 30 years by the NIH, including a MERIT [Method to Extend Research in Time] award. (Rossini, with Ruth Lundstrom, a Diabetes Nurse Practitioner and Certified Diabetes Educator, also wrote *The Diabetes Handbook* and ran a robust clinical division of Diabetes and Endocrinology.)[41]



Aldo Rossini, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar soutter Library, University of Massachusetts Medical School)*

Given this rich environment, bringing Michael Czech to UMass from Brown, according to Chancellor Tranquada, epitomized his strategy for

leveraging research on both the basic and clinical science fronts. Czech has become "a recognized leader in the field of insulin action and signal transduction in diabetes and obesity, and recently developed methods for RNAi-mediated gene silencing in cultured adipocytes."[42] Even before he arrived at UMMC, Czech had great standing as a researcher whose work was devoted to, in his words, "insulin action at the molecular level, receptors and cell membranes, and other signaling molecules within the cell." These interests "extended...into the disease area of diabetes, since insulin action is a critical ingredient of insulin resistance in Type II diabetes. And of course, that also relates very much to Type I diabetes, in terms of the etiology of the disease relating to insulin as a fundamental deficiency."[43] From the Chancellor's perspective, Czech represented an opportunity to bolster both the school's clinical research on diabetes and diabetes-related basic research. Czech's work was at the forefront. Only a year after moving to UMMC, he received the Eli Lilly Award in Diabetes Research; the Joslin Medal and Banting Medal followed in 1998 and 2000, respectively.[44] As Dr. Roger Davis, who arrived from England to work with Czech less than a year after Czech's move to UMMC, and whose career is discussed below, explained,

> At that time—this was before the DNA revolution, and recombinant biology... people were first beginning to get ideas about which proteins are the ones which were mediating effects, things like insulin. And...Mike Czech's laboratory had... done the initial experiments, where they could actually identify the protein that actually bound insulin. So in terms of the beginnings of understanding at the molecular level exactly how insulin worked, this was really the beginnings of the whole story.[45]

Moreover, Tranquada emphasized, "it was clear that [Czech was] really interested in what was going on in Worcester and saw it as an opportunity to grow. And that was so important!"[46]

Czech, then, not only continued his own research, but also attracted others to create a critical mass of diabetes researchers. For example, another recruit from the Joslin Center, William Chick, M.D., was recruited by Czech and

Rossini in 1981. Chick was trying to develop a biohybrid pancreas that could be implanted in humans with Type I diabetes. Although most of the diabetes work at UMass Med focused for many years on Type 1 diabetes and autoimmunity, Czech's research also amplified and broadened the work being done on Type 2 diabetes. In 1983, with Chick as director (Dr. Rossini became the director in 1998), the Medical Center became one of only 12 institutions funded by the NIH as a Diabetes-Endocrinology Research Center (DERC).[47]

Another recruiting success with long-term consequences was the hiring in 1982 of Aaron Lazare, M.D., a professor of psychiatry at Harvard, to become the chair of the Psychiatry Department at UMMC. Tranquada explained,

> One of the reasons that I was so enthusiastic about having Aaron come was because he and I both agreed that one of the things we needed to do was to reach out in our affiliations. We did not have enough psychiatric in-patient work to be an effective source of training for residencies in psychiatry. We had to have access to additional beds, and we knew that that had to be through affiliations. Aaron was very effective in moving us in that direction—not only that, but subsequently, in attracting state funds for programs that his department would run.[48]

Dr. Lazare, who would ultimately become Chancellor/Dean at UMMC from 1991 to 2007, continued the trend begun by Chancellor Bulger and the previous Psychiatry chair, Stanley Walzer, to emphasize the Psychiatry Department's links to the public sector in Massachusetts—whether state schools for the developmentally disabled such as Belchertown, or state psychiatric hospitals such as Worcester State, Westborough State, and other such inpatient psychiatric hospitals. As designed by senior departmental administrator and future Deputy Vice Chancellor for Operations, Thomas Manning, contracts with such state institutions brought income to the department and the medical school and helped stabilize professional staffing at these sites. (In 1987, Worcester State Hospital barely avoided being placed under a judicial consent decree on account of inadequate medical staffing and services; the agreement to allow the Psychiatry Department both to staff WSH and to run a residency program there, proved

crucial to the Hospital's regaining full accreditation.)[49] Lazare successfully recruited two leaders in the field of Law, Psychiatry, and Ethics and of Forensic Psychology, Paul Appelbaum, M.D. and Thomas Grisso, Ph.D., respectively, who invigorated the state of Massachusetts' forensic mental health services as well as writing the leading manual on the assessment of psychiatric competence to consent to treatment.[50]

Paul Appelbaum, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Dr. Tranquada's goal of invigorating basic and applied research called for the acquisition of additional and up-to-date, research facilities. After a decade in the Medical Science building, researchers persistently complained about the lack of space and the inflexibility of available research space. Dr. Tipper remembered that:

> ...this medical school was designed, both physically and in terms of its departmental structure, in a very classical fashion. There were six floors—actually, seven floors in the building, but the bottom one was administration, so the other six floors means six departments, with Anatomy at the bottom, and Pharmacology at the top. And that was it. There was no space designated for anything called Genetics, or anything remotely resembling that...
>
> The architect designed it for its external appearance. He must have got advice on how to build labs, but it was advice from practically the 19th century, as far as I can tell. Anyway, it was certainly not late 20th century structure. The labs were inflexible. Benches couldn't be moved. There was very little room for larger pieces of equipment.[51]

By collaborating with the Worcester Area Chamber of Commerce (WACC) to build a biotechnology park on unused medical school property on Plantation Street, Tranquada gained access to research space designed to its specifications

that would become available years sooner than if the university had built it for itself.

Building Biotech Park was not a simple transaction, however, and might not have been completed without timely assistance from the Governor's office. Tranquada's term as UMMC Chancellor coincided with Massachusetts' economic rebound from the worst effects of the oil embargo-induced recession of the mid-1970s. Sometimes described as the "Dukakis miracle," the state's economic rebound actually began before Governor Dukakis returned to office for his final two terms (1983 to 1991). Unquestionably, though, Dukakis was quick to focus on

Governor Michael Dukakis *(Photo courtesy of the University of Massachusetts Medical School, Lamar Soutter Library, University of Massachusetts Medical School)*

measures to strengthen the state's biotechnology sector and, more important for UMass, to broaden their impact to include cities outside the Boston catchment. As Dukakis commented, "one of the things about a medical school is it can have an enormously important economic stimulating effect on its host community." By the early 1980s, when Dukakis won his "rematch" against Governor Edward King, he recalled that, "my thinking was evolving on this, and healthcare as a major part of this state's economic revival began becoming more and more important to [my] urban strategy...where state government really was focused on reviving the Worcesters, and the New Bedfords, and the Lowells, and the Lawrences, and the Springfields, and the Fall Rivers, and so on." Dukakis readily acknowledged that the idea to create a biotechnology incubator on surplus state land in proximity to UMass Medical School originated during his predecessor, Edward King's, administration. Worcester's business community, too, through the WACC and its development arm, the Worcester Business Development Corporation (WBDC), was intent on finding a way to revitalize the city and, at least since 1981, hoped

to lure biotechnology companies beyond the I-128 corridor and into central Massachusetts.[52] The plan had stalled. Trustees of Worcester State Hospital sued over the alleged impropriety of transferring state land to the commercial sector, leaving the project in a legal limbo.[53]

The idea presented an opportunity to solve the school's laboratory expansion problem. State law made it cumbersome and expensive for a state institution to construct new buildings. The WBDC's hoped-for biotechnology park would enable UMass Med to rent new laboratory space, rather than having to build it. Accordingly, in 1982 Tranquada advised a special meeting of the UMass Board of Trustees that UMMC would waive all interest in a 29-acre parcel of Medical Center land across Plantation Street from the campus to allow it to be declared state surplus. Michael Dukakis made it one of his campaign pledges to central Massachusetts that his administration would make sure the project came to fruition. It became "a big priority" for his administration as well as for local state legislators and Congressman Joseph Early. Following Dukakis's election in 1983, the WACC created an entity known as the Worcester Biotechnology Research Park. In 1984, following Dr. Tranquada's recommendation to the Legislature, the land formerly held by UMMC was ceded to the WBDC to be developed through its creation of the Worcester Biotechnology Research Institute, or WBRI. Chancellor Tranquada was made an ex officio member of the WBRI Board in 1984. By 1984 the legal challenges had been dismissed and a year later, Governor Dukakis named the MBR Park one of his administration's five statewide Centers of Excellence.[54] Construction of the Worcester Biotechnology Research Park's buildings began in 1986. Its first tenant, Cambridge Bioscience Corporation, signed a lease within weeks of the dedication. UMMC arranged to lease 20,000 square feet of laboratory space at Biotech Park, but did not take occupancy of what would become Biotech 2 until 1989.[55]

A Fork in the Road

Having successfully collaborated in opening the Worcester Biotechnology

Research Park, provided leadership for several key clinical and research initiatives, and having overseen the successful launch of the Graduate School of Biomedical Sciences and the Graduate School of Nursing (both of which will be described in Chapter 10), Chancellor Tranquada left UMMC to become the dean of the medical school at the University of Southern California. His announcement in May 1986 set in motion a series of decisions that, albeit painful, ultimately resulted in the medical school's transformation into a stronger institution with a national reputation for both primary care education and scientific research. This critical period, one which resulted in the setting of a new course for the school, lasted at least until 1991.[56]

The process of choosing Dr. Tranquada's successor was fraught with conflict. Looking back at these events from the vantage of the 21st century, it is difficult to avoid interpreting the tensions of these years as the precursor rumblings of a seismic shift in the underpinnings of UMass Med. From a present-day vantage, in other words, it is hard not to see the uneasiness over the choice of Chancellor Tranquada's successor as anything other than a contest over the long-term direction of the medical center—choosing whether it would become renowned for its basic and clinical research, or rather, cultivate its designated place in Massachusetts as a center for primary care medical education and excellent, but regional, tertiary care and clinical research. To view the events to be described below in that way, however, would oversimplify the dilemmas faced by UMMC in the late 1980s. It would also commit the historical fallacy of "presentism," that is, of interpreting the past through the lens of the present. When Dr. Tranquada announced his intention to return to California in May 1986, no one at the University of Massachusetts, whether in Worcester or in the President's office, could have foreseen that the University Hospital would within a decade prove more of a financial burden than the Trustees could responsibly tolerate. Nor could anyone have forecast that basic research at UMass Med would become as successful as it did within that same decade.

In fact, a "Leadership Retreat" held just a few months before Tranquada's resignation demonstrated how far campus leaders were from viewing research

as a top priority. Notes from the Retreat indicate that the majority of initiatives being considered were aimed at bolstering clinical growth. Moreover, strong resistance even to the initiatives under consideration revealed a serious division among department chairs. At a time when the Physician Practice Plan was facing more than a million-dollar deficit, a discussion of new program priorities chaired by Maurice Goodman yielded the following opinions: "Some committee members had strong feelings about not curtailing our growth because of limited space resources; we are much too young an organization to be thinking about leveling off our growth. Other committee members felt that the reality is that we must curtail growth because of the general climate of cost containment." Serious misgivings about the power vested in the Scientific Council also surfaced.[57]

In short, UMass Med seemed to be in the doldrums. Despite efforts to bolster the growth of research at the medical center during the Tranquada years via serious recruiting, cementing a strong graduate education presence, and acquiring additional, fully adaptable research space, many leading researchers believed the school's research profile still did not meet their needs.

At the same time, a growing sense of competition between researchers and clinicians simmered in a setting of scarce resources. The somewhat torturous path toward a revised research mission statement illustrates the situation. In 1987, the research component of the Worcester campus's mission statement was further revised to reflect the new emphasis on centers of excellence on campus and the earliest coordinated efforts to promote collaboration with the biotechnology industry, something also of great interest to Governor Dukakis and to the UMass Board of Trustees.[58] Yet after five years of successive revisions, the "research" segment of the long-range plan for the UMass-Worcester campus remained unfinished. Nor would it be completed any time soon given that the campus, currently embroiled in a search for Dr. Tranquada's successor, was deeply divided over its long-term goals: would it put most of its resources behind projects to strengthen the hospital and ambulatory clinics, or would it finally commit serious resources to recruiting researchers to bolster the excellent, but small cadre already in place?

The research community on campus by the time of Chancellor Tranquada's departure strongly believed that this was the moment when the campus' research sector must be reinforced or, likely, it would wither into insignificance. Simply put, the emergence of powerful technologies to advance research at the molecular and cellular levels—gene sequencing, linkage mapping, recombinant genetics, monoclonal antibody production, advances in visualization, to name a few—accelerated the unification of previously diverse biological specialties under the rubric of "molecular biology." As one historian of medical education has observed, "If any one aspect of the molecular revolution demonstrated that a new era in basic biomedical research had begun, it was the coalescence of the once separate 'preclinical sciences' into a single field speaking a single molecular language." Adapting a definition of molecular medicine from Francis Crick, another writer has written that it "encompasses the structure and interactions of the building blocks of living things, particularly proteins and nucleic acids, and studies of gene structure, replication, and expression." Within that extensive and supple framework, the research of faculty members in a range of departments began to converge, if not outright overlap.[59]

This is not to suggest that this evolution was sudden or, indeed, unforeseen. The term "molecular biology," at least in the American context, was coined in 1938 by Warren Weaver, director of the Rockefeller Foundation's natural sciences division, although his usage of the term was more generic than what would obtain during and after the 1950s.[60] The National Science Foundation (NSF) first used the term "molecular biology" in 1952, a year before the discovery of the double helix structure of DNA, that is, before "the post-double helix narrowing of the term to molecular genetics," in historian Toby Appel's words. By the mid-1960s, a sense of molecular biology's inevitable ascendancy was widespread. Indeed the NSF's Molecular Biology Program section head from 1966-1969, Eugene Hess, viewed the concept as "not a discipline, but rather a level of organization or approach to the study of life."[61] Neal Brown, founding chair of the Department of Pharmacology, recalled that in 1965 or 1966, when he was finishing up his doctorate at Yale,

> there was a guy; he was always kind of a laconic fellow, [a] professor, and he always had his feet up on his desk. And he said, 'Come here, Brown. I want to show you the future'...And he slapped down the first issue of *The Journal of Molecular Biology*. He says, 'That's where it is.' That's where it was, yeah.[62]

At UMass in 1970, Moe Goodman understood the desirability of establishing a physiology department that did not focus on "whole animal" systems. Planning the department with his first recruit, Fredric Fay, Ph.D., he knew that, at that time,

> ...the biochemists were doing things on a cellular level and physiology was still working on the whole animal level. And there was...nothing in between...So the theme that we adopted was we were going to do cellular physiology that would bridge the gap...and remember, this was before molecular biology really got underway and people were still trying to study the physics of blood flowing through tubes.[63]

Donald Tipper, founding chair of the Department of Microbiology, reflecting on the early 1970s when he began recruiting faculty for his department, was "forcibly reminded of the vicissitudes of establishing a first class microbiology department, representing the best in the exploding field of molecular biology while fostering its integration with medical microbiology, immunology, physiology and pathology."[64] Allan Jacobson reiterated, "[The Microbiology department] tried really hard to build what amounted to a molecular biology department, people who care about DNA, or RNA, or gene control in various ways, genetics."[65]

In short, the first generation of researchers at UMass Medical School knew they were trying to lay the groundwork—conceptually and fiscally—for a new era. By the early 1980s, a second-generation "molecular revolution" in biology had moved beyond discovery of the structure of genetic materials to the capacity to visualize and manipulate them experimentally. Roger Davis, Ph.D., who joined Michael Czech's laboratory as a postdoctoral fellow from Cambridge in 1982, reflected that at the time,

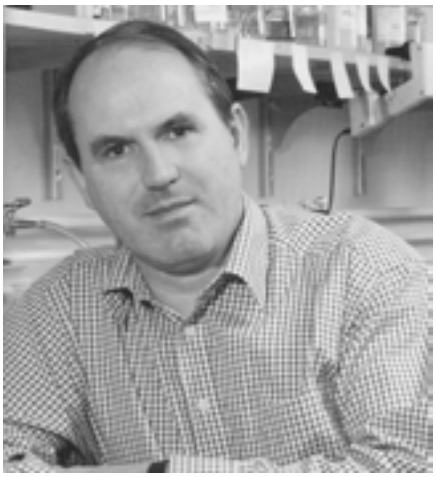
> there was this massive revolution in molecular biology, and being able to isolate DNA fragments, clone proteins, and to actually really start working with molecules, was...a revolution both in understanding, but also in terms of techniques which then became possible that were never possible before [e.g.] molecular cloning, being able to mutate DNA at will, and to study how things worked essentially by taking it apart at the molecular level. You could use DNA to actually make any change in anything you wanted, and then find out how it works by pulling things apart.[66]

UMMC scientists faced a paradoxical problem well described by Michael Czech:

> Remember, in 1981 when I came here [the research enterprise] was really in its infancy...I would say it was very good. But it was not, in general, the breakthrough science that bigger institutions were enjoying...And that was a problem because recruiting great people requires, fundamentally and primarily, the great magnet of other outstanding scientists. Everyone wants to be with other outstanding scientists in the science business, just like in a baseball team. So to recruit great people, you had to have great people—the typical Catch-22, the typical egg and chicken problem...And we were, I think, mired in that chicken and egg problem literally all the way through the eighties.[67]

Roger Davis vividly recalled the sense of uncertainty that seemed pervasive among researchers here at the time. He was among the first researchers to join Czech's Program in Molecular Medicine when it was founded in 1989. In 1990 he became the first UMMC researcher to become a Howard Hughes Medical Institute Investigator, a status he continues to hold as of this writing. In 2002 he was named to the H. Arthur Smith Chair in Cancer Research. That same year, Davis was elected a Fellow of the Royal Society.[68] The goal of his research is to understand "the role of inflammatory responses in disease processes. A specific focus of [the] research is the function of stress-activated MAP [mitogen-activated protein] kinases in cancer, diabetes, and neurodegeneration." In 1994 and 1995, soon after Davis's lab had mapped and cloned a previously unstudied genetic pathway implicated in this stress response with important implications for

Alzheimer's, stroke, traumatic brain injury, and diabetes, he was the most cited researcher in the world.[69]



Roger Davis, Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Davis considered the later 1980s as "actually a very dangerous time." In addition to the school's relative youth and lack of resources to bring in established researchers exemplifying what Davis called the "molecular biology revolution," some of the outstanding researchers already here were "raided by other institutions." He remembered

> a conversation with Mike Czech and...a couple of other people. I remember we had discussions that there were two things that were likely to happen at UMass. One [was], two of our esteemed colleagues had been recruited away, and quite likely a year from now both of us would end up moving away, probably to two different institutions as well. And the other possibility [was] that we [might] do something different and new.[70]

Spatial considerations played a large part. As Roger Davis explained, reiterating a point also made by Donald Tipper, the original Medical Science building, by this time nearly 20 years old,

> ...was a stratified building. If you were in Biochemistry, there was really very little interaction with people on the floor above and the

> floor below. And as a result, we had old-fashioned—Pathology was this; Biochemistry was this, and other departments were that, Cell Biology was that, with very little intermingling. And I think that what was really missing was the idea of shaking everything up, and realizing that all biomedical science was the same, and that we needed people from very different disciplines to come together, to really cross-fertilize expertise from Biochemistry, to Molecular Biology, to other things.[71]

Deeper concerns underlay these frustrations, a feeling, as Maurice Goodman reflected much later, that, "the mission of the medical school was to develop primary care, and that we really didn't need another Harvard, and we didn't need to have a strong science and research and intellectual component, other than the intellectual aspect which related to patient care." Moreover, the researchers perceived,

> ...a developing schism and a developing competition for resources. The only sources of funding at the time were clinical income, the relatively small state appropriation, and the overhead on research grants. Very little effort or progress had been made in philanthropy...So there was really a shortage of money, and a shortage of space, and a burgeoning clinical establishment, as well as a burgeoning scientific establishment. And we were sort of at a stalemate at the time; it appeared that we had gone about as far as we could go, or at least as far as we could go under the Tranquada kind of leadership.[72]

These varying concerns, a sense of crisis among the researchers, persuaded leading researchers at UMMC to urge the President of the UMass system, David Knapp, to seek out a new chancellor who would shake things up and, perhaps, put research at the top of his or her priorities. It would appear that Knapp and the Trustees were indeed persuaded by their arguments.

Leaders of the clinical operations at UMMC, however, did not see the situation from anything like the perspective of the basic scientists. Worse, they seem not to have understood that at the level of the President's office, priorities were beginning to shift. The clinical chairs' assumptions were understandable;

yet they evince a wide gap between the cultures of clinical medicine and basic research at that time. As described in Chapter 5, University Hospital had begun to show a profit in the early 1980s, had become a certified regional trauma center, and was becoming the dominant center for cardiac care in Central Massachusetts. Yet its profit margins were slim. The intrusion of HMOs into the health care scene resulted in close competition among the region's hospitals and a desire to push the UMass Hospital out in front of its competitors. Counterbalancing the aspirations of the basic scientists in 1986 one must weigh the aspirations of the clinical faculty.

David Knapp, President
University of Massachusetts
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

James Dalen and the Clinicians' Perspective: the Road not Taken

At the time of Chancellor Tranquada's decision to leave UMass, President Knapp reported to the Board of Trustees that he had canvassed the Worcester faculty and would recommend James Dalen, M.D. to be Acting Chancellor. (Barry Hanshaw, chair of Pediatrics, had been named Dean and Provost earlier that year in recognition that the campus was by now too complex for anyone to be both Chancellor and Dean.) Dalen, who arrived at UMMS as Chair of Cardiology in 1974 and became chair of the Department of Medicine in 1978, was also a member of the Hospital Management Board. Although he was strongly identified with the clinical work of the medical center, he was widely known and respected. In 1976 he became president of the American College of Chest Physicians and soon after, the editor of the *Archives of Internal Medicine*, both prestigious positions indicative of a strong national reputation.[73] Dalen was widely—and justifiably—seen as a key reason for the hospital's viability in a highly competitive market. Among some members of the clinical faculty, the hospital was known

as "the house that Dalen built."[74] It was evident, especially to the clinicians, that competition among hospitals in the new era of managed care required the oversight and strategic intensity of a seasoned hospital administrator—someone, in short, like Dr. Dalen. In this context, Moe Goodman, who was named by President Knapp to head the search committee for a new chancellor, was asked by clinical colleagues not to "rock the boat." Goodman elaborated:

> There was strong competition between UMass and not only Saint Vincent's, but also Memorial, and growing need to break...into the leadership role in locally providing health care...And therefore, there was a strong feeling that we ought to maintain the status quo...[75]

Unfortunately for Dr. Dalen, although he and many of the clinical chairs and faculty at UMass were enthusiastic about his appointment and hoped it would lead to his being named permanent Chancellor, the President, Trustees, and the search committee already were determined to name someone from

James Dalen, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

the outside. Indeed, at about this time Dalen was offered the deanship of the University of Washington Medical School, and President Knapp urged him to take it.[76] Dalen made crucial contributions to the growth of the UMass hospital and thus to the stability of the school. But his priorities and style of research

did not seem to align well with the vision of UMMC's future coming into view. Chapter 5 in part described Dalen's successful launch of the Department of Cardiology. Two additional examples of successful initiatives he inaugurated, one the work of Judith Ockene's Division of Preventive and Behavioral Medicine, the other Jon Kabat-Zinn's Stress Reduction Clinic and mindfulness-based stress reduction program (MBSR), may serve to illustrate both Dalen's farsightedness and the distinctive character of his leadership. Both exemplified initiatives of great importance to the reputation of the medical center. Both pursued significant advances in human health and wellbeing. Neither one, however, fit easily into the "molecular" paradigm for research that had begun to shape the President's and the Trustees' vision for UMMC for the coming decade.

The division of Preventive and Behavioral Medicine was instituted by Dalen under the leadership of Judith Ockene, Ph.D., founding chief of the division since 1983. Ockene first worked with Dalen at the Harvard School of Public Health as a psychologist. They focused on behaviors that carried a high risk for heart disease, especially smoking, as part of Dalen's Multiple Risk Factor Intervention Trial (MRFIT). When Dalen came to UMMC in 1974, he brought Ockene's husband, Ira Ockene, M.D., with him to open the catheterization lab. Eight years later, he also invited Judith Ockene to set up a program of her own design in cardiac preventive care. She became one of the few women division chiefs at the hospital. Soon she established a pattern of winning large research awards, such as one in 1986 for $4.4 million to study community-based anti-smoking measures, one of several such grants she received between 1984 and 1989. An adviser to several U.S. Surgeons General and the scientific editor or author of successive editions of the Surgeon General's Report on Smoking and Health, in 1990 Ockene was awarded a Surgeon General's Medallion for Exemplary Service for her work on prevention or cessation of smoking. She was also made the Barbara Helen Smith Chair in Preventive and Behavioral Medicine in 2001. More recently, in work for which she became equally well known, she became a principal investigator on several branches of the Women's Health Initiative studies, running large clinical trials either alone or in collaboration with

the Fallon Clinic of Worcester.[77]

The Stress Reduction Clinic and the Birth of Mindfulness in Health Care

Dr. Dalen took a calculated risk by giving Dr. Ockene, a psychologist, carte blanche to create a division of preventive and behavioral medicine. He took a much greater risk, arguably, in bringing a young, almost totally unknown molecular biologist, Jon Kabat-Zinn, Ph.D., into his department to develop a program in stress reduction techniques for UMMC patients. Today the concepts of "mindfulness" and what Kabat-Zinn called "mindfulness-based stress reduction" (MBSR) are internationally known. A recent study of the influence of mindfulness meditation techniques, *Mindful America* (2014), considers Jon Kabat-Zinn one of the three main "wellsprings of the American mindfulness movement." Its author writes, "The universally acknowledged turning point for the mindfulness movement's relationship with science and medicine is 1979, when Jon Kabat-Zinn started the Stress Reduction and Relaxation Program at the

Judith Ockene, Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

University of Massachusetts Medical School."[78] A recent search in the published English language scientific literature indicates that studies utilizing MBSR have increased more than fifty-fold between 1999 and 2014.[79] Kabat-Zinn founded

the UMMC Stress Reduction Clinic in 1979 and the Center for Mindfulness in Medicine, Health Care, and Society (the latter established with colleague and UMass successor, Saki Santorelli, Ed. D.) in 1995.

Kabat-Zinn has defined "mindfulness" as "the awareness that arises by paying attention, on purpose, in the present moment, non-judgmentally... in the service of self-understanding."[80] The concept is part of a tradition in American medicine that can be traced back at least to Harvard cardiologist Herbert Benson's studies in the late 1960s, work that was popularized in 1975 with the publication of *The Relaxation Response*. Investigating the effects of "transcendental meditation" (TM), a yoga tradition that became well known in the 1960s through Maharishi Mahesh Yogi, Benson measured TM's physiological effects and observed that it can lower heart rate, oxygen consumption, blood pressure, and general metabolism. Subsequent studies by Benson's colleagues related meditation practice to a reduction of the body's response to the stress-related hormone, norepinephrine.[81] Benson's work stimulated subsequent studies and wide interest. (Indeed, he lectured at St. Vincent Hospital in Worcester in the 1970s.)[82]

Kabat-Zinn's path was quite different from Benson's. Although he must have been aware of that work, there seems to be no direct connection between the work of Benson at Harvard and Kabat-Zinn at UMass.[83] Rather, Kabat-Zinn's development of MBSR was rooted in Buddhist traditions that began to spread in the U.S. in the 1960s and 70s mainly through the teaching of American-born masters who had been educated in Southeast Asia or Korea. Such teaching, whether at Zen centers such as that founded in Rochester, New York in 1966, or at Theravada centers such as the Insight Meditation Society established in Barre, Massachusetts in 1973, made a deep impression on Kabat-Zinn and many others.[84] Kabat-Zinn's story is that of someone with a scientific background also trained in Buddhist meditation; he understood that meditation's health benefits would not reach deeply into American society unless they could be re-contextualized within the culture of American bio-medicine. The wide-open culture of UMass Med in the 1970s, along with Dr. Dalen's unusually welcoming

attitude toward preventive and behavioral approaches to cardiology, provided an opening for what might have seemed a holdover from the hippie world of the 1960s. Even in the late 1970s meditation was considered part of health care's "radical fringe," as Kabat-Zinn has often acknowledged.[85] As he reflected in 2011,

> ...from the beginning of MBSR, I bent over backward to structure it and find ways to speak about it that avoided as much as possible the risk of its being seen as Buddhist, 'New Age,' 'Eastern Mysticism' or just plain 'flakey.' To my mind this was a constant and serious risk that would have undermined our attempts to present it as commonsensical, evidence-based, and ordinary, and ultimately a legitimate element of mainstream medical care.[86]

Kabat-Zinn received a doctorate in molecular biology with Nobel Laureate Salvador Luria at MIT. (His father was a scientist at Columbia, and respect for the culture of western science runs throughout Kabat-Zinn's story.) But, he was "really interested since early childhood in the whole question of consciousness, and how are we conscious beings." In 1965 at MIT he attended a lecture by Philip Kapleau, author of *The Three Pillars of Zen*, and felt, "this is what I've been looking for my whole 21, 22 years of being alive!" He completed his doctorate in 1971, but rather than pursuing a career in molecular biology he began devoting more time to yoga and meditation, searching, as he put it, for a way to find a "right livelihood" for himself, a "worthy work."[87] He became ever more committed to understanding, practicing, and teaching mindful meditation.

In 1976, unemployed and with a family to support, he began a postdoctoral fellowship working with Robert Singer, Ph.D., member of the Anatomy Department at UMMC.[88] And while his heart wasn't in the work of his lab, he did begin to hold ad hoc yoga classes for anyone in the medical center as well as "yoga for anatomists" sessions for his colleagues.[89] Kabat-Zinn became convinced of the health benefits of his techniques. With the goal of "bridging [the] two epistemologies of science and dharma," an idea for a clinic began to crystallize. During his stay at a retreat at the Insight Meditation Center in the spring of 1979, Kabat-Zinn "had a 'vision' that lasted maybe 10 seconds...I saw in a flash not only

a model that could be put in place, but also the long-term implications of what might happen if the basic idea was sound and could be implemented in one test environment." He had been rounding with Drs. Thomas Winters, Robert Burney, and John J. Monahan, leaders respectively of the hospital's primary care, pain, and orthopedics clinics.[90] Now he thought he saw a way to move forward. As Kabat-Zinn reconstructed the events,

> I asked them things like, 'What percentage of your patients do you feel like you actually help? What percentage [of patients] get better?' And the three of them wound up saying different variants of, 'Maybe fifteen, maybe twenty percent of people I see get better, really respond to our treatments.' And I said, 'Well, what the hell happens to the others? That's like 80 percent, 85 percent.' And they say, 'Well, they either get better on their own, or they never get better.'
>
> And I said to them, 'Well, do you think that it might be valuable if you had a place in the hospital that you could send all the people that in some sense you don't know what to do with anymore? They are not getting better ...We'd create a clinic in the form of a course that was designed to teach people how to take better care of themselves, and particularly designed for the people falling through the cracks of the health care system, and challenge them to do something for themselves that no one on the planet could do for them, that you can't do for them, that their spouse can't do for them, that their parents can't do for them, that their clergy can't do for them, that no one can do for them; namely, that your patients have to...take some degree of responsibility for their own health and wellbeing.[91]

With encouragement from these clinicians, Kabat-Zinn proposed that a stress-reduction program become part of the Ambulatory clinic at the hospital. (It didn't hurt that the hospital was half empty in 1978.) In 1979 the Stress Reduction and Relaxation program opened down on Level A as part of the Physical Therapy department, operating only two days a week. (The head of Physical Therapy generously offered her office for the patient interviews Kabat-Zinn conducted before, during, and after the program.) The core of the program was—and is—an eight-week course (originally it was 10-weeks) utilizing

meditation and gentle yoga techniques to develop, as he wrote, "'new kinds of control and wisdom in our lives, based on our inner capacities for relaxation, paying attention, awareness, and insight.'"[92]

Kabat-Zinn decided to write a pilot grant proposal to NIH to document MBSR's effectiveness in reducing pain and hypertension. This required his holding a faculty position. In turn, that required the support of the chair of the Department of Medicine, Dr. Dalen who, at the time, knew nothing about him. Significantly, the Cardiovascular Medicine division chief, Joseph Alpert, M.D., a close associate of Dr. Dalen, became interested in the potential of stress-reduction techniques for his patients. Alpert, who agreed to become co-principal investigator on Kabat-Zinn's grant proposal, intervened. Dalen paid a surprise visit to Kabat-Zinn and they struck a deal: Kabat-Zinn would receive an appointment as an instructor in the Department of Medicine and would measure his patients' outcomes as rigorously as possible. At the end of one year he would present his findings to the department at grand rounds. If Kabat-Zinn could show that the Stress Reduction Clinic had been effective, Dalen would give him a regular appointment in the department. In this way, what he now called *mindfulness-based* stress reduction became part of the regular offerings of UMass Medical Center. In 1983 Kabat-Zinn became a member of Judith Ockene's division of Preventive and Behavioral Medicine.[93]

Jon Kabat-Zinn, Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

But his standing within the medical school was not particularly secure. One incident involved the chair of Surgery, Brownie Wheeler. One day early in the clinic's operation, Kabat-Zinn was lying on the floor of the Faculty Conference Room, leading a group of patients in the first scheduled class of the stress reduction program. He was "midway through guiding [them] in an extended lying-down meditation known as the body scan." The patients were all on colorful yoga mats. Kabat-Zinn was attired in "a black

tee-shirt, black karate pants," and no shoes. Suddenly, a large group in long, white coats, some with stethoscopes, entered the room led by Dr. Brownie Wheeler, someone Kabat-Zinn had heard of but had never met. Dr. Wheeler stopped, looked around, walked over to Kabat-Zinn (who was by then leaning on one elbow to better appraise the situation), and asked him what was going on. Kabat-Zinn explained what he was doing, while Wheeler's group looked around. Finally, Dr. Wheeler asked, "Are these our patients?" When Kabat-Zinn replied, "Yes," Wheeler led his group out the door, saying "We'll find someplace else to hold our meeting." Over time, with at least tacit support from Drs. Dalen and Wheeler, the Clinic's reputation grew. Since 1979, thousands of patients have been referred to it by central Massachusetts physicians. From 1992 to 2000, Kabat-Zinn and Santorelli also established an inner city clinic based at Worcester City Hospital, and from 1992 to 1996, a program for Massachusetts prison inmates that worked with 10% of the inmate population.[94]

From the perspective of the history of the medical school, what seems most interesting is the way that Kabat-Zinn tried to adapt a meditation and yoga-based clinical intervention to the research-driven culture of an academic health science center.[95] Because this dimension of Kabat-Zinn's and his colleagues' work was deliberately embedded early on, the Center for Mindfulness in Medicine, Health Care, and Society still exists at UMMS—albeit not without a few institutional "near death" experiences. Despite having powerful supporters (or, at least, no powerful enemies) among UMMS's clinical leaders, the Stress Reduction Clinic could never have afforded to coast along on anecdotal stories of success. It had to document its effectiveness systematically. It had very little money for research, particularly in the early years, but Kabat-Zinn and his small staff tracked clinical outcomes using a standardized symptom checklist designed by the National Institute of Mental Health. Kabat-Zinn also used a psychological assessment tool, the Symptom Checklist-90 (SCL-90-R) with, "nine different so-called psychiatric dimensions to it. And then I could at least see whether I was seeing symptom reduction over the course of the eight weeks... [The] question was, 'would these symptoms get better, training them in mindfulness and mindful Hatha yoga?'

And they did. And we were documenting it."[96]

Kabat-Zinn wrote his first paper in 1982, focusing on the clinic's chronic pain patients.[97] Additional papers followed, but widespread national recognition occurred more as a result of the publication in 1990 of his book *Full Catastrophe Living*.[98] When the journalist Bill Moyers created the television series "Healing and the Mind" in 1993, a five-part broadcast that eventually won an Emmy and many other awards, Kabat-Zinn's work was the entire focus of one segment titled "Healing from Within." At the conclusion of the segment Moyers reported that, according to Stress Reduction Clinic findings, 75% of its patients reported moderate to great improvement in their symptoms and 90% had continued some form of meditation four years after taking the eight-week class. Kabat-Zinn and MBSR had begun to reach a national audience.[99]

As the Stress Reduction Clinic became more established within the Division of Preventive and Behavioral Medicine, several changes occurred. The first involved the recruitment in 1983 of Dr. Saki Santorelli, Ed. D., an educational psychologist. Santorelli quickly became the clinic's second in command and took over much of the clinic's medical student teaching and clinical work while Kabat-Zinn focused on external collaborations. Santorelli had acquired years of experience with yoga and meditation prior to becoming an intern with Kabat-Zinn in 1982. In 1983, he was made the Assistant Director of the Stress Reduction Clinic at UMass Hospital. In 1995, the Clinic spawned a research and fund-raising unit called the Center for Mindfulness in Medicine, Health Care, and Society which, besides acting as an administrative hub, sponsored research conferences, professional internships in MBSR, and research. It was funded not by hospital reimbursements but, after the first few years, by direct payment from clients, grant funding, and philanthropic donations. Many

Saki Santorelli, Ed.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

professionals were requesting some form of training to teach MBSR at their own institutions. In 1996 the Center began to offer a certification program as well as more intensive, multi-day retreats.[100] Kabat-Zinn became Executive Director of the Center, while Santorelli took over as the director of the Stress Reduction Clinic. Santorelli participated in the medical school curriculum, offering a Stress Reduction class to medical students and in the 1990s, worked with Dr. Sarah Stone in the Physician, Patient and Society course described in Chapter 7.[101]

In 2000, Kabat-Zinn retired from the medical center. He continued to write and to lead workshops, many in collaboration with Santorelli. Santorelli became Executive Director of the Mindfulness Center, which evolved into the umbrella organization for both the hospital-based Stress Reduction Clinic and the professional education and MBSR research activities based at the Medical School. Four months after taking over, he learned that the clinic was about to be scuttled by the Hospital. Since its merger with Memorial in 1998, the former University Hospital had not had an easy time. A need to achieve financial stability now led the hospital's leadership to demand drastic budget cuts from, among others, the Stress Reduction Clinic. Moreover, an unsuspected accounting error revealed that the clinic was seriously in debt.[102]

As Santorelli recalled, this looked like the "end of the line" for MBSR at UMass. It was certainly a trial by fire for Santorelli. After months of negotiations, he heard some potentially good news from the Medical School's leadership: Rick Stanton, Deputy Chancellor for Finance, and Tom Manning, Vice Chancellor for Operations, had decided the Center for Mindfulness in Medicine, Health Care and Society was "worth saving." Santorelli understood that Manning's "*real* terms" were: "Maintain your academic and scholarly work, run your operation like a business, float your own boat, or you'll be out of here." The hospital-based clinical referral service, the Stress Reduction Clinic, ceased to exist; instead, private, paying patients would register for courses in MBSR at the medical school-affiliated Center for Mindfulness in Medicine, Health Care and Society. Fundraising and fees from professional training workshops in MBSR would also help pay the bills. As part of the medical school, however, research such as

the use of brain imaging techniques to track the effect of MBSR on addiction, depression, chronic pain, and other conditions, played a key part in sustaining its academic credibility.[103]

A Painful Transition

Regardless of successful and innovative programs in clinical and behavioral research, regardless of Dalen's importance to the success of the hospital, and regardless of the desires of the clinical faculty, by 1986 the basic science faculty, UMass President Knapp, and some of the Trustees, all believed the school's future course must emphasize molecular science if it were to realize its full potential. Without publicly stating as much, the search for a new chancellor was intended to look outside UMMC.[104] At the same time, James Dalen and Brownie Wheeler—the most powerful of the clinical chairs—seemed to be the hands-down, local favorites to become the next chancellor. When President Knapp named Dalen Acting Chancellor in 1986 but did not extract a pledge that Dalen would not seek the permanent appointment, many in the medical center and the community at large understandably thought the die was cast. The search for Chancellor Tranquada's successor, therefore, ushered in a period of false hope, internal division, and bitter feelings. This was unlike anything previously experienced by UMass Med in its nearly two decades of existence.

Dalen later said publicly that at first he hadn't been certain he wanted the job. After a few months, however, he realized how much he enjoyed it, and put his name up for consideration. Dalen's numerous friends among clinical faculty, patients (including the local Bishop), the local press and, especially, local politicians, proved to be both a source of strength for him and a weakness. During the first few months of the search for a new chancellor, which turned out to be a bruising, year-long process, a stream of local newspaper articles described the latest developments in cardiovascular research, treatment, and prevention strategies, especially those with a direct link to UMass Medical Center. Dalen's name was mentioned prominently in all of them. In fact these were newsworthy

developments. One called attention to the "Worcester Heart Attack Study," initiated by Robert Goldberg, Ph.D., of the Division of Preventive and Behavioral Medicine, part of Dalen's Department of Medicine, a study subsequently directed by Dalen and his chief of Cardiovascular Medicine, Joseph Alpert. Begun in 1979 as a long-term study of heart attack patients treated in all 16 hospitals in the Worcester area, its first published conclusions came out in the May 24, 1986 *Journal of the American Medical Association* and showed a "decline in mortality rates from coronary disease in metropolitan Worcester." Prominent mention also was made of UMMC's place among only 13 medical centers to be authorized to engage in clinical trials of "tissue-type plasminogen activator" (TPA), a new heart attack therapy. Finally, also within the first few months of the search for Dr. Tranquada's successor, another article cited the $4.4 million grant won by Judith Ockene and Robert Goldberg to develop smoking prevention programs. Ockene, as noted above, was a Dalen protégé and a division chief in Dalen's department. To an outside observer, it would have seemed that much of the innovation and excitement at UMass Medical Center emanated from the work of faculty in Dalen's Department of Medicine.[105]

Dalen's supporters might have felt less confident had they taken a closer look at the composition of President Knapp's search committee. Among the seven members from the Medical Center, three were basic scientists and one was a leader of University Hospital's major competitor (Memorial). To the extent that Dr. Dalen was seen as a proponent of University Hospital's expanded reach into central Massachusetts and, implicitly, someone unlikely to sacrifice his goals for the sake of basic research, this committee was primed to look elsewhere for a Chancellor.[106] When Dalen was interviewed by an editor of the *Worcester Gazette*, Robert Nemeth, who asked him about his vision for the Medical Center, his reply must have given the research side of the campus pause. He told the newspaper's readers, "*Things will center around the hospital.* How the hospital will adjust to the changes [in the economic environment] will determine our success." He added that he hoped to enhance the Medical Center's prevention program and to develop a first-class cancer center, something Dr. Tranquada had also promoted.

He made no mention of basic research.[107]

President Knapp, on the other hand, along with many of the Trustees and influential researchers on campus such as Drs. Goodman and Czech, felt that the search was, in Goodman's words,

> ...an opportunity to raise the medical school to a new level, that we were an okay medical school, but if we really aspired to be a great medical school, we needed the kind of leadership that would pull us forward.
> And my charge, as chairman of the search committee, was to find a candidate who would bring us to that next level, that would presumably involve [the institution] in expansion, since we were really bursting at the seams.[108]

As the hopes and expectations of the clinical side of the institution confronted the quite different goals of the basic scientists, the Trustees, and President Knapp, what ensued was one of the messier executive-level searches in the medical school's history. The search committee winnowed a longer list of potential candidates presented by an executive search firm down to a group of five who were given an initial interview, including James Dalen. But when the committee recommended three finalists for consideration by President Knapp and the Board, word leaked out that Dalen was not among them. Suddenly everyone from 17 Worcester-area state legislators, to the Bishop of Worcester, to members of Dalen's own department (who began a petition drive), weighed in on the exclusion of the popular acting Chancellor. One of the local newspapers wrote an editorial titled, "Give Dalen a Chance." The same paper also reported a rumor alleging that a "Jewish conspiracy" was behind the exclusion of Dr. Dalen; the totally unfounded rumor apparently arose because all of the top three candidates were Jewish, while Dalen was not. The newspaper reported outrage after President Knapp remonstrated with the clinical chairs over the charge: "'No one here at the medical center has the faintest idea where [President Knapp] got that idea,' said [Joseph] Alpert, who is Jewish. [Alpert] said some doctors who are Jewish are backing Dalen and other Jewish doctors are on the other side." After

two of the three finalists dropped out, the Board proceeded to choose Leonard Laster, M.D., chancellor of the Oregon Health Sciences University (OHSU) in Portland, as the new chancellor of UMMC. At that point, state Senator John Houston urged the Massachusetts attorney general to investigate the university's apparent violation of the Open Meetings law. (The law required that "semifinal rounds of a search must be open to the public.") President Knapp reluctantly reinstated Dr. Dalen to the list of finalists and, at least technically, reopened the search. The Board then met in public as a search committee of the whole to interview the two remaining candidates, Laster and Dalen on July 29, 1987. Immediately after, they reconvened in private and formally (re)elected Dr. Laster. James Dalen left UMass in 1988 to become the dean of the University of Arizona College of Medicine; in 1995 he was named Vice President for Health Sciences there.[109]

Knapp told the press that "Dr. Laster is a man of great vision, a builder and motivator who has successfully mobilized private and public support for the [OHSU]." His motivation for choosing Leonard Laster were shared by the majority of Board members and the search committee, namely, that it was time to try something new. Dr. Laster, when asked how he envisioned the future of UMass Medical Center, told reporters, "It is an institution poised to leap to greatness or accept a future of making do and [just] surviving without going to the heights."[110] Publicly and privately, Dr. Laster, President Knapp, and search committee chair Maurice Goodman were unanimous in their belief that the medical center was suffering from a lack of commitment to research excellence. Laster commended himself to the search committee particularly because of his accomplishments at OHSU. During his decade in Portland, Laster had taken a school with a middling research profile—something directly related to its anemic levels of state support and to its apparently ineffectual attempts at fundraising—and, with the strong support of then-U.S. Senator Mark Hatfield, turned it into the nationally well-regarded home of the Vollum Institute, a center of neuroscience research. UMMS, it was felt, suffered from the same problems as OHSU: declining state funding and a dearth of philanthropic donors to finance

recruitment packages, endowed chairs and, especially, new research facilities.

Laster's career had begun at the NIH clinical center researching diseases of the gastrointestinal tract. Teaming up with various colleagues there to investigate a variety of mysterious disorders presented by patients referred to his service, he and his colleagues identified several new diseases. To Laster, their successes arose directly from the way the Clinical Center at NIH was organized:

> And this is one of the wonders of the NIH: you could walk down the hall to another building, and there was someone who was a world authority on metabolism in that field...This down-the-hall capacity was just an amazing way to foster basic research. And that's relevant to what I used as my model in subsequent activities.[111]

The NIH model became the template with which Laster approached the challenges presented by a series of, in his view, underperforming medical schools. He spent a few years at Downstate Medical Center, and then nearly a decade at OHSU. His goals for Oregon Health Sciences University seemed to fit the needs of UMass: "[T]he need was, in my judgment, to give the place an image, to the people of the state, of excellence, excitement, and to turn the recruitment difficulty around by being a place to which the top people would want to come." His success there led the UMass search committee to invite him to apply for the position here. President Knapp told him, as Laster remembers it, "The place needs a rejuvenation." In Knapp's view, as understood by Dr. Laster, "there was a need for a shot in the arm for the institution. [Knapp] said it was a chance to build something; it had some excellent people, and it did. When I came to visit, I met some people who were of top caliber. And I got the impression that he wanted me to replicate the story from Oregon." In particular, Knapp hoped that Laster could persuade the Massachusetts legislature to provide stronger support, something he had accomplished in Oregon.[112]

Laster's successes at OHSU had come at a price, however, something Maurice Goodman and David Knapp apparently learned only after he had been hired by UMass Medical Center. Several years into Dr. Laster's tenure in

Portland, he received a highly negative job review for having "an abrasive style of leadership." Of equal significance, he made lasting enemies there of longstanding faculty who felt threatened by the resources and attention being lavished on the new research centers and their newly recruited faculty. The same factors would play out at UMass Med. Dr. Laster's term there proved short, but with long lasting, positive effects on the research profile of the school.[113]

Laster's chancellorship at UMass lasted from October 1987 until August

Leonard Laster, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

1990. During that relatively brief span, several significant initiatives were set in motion. One successful venture involved getting legislative and Board approval to fund the new ambulatory clinic (later named for Joseph Benedict, as discussed in Chapter 5). More far reaching was the successful initiation of the Program in Molecular Medicine (PMM), to be discussed in Chapter 9. In October 1988, Dr. Laster announced to the UMass board that the program would focus on "molecular biology as it relates to human medicine, cancer, brain disease, Alzheimer's, genetics, aging, immunology, and [viral] disease[s]. The Department will be housed in the Bio-Technology Research Park and will be headed by Dr. Michael Czech, Chairman of Biochemistry."[114]

The Molecular Medicine program, represented Laster's vision for a

revitalized research profile at UMass Medical School; it led to many advances at the Worcester campus. Laster himself, however, could not effectively oversee the deep changes inherent in his vision. His managerial style was indeed abrasive, as had been observed in Portland nine years earlier. Philanthropy had not flourished, although, in fairness, such things take more than one or two years to develop. Nor had he been successful in reaching a rapprochement with the state's legislators, despite having hired someone who was well connected to many influential state politicians, Albert (Albie) Sherman.[115] By 1990, most of the medical center chairs were fed up with what to them seemed the arbitrary leadership of Chancellor Laster. After two years, they staged a "revolt." In a secret meeting arranged by Dr. Arthur Pappas in August 1989 in the Owners' Box during a Boston Red Sox game (Roger Clemens, the Red Sox's star pitcher, was on the mound), the department chairs decided to approach President Knapp about their difficulties with the Chancellor. Although this proved fruitless, by the following summer even former Laster supporters such as Dr. Goodman were willing to press Knapp's successor, Joseph Duffey, to remove Laster from his position. (David Knapp had resigned in early 1990, partly due to the fallout from his support for Leonard Laster.) Once again Dr. Pappas arranged a meeting at Fenway Park with Brownie Wheeler, Maurice Goodman, Aaron Lazare, UMass Trustee Michael Foley, UMass Board Chair Gordon Oakes, and President Duffey. With even Dr. Goodman insisting on the need for change, and the open hostility of the state legislature toward Dr. Laster, Duffey was willing to act.[116]

Psychiatry Department chair Aaron Lazare, who had been made interim dean in 1989 with strong support from the other chairs after the much respected and liked dean, James B. (Barry) Hanshaw, M.D. had resigned, was named permanent Dean of the medical school in July 1990. Leonard Laster resigned shortly after that, effective August 31, and Lazare was appointed Chancellor *ad interim* in October 1990. In June 1991 the Trustees appointed him Chancellor/ Dean, a title he held until 2007.[117] By reuniting the offices of dean and chancellor, as had been done under Lamar Soutter, the Trustees were heeding a call to end the turbulence that had marked the administration of Dr. Laster. By choosing

Aaron Lazare, they were signaling a desire to see someone with strong leadership

Aaron Lazare, M.D. *(Photo courtesy of the University of Massachusetts Medical School, Lamar Soutter Library, University of Massachusetts Medical School)*

skills who would also pay heed to the urgent need of the basic sciences for parity with the institution's clinical departments.[118] Chapter 9 will describe the school's return to relative calm and the consolidation and unprecedented growth of basic science research. Excellent leadership and extraordinary research were necessary for these developments to occur, yet without the decision to divest the hospital, made in the mid 1990s, it might not have been possible for the school to achieve its transformation.

NOTES

CHAPTER EIGHT

1 The characterization of early research strategy as "laissez-faire" comes from H. Maurice (Moe) Goodman, Oral History Interview transcript, Part 3, p. 1, interviewed by Ellen More, Aug. 18, 2009, Worcester, MA, Oral Histories, UM/W.

2 Board of Trustees, "Minutes," April 30, 1969, p. 10, Box "Board of Trustees Minutes of Meetings of Full Board and Committees, Jan.-July, 1969," fol. "Trustees (Full Board), Minutes, Agenda, etc., June, 1969;" Trustees, UM/A.

3 R. William Butcher, Oral History Interview transcript (by telephone), pp. 4, 7, interviewed by Ellen More, Aug. 30, 2010; Maurice Goodman, Oral History, "Transcript, Part 1," pp. 26, 38, interviewed by Ellen More, July 27, 2006, Worcester, MA; Allan Jacobson, Oral History Interview transcript, p. 7, interviewed by Ellen More, Nov. 28, 2012, Worcester, MA, all in Oral History Collection, UM/W.

4 At that time, the Pharmacology faculty had joint appointments in either Physiology or Biochemistry. H. Maurice Goodman, personal communication, Feb. 25, 2015; Goodman, Oral History Interview transcript, Part 1, pp. 40-41.

5 Shirwin Pockwinse, Oral History Interview transcript, interviewed by Ellen More, Nov. 20, 2008, p. 9, Worcester, MA, Oral History Collection, UM/W.

6 Quotation from Carol Brill, "Press Release," National Association of Social Workers, Massachusetts Chapter," in "Achievements of the 1971-1972 Massachusetts Legislature," accessed at http://archive.org/stream/achievementsof1900bart/achievementsof1900bart_djvu.txt on Oct. 6, 2014; "University of Massachusetts Medical School, FY1973, Comments Regarding Subsidiary Account in Which Reserve Funds are Requested," p. 9, Box "Board of Trustees Documents FY 1973 T001-094," fol. "Trustee Documents T73-013-024," Trustees, UM/A.

7 Lamar Soutter to Board of Trustees, "Summary and Recommendations of the Liaison Committee on Medical Education [LCME]," Nov. 7, 1972, p. 18, Box "Board of Trustees Documents FY 1973 T001-094," fol. "Trustee Documents T73-068-078," Trustees, UM/A.

8 Neal Brown, Oral History Interview transcript, p. 34, interviewed by Ellen More, Nov. 3, 2010, Worcester, MA, Oral History Collection, UM/W.

9 Brown, Oral History Interview transcript, p. 34.

10 Donald Tipper, founding chair of Microbiology, was one of several who singled out Dr. Goodman as "an exceedingly important person in the history of this institution." Donald Tipper, Ph.D., Oral History Interview transcript, p. 9, interviewed by Ellen More, Nov. 10, 2009, Worcester, MA, Oral History Collection, UM/W.

11 Goodman, Oral History Transcript, pp. 1, 5, 30-31; "H. Maurice Goodman," American Physiological Society *Living History,* accessed at https://web.archive.org/web/20150814145911/http://www.the-aps.org/mm/Membership/Living-History/Goodman on Sept. 17, 2014; H. Maurice Goodman, "Vitae: The Last Word," UMMS Annual Report, 2006; Michael Czech, Oral History Interview transcript, p. 4, interviewed by Ellen More, Dec. 17, 2009, Worcester, MA, Oral History Collection, UM/W.

12 Brown, Oral History Interview transcript, p. 3.

13 H. Maurice Goodman, "The Mission of the School," in Maurice Goodman, "Chairman's Report," typescript, p. 1, in "University of Massachusetts Medical School Physiology Department Five-Year Review, March 23, 1984," loose-leaf binder, Box 1, fol. "Department Accreditation, 1975-1990," Physiology/MAPS Collection, unprocessed, UM/W. [Hereafter, MAPS, UM/W.]

14 Butcher, Oral History Interview transcript, pp. 2-3, 7. UMass Medical Center Chancellor/Dean Roger Bulger told the Board of Trustees in 1978 that Butcher had recently been cited as one of the "50 authors most frequently cited in the biomedical literature." Cf. "UMMC Chancellor [Bulger's] Comments, Sept. 18, 1978," Board of Trustees Meeting, Oct. 1, 1978, Section "1978," in "Digitized Minutes of the Board of Trustees," Trustees, UM/A. accessed online at https://archive.org/stream/universityofmasst7778univ#page/n283/mode/2up [Hereafter, Trustees online, UM/A.]

15 Goodman, Oral History Interview transcript, Part I, p. 12, Oral History Collection; Maurice Goodman, "In the beginning…" pamphlet, n. p., in "University of Massachusetts Medical School, Department of Physiology 30th Anniversary, 1970-2000," loose-leaf binder, n.p., unprocessed, MAPS, both UM/W; H. Maurice Goodman, American Physiological Society "Living History" Profile, accessed at https://web.archive.org/web/20150814145911/http://www.the-aps.org/mm/Membership/Living-History/Goodman, accessed on Sept. 17, 2014; "University of Massachusetts Gifts and Grants Summary," July 1, 1972-Sept. 30, 1972, Box "Board of Trustees Documents FY 1973 T001-094," fol. "Trustee Documents T73 068-078," Trustees, UM/A.

16 Goodman, Oral History Interview transcript, Part 2, pp. 37-38; Cf. Doc. T73-079, "Development of the Worcester Campus of the University of Massachusetts:

A Committee Report," n. d. but c. late 1972, Box "Board of Trustees Documents FY 1973 T001-094," fol. "Trustee Documents, T73-079" Trustees, UM/A.

17 H. M. Goodman to Robert Tranquada, Feb. 20, 1980, p. 3, Box 1, fol. 5 "MAPS, Correspondence: Robert Tranquada, Chancellor/Dean, 1979-1986," unprocessed, in MAPS, UM/W; Allan Jacobson, Oral History Interview transcript, pp. 20-21, interviewed by Ellen More, Nov. 28, 2012, Worcester, MA.

18 Dr. Sullivan's research is described in Chapter 9. Cf. John L. Sullivan, M.D., Oral History Interview transcript, p. 4, interviewed by Ellen More, May, 19, 2011, Worcester MA, Oral History Collection, UM/W.

19 Jacobson, Oral History Interview transcript, p. 23.

20 Jacobson, Oral History Interview transcript, pp. 20-21.

21 Goodman, Oral History Interview transcript, Part 2, p. 27; Jacobson, Oral History Interview transcript, p. 23.

22 H. Maurice Goodman, "Chairman's Report," n.d., c. 1975, Box 4, fol. "Physiology Annual Report, 1975-76, Chairman's Report," p. 3, unprocessed, in MAPS, UM/W.

23 Quotation from H. Maurice Goodman, personal communication, Feb. 25, 2015.

24 Doc. T76-059, Box "Board of Trustees Documents, F76 T001-101," fol. "Trustees Documents, T76-054-063 (except 060);" "Special Report to the Committee on Budget and Finance: Status Report on Grants and Contract Administration," April 17, 1976, Box "Board of Trustees Minutes of Meetings of Committees: Budget and Finance, Buildings and Grounds, 1976 (Jan.-Dec.)," fol. "Board of Trustees, Committee ion Budget and Finance, May, 1976," both in Trustees, UM/A; Goodman Oral History Interview transcript, Part 2, pp. 27, 37-41.

25 Board of Trustees, "Minutes," Nov. 1, 1978, Section "1978," Trustees, online. Goodman's term as Acting Chancellor began on Nov. 15, 1978. Cf. Board of Trustees Document T78-123. At the conclusion of his term and the arrival of Chancellor Robert Tranquada in June 1979, Goodman, like Butcher before him, was awarded the University Medal for Outstanding Service. More informally, UMass Trustee Haskel Kassler told the Board: "At a time when leadership at the Medical School was in doubt and the viability of faculty was in question because of inability to keep and attract good faculty, Moe Goodman took over as interim Chancellor at the Medical School. His ease in dealing with people, his sense of humor and his dedication to the job not only steadied the ship, but guided it forward. Many people consider the Medical School to be our academic Garden of

Eden. It is important to note that throughout Moe's stay as Chancellor there was never a hint of an apple scandal." Board of Trustees "Minutes," June 6, 1979, p. 5, Section "1979," Trustees online, UM/A.

26 Goodman, Oral History Interview transcript, Part 3, p. 1 (note 1 above).

27 Robert E. Tranquada, Oral History Interview "Transcript, Part 2," quotations pp. 2, 3, 4, interviewed by Ellen More, July 28, 2009, Arlington, MA, Oral History Collection, UM/W; Jacobson, Oral History Interview transcript, p. 22. Dr. Goodman explained the policies in detail:

> Current school policy requires that each member, with the exception of the chairman, request 25% of salary in the budget of a research proposal...State salary dollars which exceed salary needs within the department can be used to pay partial salaries for additional faculty who are not occupying full-time state positions, or can be swapped with the Chancellor dollar-for-dollar for unrestricted Chancellor's Fund money. Money derived from the Chancellor's Fund can also be used to supplement faculty salaries above the state maximum thus making it possible for a few senior individuals in each of the basic science departments to receive salaries that are competitive on a national scale...

H. Maurice Goodman, "Chairman's Report," p. 4, in "University of Massachusetts Medical School Physiology Department Five-Year Review, March 23, 1984," MAPS, unprocessed, UM/W.

28 Fay died of a heart attack at the age of 54 in 1997 while at a meeting of the German Physiological and Cell Biology Societies in Halle. In one of his obituaries, a colleague wrote: "Among Fred's many contributions to smooth muscle research was the first direct demonstration of the rise in free cytoplasmic calcium that precedes and triggers contraction. He energetically pioneered the use of isolated smooth muscle cells for studies of both signal transduction and cross-bridge mechanisms...Early in his career, Fred became interested in modern imaging methods. He utilized these for his studies of intracellular signaling..." Cf. Andrew P. Somlyo, "In Memoriam: Dr. Fredric S. Fay (1943-1997)," *J. Muscle Research and Cell Motility*, 1997, *18*: 399, n.p., accessed on June 26, 2014 at https://web.archive.org/web/20150814155435/http://download.springer.com/static/pdf/240/art%253A10.1023%252FA%253A1018638613026.pdf?originUrl=http%3A%2F%2Flink.springer.com%2Farticle%2F10.1023%2FA%3A1018638613026&token2=exp=1439568835~acl=%2Fstatic%2Fpdf%2F240%2Fart%25253A10.1023%25252FA%25253A1018638613026.pdf%3ForiginUrl%3Dhttp%253A%252F%252Flink.springer.com%252Farticle%252F10.1023%252FA%253A1018638613026*~hmac=b5a0b352175c22194007c479237d74f9f74f1079b63abd18b77811d05d534257. Also see Richard A. Tuft and Leslie M. Loew, "A Tribute to Fredric Fay: June 5, 1943-March 18, 1997," *Biophysical Journal,* 1998, *75*: 1599-1602; "Biographical Sketch: Fredric S. Fay," Box 1, fol. "UMMS

Department of Physiology Five Year Review, July 1984-June 1989, Vol. II," typescript, loose- leaf binder, MAPS, unprocessed, UM/W. An annual Fred Fay Lectureship commemorates Dr. Fay's contributions to his field and to the Medical School.

29 Jacobson, Oral History Interview transcript, pp. 20-21.

30 Jean Marshall, Chair, "Visiting Committee Report from Previous Departmental Five Year Review [1978], typescript, 21 pp., Box 1, fol. "University of Massachusetts Medical School Physiology Department Five-Year Review, March 23, 1984," loose-leaf binder, Physiology/MAPS, unprocessed, UM/W. Cf. Yagi, S., P.L. Becker, and F. S. Fay, "Relationship between force and [Ca-2+] in smooth muscle as revealed by measurements on single cells," *Proc. Natl. Acad. Sci.*, 1988, *85*; 4109-4113; Becker, P.L., J.V. Walsh, Jr., J.J. Singer, and F.S. Fay, "Regulation of [Ca-2+] in voltage-clamped single smooth muscle cells," *Science,* 1989, *244*; 211-214; Itoh, T., Ikebe, G.J., Kargacin, D.J. Hartshorne, B.E. Kemp, and F.S. Fay, "Effects of modulators of myocin light chain kinase activity in single smooth muscle cells," *Nature*, 1989, *338*; 164-167.

31 H. Maurice Goodman to Robert E, Tranquada, March 18, 1982, Box 1, fol. 5 "MAPS, Correspondence: Robert Tranquada, Chancellor/Dean, 1979-1986," MAPS, unprocessed, UM/W; Rossini, Aldo E., Oral History Interview transcript, p. 20, interviewed by Ellen More, Oct. 15, 2008, Worcester, MA, Oral Histories, UM/W. According to an outside review of the Physiology Department in 1990, however, the neuroscience group had not yet become robust. Leeman was also the first UMMS professor to be elected to the National Academy of Arts and Sciences (1987). Cf. Alexander, M.J., M.A. Miller, D.M. Dorsa, B.P. Bullock, R.H. Melloni, Jr., P.R. Dobner and S.E. Leeman, "Distribution of Neurotensin/ Neuromedin N mRNA in Rat Forebrain: Unexpected Abundance in Hippocampus and Subiculum," *Proceedings of the Natl. Acad. Sciences*, 1989, *86*; 5202-5206; "Susan E. Leeman," Society for Neuroscience, accessed Oct. 20, 2014, https://web.archive.org/web/20150814160537/http://www.sfn.org/~/media/SfN/Documents/TheHistoryofNeuroscience/Volume%206/c9.ashx; "Biographical Sketch: Susan E. Leeman," in "UMMS Department of Physiology Five Year Review, July 1984-June 1989, Vol. II," typescript, loose-leaf binder; William F. Ganong to Aaron Lazare, Feb. 21, 1990; [William F. Ganong et al], "Department of Physiology, University of Massachusetts Report of External Review Committee," typescript, pp. 3, 8-9, Box 1, fol. "MAPS, Department Accreditation, 1975-1990," unprocessed, MAPS, UM/W.

32 William Chick, who came to UMMS shortly after Villa-Komaroff, was a coauthor on this paper. Lydia Villa-Komaroff, Argiris Efstratiadis, Stephanie Broome, Peter Lomedico, Richard Tizard, Stephen P. Naber, William L. Chick, and Walter Gilbert, "A bacterial clone synthesizing proinsulin," 1978, *Proc. Natl. Acad. Sci. USA*, 1978, *75*: 8 (August), pp. 3727-3731; "Lydia Villa-Komaroff,"

Wikipedia, accessed at https://web.archive.org/web/20150814161141/https://en.wikipedia.org/wiki/Lydia_Villa-Komaroff
on Nov. 20, 2014. In 1973, Villa-Komaroff had helped found SACNAS (the Society for Advancement of Chicanos and Native Americans in Science).

33 An important cluster of researchers in UMMC's first decade including Neil Blacklow, Francis Ennis, Barry Hanshaw, Robert Humphries, David Parker, David Purtilo, John Sullivan, Raymond Welsh, Robert Woodland, and others, focused on viral immunology. Blacklow, Ennis, Hanshaw, and Sullivan were all based in clinical departments. See Chapter 9 for more on their work.

34 H. Maurice Goodman to Robert E. Tranquada, Feb. 20, 1980; Robert Tranquada to Department Chairs and Vice Chancellors, Memorandum, "Planning Assumptions," Dec. 11, 1980, typescript, pp. 3, 13, both in Box 1, fol. 5 "MAPS, Correspondence: Robert Tranquada, Chancellor/Dean, 1979-1986," unprocessed, in MAPS, unprocessed, UM/W.

35 John P. Howe, III to "Participants in March 26, 1981 Meeting of Faculty Committee/Task Force Chairpersons," March 23, 1981, Box 1, fol. "Correspondence: John Howe, M.D., Academic Dean, 1981-1984," MAPS, unprocessed, UM/W. Italics in original.

36 Although a cut-off date for "new" schools was not given, 1960 is commonly used as a dividing line. (See Chapter 1 for a discussion of the cohort of "new" schools. UMass was founded in 1962.) "University of Massachusetts Medical School Retreat—Feb. 8, 1982, Revenue Sources: Comparison with New Medical Schools and Established Medical Schools," Box 4, fol. "Correspondence: John Howe, M.D., Dean, 1981-1984," MAPS unprocessed, UM/A.

37 Ellie McGrath, "Cash Squeeze on Campus," *Time Magazine*, Sept. 5, 1983, pp. 50-51. The article was included in a "News Brief" from President Knapp to various upper tier administrators of the three UMass campuses. Box 7, fol. "University of Massachusetts, Office of the President, 1980-1987," unprocessed, MAPS, UM/W.

38 "UMass Campus Mission Statements: University of Massachusetts, Worcester Campus, April, 1984," Box 7, fol. "Long Range Planning: Correspondence, Planning Document Draft, 1984-1987," MAPS, unprocessed, UM/W.

39 [E.B.L.], "The Gland that Guides," *UMMC Quarterly*, 1988, *X*: No. 3 (Fall), pp. 18-20, Publications Collection, UM/W.

40 Michael Czech, Oral History Interview transcript, p. 7, interviewed by Ellen More, Dec. 17, 2009, Worcester, MA, Oral History Collection, UM/W.

41 "Diabetes...A National Epidemic," *UMMC Quarterly*, 1978, *1*:2 (Dec.), pp. 2, 6; Holly Robinson, "Diabetes and the team advantage," *UMMC Magazine*, 1993, *16*: 1 (Fall/Winter), p. 25, both in Publications Collection, UM/W; Rossini, Oral History Interview transcript, pp. 1, 5-6, 10, 13, 20. Cf. E. S. Handler, J. P. Mordes, J. Seals, S. Koevery, A. A. Like, K. Nakano, A. A. Rossini, "Diabetes in the Bio-Breeding/Worcester rat. Induction and acceleration by spleen cell-conditioned media," *J. Clin. Invest.*, 1985, *76*:4; 1692-1694, accessed at https://web.archive.org/web/20150814161719/http://www.jci.org/articles/view/112156/pdf, 2014; Armand J. MacMurry, "Lymphopenia in the BB Rat Model of Type I Diabetes is Due to a Mutation in a Novel Immune-Associated Nucleotide (Ian)-Related Gene, *Genome Research*, 2002, accessed on July 1, 2014, at http://genome.cshlp.org/content/12/7/1029.full#xref-ref-9-1.

42 "World-Renowned Scientist Joins Scientific Advisory Board of CytRx Subsidiary," *PR Newswire*, Dec. 10, 2014, accessed in https://web.archive.org/web/20150814163008/http://www.prnewswire.com/news-releases/world-renowned-scientist-joins-scientific-advisory-board-of-cytrx-subsidiary-73272992.html on Nov. 11, 2014; Michael P. Czech, Ph.D., Curriculum Vitae, Michael Czech papers, UM/W.

43 Czech, Oral History Interview transcript, p. 1.

44 Czech, Curriculum Vitae.

45 Roger Davis, Oral History Interview transcript, interviewed by Ellen More, Sept. 24, 2014, Worcester, MA, p. 4, Oral History Collection, UM/W.

46 Tranquada, Oral History Interview transcript, Part 2, p. 4.

47 Susan V. Seligson, "An Artificial Pancreas," *UMMC Quarterly,* 1986, *8*: 2; 2-3, Publications Collection, UM/W; Aldo Rossini, *Curriculum Vitae*, Aldo Rossini papers, unprocessed, UM/W; Board of Trustees, "Minutes," May 13, 1981, "Section "1981," Trustees, online, UM/A; Davis, Oral History Interview transcript, p. 22.

48 Tranquada, Oral History Interview transcript, Part 2, p. 6.

49 By 1985, the list of state institutions with which UMMC had contracts to provide medical services also included Monson Developmental Center, Northampton State Hospital, and Medfield State Hospital. "UMass Medical Center: a local, regional and statewide resource," booklet, p. 8, 15 pp., n.d., but c. 1984; Brian S. McNiff, "Settlement 'ratifies' course of WSH," *Evening Gazette*, Aug. 5, 1987, Newsclippings, both in Public Affairs Collection, UM/W.

50 Thomas Grisso and Paul S. Appelbaum, *Assessing Competence to Consent to Treatment: A Guide for Physicians and Other Health Care Professionals* (New

York: Oxford University Press, 1998). In 2000, the book won the American Psychiatry Association's highest honor in the field of Law and Psychiatry, the Guttmacher Award.

51 Tipper, Oral History Interview transcript, pp. 10, 18.

52 The WBDC was founded in 1965 as the "non-profit development arm" of the Worcester Area Chamber of Commerce. Cf. "Founding of the Worcester Business Development Corporation," accessed at https://web.archive.org/web/20150814163242/http://www.thewbdc.com/company/history, Oct. 24, 2014.

53 Alan Daly, "A Man, a Plan, a Biotech Park," *Mass High Tech*, Feb. 16, 1987, Newsclippings, Public Affairs Collection, UM/W.

54 Mr. Paul O'Connell, a real estate lawyer, became president of the WBDC in 1983 and is given much credit for untangling some of Biotech Park's difficulties. Together with Dukakis administration development specialists, Worcester officials, and the WACC, they managed to create a model ordinance permitting genomic research in the city of Worcester, a huge reassurance to prospective biotechnology and pharmaceutical tenants. Michael Dukakis served as Governor for one term from 1975 to 1979, and then for two consecutive terms, from 1983-1991. Hon. Michael S. Dukakis, Oral History Interview transcript, quotations pp. 3, 4, 5, 11-13, interviewed by Ellen More, Aug. 21, 2013, Boston, MA, Oral History Collection, UM/W; Daly, "A Man, A Plan, etc.,"

55 By law, all profits that arose from the land's disposition would benefit the academic institutions of the Worcester area, particularly UMMC, WPI, and the Tufts Cummings Veterinary Medical Center. The land was described as "Parcel A in Section 1 of Chapter 901 of the Acts of 1965," the act by which the State's Department of Mental Health transferred land from Worcester State Hospital to the University of Massachusetts for the medical school. Board of Trustees, Special Meeting, "Minutes," May 29, 1982, "Section "1982;" Board of Trustees, "Minutes," April 13, 1983, Section "1983;" Board of Trustees, "Minutes," Aug. 7, 1985, Section "1985," Trustees online, UM/A; Peter W. Van Etten to Gordon N. Oakes, Jr. et al, Feb. 4, 1991; Peter W. Van Etten to Stephen W. Lenhardt, Sr., Nov. 30, 1990, Box 3, fol. "Molecular Medicine Program Charter, Correspondence, Catalogue, 1988-1992, MAPS unprocessed, UM/A. Cf. Evelyn Herwitz, "Mass. Biotechnology Research Park is Dedicated; Expects Signed Leases by Summer's End," [*Worcester] Business Digest*, July, 1986, n.p; Robert R. Bliss, "One Biotech Park gets its first tenant," *Worcester Gazette*, July 21, 1986, p. 1, Newsclippings, Public Affairs Collection, UM/W.

56 Board of Trustees Executive Committee, "Minutes," May 20, 1986, Section "1986," Trustees online, UM/A.

57 A representative quote read, "The Scientific Council may not be the best forum for such decisions since the present council's attitude is, 'What is in it for me'." Romeo R. Adams, Interim Associate Vice Chancellor, to Robert E. Tranquada, "Group A Retreat Notes," Feb. 3, 1986, p. 4, fol. 11, Box 1, Tranquada, UM/W.

58 "Introduction;" James Barry Hanshaw to H. Maurice Goodman, March 27, 1985; "University of Massachusetts at Worcester Long-Range Plan—[March 2,] 1987," both in
Box 7, fol. "Long Range Planning: Correspondence, Planning Document Draft, 1984-1987," MAPS, unprocessed, UM/W.

59 Kenneth M. Ludmerer, *Time to Heal: American Medical Education from the Turn of the Century to the Era of Managed Care* (New York: Oxford, 1999), quotation, p. 290, and esp. pp. 288-295; David Weatherall, *Science and the Quiet Art: the Role of Medical Research in Health Care* (NY: Norton, 1995), quotation, p. 228, and pp. 227-267; Toby Appel, *Shaping Biology: The National Science Foundation and American Biological Research, 1945-1975* (Johns Hopkins: 2000), esp. pp. 209-216, 269-271. I have benefited from conversations with Dr. Appel and Dr. Thoru Pederson about the molecular era in biological research.

60 In Robert Kohler's words, Weaver understood the concept to refer to "a conception of biology reformed by the methods of physical science," allowing for a more exact and minute examination of "the chemistry of vital processes." Robert E. Kohler, "The Management of Science: The Experience of Warren Weaver and the Rockefeller Foundation Programme in Molecular Biology," *Minerva*, 1976, *14*:3, pp. 279-306, quotations pp. 280, 289; Warren Weaver, "Molecular Biology: the Origin of the Term," *Science*, *CLXX*:3958 (Nov. 6), pp. 581-582.

61 Appel, *Shaping Biology*, pp. 64-65, 209-210, quotation p. 64.

62 Brown, Oral History Interview transcript, p. 40; Neal C. Brown, Curriculum Vitae, Neal Brown Papers, unprocessed, UM/W.

63 Goodman, Oral History Interview transcript, Part 1, pp. 31-32.

64 Donald Tipper, Personal Communication, Oct. 26, 2012.

65 Jacobson, Oral History Interview transcript, p. 13.

66 Roger Davis, Oral History Interview transcript, pp. 6-7, interviewed by Ellen More, Sept. 24, 2014, Worcester, MA, Oral History Collection, UM/W.

67 Czech, Oral History Interview transcript, pp. 14-15.

68 Roger J. Davis, Curriculum Vitae, p. 4, Roger Davis Collection, unprocessed, UM/W; Davis, Oral History Interview transcript, p. 5.

69 Board of Trustees, "Minutes," May 1, 2002, Section "2002," Trustees, online, UM/A; Davis, Curriculum Vitae, p. 16; Davis, Oral history Interview transcript, pp. 19-20.

70 Davis, Oral History Interview transcript, p. 9, italics added. Dr. Davis was referring to Gary Johnson, Ph.D., who moved from UMMS to the University of Colorado School of Medicine, and Joan Massagué Solé, Ph.D., who was recruited to the Memorial Sloan Kettering Cancer Center and as of this writing is the Center's director.

71 Davis, Oral History Interview transcript, p. 10.

72 Maurice Goodman, Ph.D., Oral History Interview transcript, Part 3, p. 2. See n. 1 above.

73 Board of Trustees Executive Committee, "Minutes," July 15, 1986, p. 2, Section "1986," Trustees online, UM/A; Madeline Patton, "Dr. Dalen nominated interim UMass head," *Worcester Gazette*, July 2, 1986; "Dr. Dalen is Editor of Specialty Journal," *Worcester Telegram*, Feb. 6, 1987, both in Newsclippings, Public Affairs Collection, UM/A.

74 Madeline Patton, "New chancellor screening sought," *Evening Gazette*, May 16, 1987, Newsclippings, Public Affairs Collection, UM/W.

75 Goodman, Oral History Interview transcript, Part 3, p. 3.

76 James Dalen, Oral History Interview transcript (by telephone), p. 21, interviewed by Ellen More, May 6, 2009, Oral History Collection, UM/W.

77 "University of Massachusetts Medical Center Annual Report, FY1986," p. 101, loose-leaf, typescript, Box 7, fol. "UMMC Annual Report, 1986," unprocessed, MAPS, UM/W; Judith K. Ockene, Curriculum Vitae, Judith Ockene Collection, UM/W; Lee Hammel, "UMass Gets $4.4M Grant to Fight Smoking," *Worcester Telegram*, Oct. 31, 1986, Newsclippings, Public Affairs Collection, UM/W. Cf. Board of Trustees, "Minutes," Dec. 5, 1984, Section "1984," Trustees online, UM/A. Ockene received a 9.5 million dollar grant to recruit more than 1433 participants in the WHI clinical trials. The proposal's statement of work reads, "The objectives of the CT [clinical trial] are to test the benefit and risk of dietary modification,

hormone replacement therapy, and supplementation with calcium + vitamin D on the overall health of women age 50-79."

78 Jeff Wilson, *Mindful America: The Mutual Transformation of Buddhist Meditation and American Culture* (New York: Oxford University Press, 2014), quotations pp. 31, 78. I am grateful to Matthew Drage, doctoral candidate, Cambridge University, for alerting me to this study as well as for sharing his understanding of Kabat-Zinn's Theravada Buddhism.

79 According to a World Cat search in 5-year intervals from 1979 to 2014, the number of peer reviewed articles in English per year with the term "mindfulness" in the title jumped dramatically after 1999. The search was performed on Jan. 13, 2015 by Kristine Sjostedt, MLIS, to whom I express my sincere thanks. The figures are listed below:
1979: 1
1984: 3
1989: 1
1994: 2
1999: 10
2004: 51
2009: 198
2014: 526

80 Kabat-Zinn, Oral History Interview transcript, p. 41, interviewed by Ellen More, Sept. 18, 2014, Worcester, MA, Oral History Collection, UM/W.

81 Wilson, *Mindful America*, pp. 79-80; Herbert Benson, with Miriam Z. Kipper, *The Relaxation Response* (New York: Avon Books, 1975). Benson argued that any form of what he called the "relaxation response" could produce those effects, thus reducing anxiety and improving cardiovascular health. Cf. *N.Y. Times* News Service, "Surprising benefits discovered about relaxation," New England News Clip, (received) May 16, 1986; Eleanor Smith, "Meditation Goes Mainstream," *Washington Post*, (received) Oct. 6, 1987, both in Newsclippings, Public Affairs Collection, UM/W.

82 Personal communication, Laszlo Leb, M.D., Chief, Division of Hematology-Oncology, St. Vincent Hospital, Worcester, MA, Oct. 21, 2014. By the mid-1980s, even the NIH was recommending relaxation as one approach to the management of mild hypertension, and the work of Dean Ornish, M.D. at the Preventive Medicine Research Institute in San Francisco, was winning proponents of multiple lifestyle modifications to address cardiovascular disease.

83 Kabat-Zinn, Oral History Interview transcript, pp. 3-5.

84 Wilson, *Mindful America,* p. 32; Personal communication, Matthew Drage,

June 15, 2015, Worcester, MA; Jon Kabat-Zinn, "Some Reflections on the Origins of MBSR, Skillful Means, and the Trouble With Maps, *Contemporary Buddhism*, 2011, 12: 1 (May), pp. 281-306. I am grateful to Mr. Drage for alerting me to this article as well as for his insights about the importance of cultivating an active, ongoing relationship with Buddhist practice to the MBSR faculty, including Kabat-Zinn and Santorelli.

85 Jon Kabat-Zinn, Oral History Interview transcript, pp. 25, 46. In some quarters, the concept of "mindfulness" has even been accused of becoming little more than a "lifestyle trend." Virginia Heffernan, "The Muddled Meaning of 'Mindfulness'," *New York Times Magazine*, April 19, 2015.

86 Kabat-Zinn, "Some Reflections," p. 282.

87 Kabat-Zinn, Oral History Interview transcript, pp. 3-5; *idem.*, Curriculum Vitae, Jon Kabat-Zinn papers, UM/W; Kabat-Zinn, "Some Reflections," quotations, pp. 286, 287.

88 A friend of Kabat-Zinn's youngest brother, Earl Etienne, Ph.D., at the time a professor in the department of Physiology, drove out to Woods Hole, MA, where the Kabat family had a summer house. Etienne strongly suggested to Jon that he should apply for the UMMS fellowship. At the time, according to Kabat-Zinn, he had never heard of either Earl Etienne or UMass Medical School. Kabat-Zinn, Oral History Interview transcript, p. 7.

89 Kabat-Zinn, Oral History Interview transcript, pp. 11-12.

90 Kabat-Zinn, "Some Reflections," Quotations, pp. 287, 288.

91 Kabat-Zinn, Oral History Interview transcript, pp. 12-14.

92 Quoted in Wilson, *Mindful America*, p. 35, from Kabat-Zinn, *Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain and Illness* (2005; New York: Delacorte, 1990), p. 2.

93 Kabat-Zinn, Oral History Interview transcript, pp. 14-16, 22, 23; Kabat-Zinn, "An out-patient program in Behavioral Medicine for chronic pain patients based on the practice of mindfulness meditation: Theoretical considerations and preliminary results," *Gen. Hosp. Psychiatry*, 1982, *4*: 33-47; Jon Kabat-Zinn, Leslie Lipworth, and Robert Burney, "The Clinical Use of Mindfulness Medicine for the Self-Regulation of Chronic Pain," *J. Behavioral Medicine*, 1985, *8*: 2, pp.163-190. James Dalen recalled thinking that Kabat-Zinn was taking care of patients, such as those with low back pain, who "no physician wants to take care of" because physicians usually don't have much to offer them. After Kabat-Zinn's Grand Rounds presentation following his first year running the clinic, Dalen said, "it was pretty obvious that he had helped these people. Most of them had

gone back to work and were off pain pills, and so we made him a member of the department." Dalen, Oral History Interview transcript, pp. 19-21.

94 Jon Kabat-Zinn, *Coming to Our Senses: Healing Ourselves and the World Through Mindfulness* (New York: Hyperion, 2005), pp. 31-32; *idem.*, Oral History Interview transcript, pp. 58-59.

95 See, for example, David S. Ludwig and Jon Kabat-Zinn, "Mindfulness in Medicine," *JAMA*, 2008, *300*: 11 (Sept. 17), pp. 1350-1352.

96 Kabat-Zinn, Oral History Interview transcript, pp. 17-18.

97 Kabat-Zinn, "An out-patient program in Behavioral Medicine", pp. 33-47.

98 Kabat-Zinn, *Full Catastrophe Living*.

99 Kabat-Zinn, Oral History Interview transcript, pp. 55-56. Cf. the video clip of the original broadcast accessed online on Dec. 12, 2014 at: https://video.search.yahoo.com/video/play;_ylt=A0LEVijyZYtUajgAxWgPxQt.;_ylu=X3oDMTBsa3ZzMnBvBHNlYwNzYwRjb2xvA2JmMQR2dGlkAw--?p=healing+and+the+mind+pbs&tnr=21&vid=2EC6F8284B36FBA38A932EC6F8284B36FBA38A93&l=2569&turl=http%3A%2F%2Fts2.mm.bing.net%2Fth%3Fid%3DUN.608015928948753137%26pid%3D15.1&rurl=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DPEJGPuPFIvc&sigr=11b3rg87g&tt=b&tit=Healing+and+the+Mind&sigt=10ks6cp2j&back=https%3A%2F%2Fsearch.yahoo.com%2Fyhs%2Fsearch%3Fp%3Dhealing%2Band%2Bthe%2Bmind%2Bpbs%26ei%3DUTF-8%26hsimp%3Dyhs-001%26hspart%3Dmozilla&sigb=134dtnt9m&hspart=mozilla&hsimp=yhs-001 .

100 During the 1990s, for example, Kabat-Zinn joined the board of the Mind and Life Institute, a foundation to fund research in the basic biology of mindfulness, which was founded in cooperation with the Dalai Lama. The grants are named for Francisco Varela, a Chilean neuroscientist, philosopher, and meditation practitioner who founded the Mind and Life Institute along with the American businessman Adam Engel. Kabat-Zinn, Oral History Interview transcript, pp. 53-54. More typical of the work to come out of Stress Reduction Clinic collaborations was one in which the nationally known researcher Richard J. Davidson, Ph.D. and colleagues at the University of Wisconsin, historian of science Anne Harrington of Harvard, and Kabat-Zinn, Santorelli, and Ferris Urbanowski of UMMS, conducted a randomized controlled trial of the effects of MBSR on employees of a pharmaceutical company in Madison, WI. Cf. Davidson, R. J., Kabat-Zinn, J., Schumacher, J., Rosenkranz, M., Muller, D., Santorelli, S., Urbanowski, F., Harrington, A., Bonus, K., Sheridan, J. F., "Alterations in Brain and Immune Function Produced by Mindfulness Meditation," *Psychosomatic Medicine*, 2003, *65*:4, pp. 564–570.

101 Saki F. Santorelli, Oral History Interview transcript, Part 2, pp. 1-4, interviewed by Ellen More, Sept. 6, 2012, Shrewsbury, MA, Oral History collection, UM/W.

102 Saki F. Santorelli, "'Enjoy Your Death': Leadership Lessons forged in the Crucible of Organizational Death and Rebirth Infused with Mindfulness and Mastery," *Contemporary Buddhism*, 2011, *12*: 1, pp. 199-217; Santorelli, Oral History Interview transcript, Part 2, pp. 17-19.

103 Saki F. Santorelli, Curriculum Vitae, Saki F. Santorelli papers, UM/W. [Hereafter, Santorelli, UM/W]; Saki F. Santorelli, Oral History Interview transcript, Part 1, p. 4, interviewed by Ellen More, Aug. 23, 2012; Santorelli, Oral History Interview transcript, Part 2, pp. 17-19; both in Oral History Collection, UM/W; Santorelli, "'Enjoy Your Death': Leadership Lessons," quotation, p. 202; Cf.
https://web.archive.org/web/20150814165431/http://www.umassmed.edu/news/news-archives/2014/12/anderson-cooper-turns-to-umms-for-60-minutes-report-on-mindfulness/?utm_source=UMassMedNow%20weekly%20roundup: Dec. 15, 2014

104 Goodman, Oral History Interview transcript, Part 3, p. 4.

105 Gail Ciampa, "Doctors Finding Ways to Stop Heart Attacks Cold," *Worcester Telegram*, June 26, 1986, p. 14A; Patton, "Dr. Dalen nominated;" "Worcester Heart Attack Study Funded for Five More Years at UMass," *Worcester Telegram*, Jan. 15, 1987; Hammel, "UMass Gets $4.4 M Grant," all in Newsclippings, Public Affairs Collection, UM/W.

106 Board of Trustees Executive Committee, "Minutes," July 15, 1986, Section "1986." Trustees online, UM/A. The search committee consisted of the following: Trustees: James Carlin, William Bowman, Thalia Zervas; UMMC: H. Maurice Goodman, Chair, Michael Czech; Carlton Akins, Trudy Morrison, Richard Fiddian-Green, Peter Levine, Kathleen Dirschel;
Central Administration: Stephen Saudek; Hospital Management Board: Keith Waterbrook, John Scott; Alumni: James McGuire, M.D. A student representative, Susan Levine, was added at the Board meeting of August 6, 1986.

107 Italics added. Robert Z. Nemeth, "UMass Medical Center Faces the Health Care Revolution Squarely," *Worcester Gazette*, Oct. 29, 1986. Cf. Kimberly Newton, "Dr. Dalen Is Choice at UMass," *Worcester Telegram*, July 2, 1986, both in Newsclippings, Public Affairs Collection, UM/W.

108 Goodman, Oral History Interview transcript, Part 3, p. 3.

109 The other two finalists were Jordan Cohen, M.D. and Richard Cooper, M.D. Madeline Patton, "New chancellor screening sought," *Evening Gazette*, May 16, 1987; "In Our Opinion: Give Dalen a Chance," *Evening Gazette*, May 19, 1987; Kathleen A. Shaw, "Knapp stands by UMass search panel," *Evening Gazette*, May 19, 1987; Brian S. McNiff, "Knapp's chancellor search process draws fire," *Evening Gazette*, May 29, 1987; John J. O'Connor, "UMass Search Down to Two," *Worcester Telegram*, June 25, 1987; Steve Curwood, "Trustees to select medical school head," *Boston Globe*, July 24, 1987; Kathleen A. Shaw, "Trustees pick Dr. Laster as chancellor," *Evening Gazette*, July 29, 1987; Paul Della Valle, "Dr. Laster Offered Med Center Post," *Worcester Telegram*, July 30, 1987, all in Newsclippings, Public Affairs Collection, UM/W; H. Maurice Goodman, personal communication, Feb. 25, 2015; Cf. https://web.archive.org/web/20150814180810/http://medicine.arizona.edu/person/james-dalen-md-mph .

110 Shaw, "Trustees pick Dr. Laster as chancellor"; Kathleen A. Shaw, "Dr. Laster called 'man of vision'," *Evening Gazette*, July 30, 1987, Newsclippings, Public Affairs Collection, UM/W.

111 Leonard Laster, M.D., Oral History Interview transcript, pp. 2-12, quotation, pp. 7, 12, interviewed by Ellen More, July 21, 2010, Oral History Collection, UM/W.

112 Laster, Oral History Interview transcript, p. 26.

113 Bitterness over Dr. Dalen's treatment lingered. Laster's expenditures for his temporary housing came under public scrutiny as did his (by central Massachusetts standards) extravagant-sounding desire for a 5-bedroom house with a six-burner stove and two dishwashers—to better facilitate entertaining. Kathleen A. Shaw, "Dr. Laster called 'man of vision'," *Evening Gazette*, July 30, 1987; Paul Della Valle, "New Chancellor Puts Compassion First," *Worcester Telegram*, July 30, 1987; "House is Sought for Chancellor," *Worcester Telegram*, Oct. 18, 1987; Kathleen A. Shaw, "A little grass shack just won't do," *Evening Gazette*, Oct. 29, 1987; Gerald S. Cohen, "Laster's Shades Cost UMass $2,400," *Worcester Telegram*, Dec. 4, 1987; all in Newsclippings, Public Affairs Collection, UM/W.

114 Board of Trustees, "Minutes," Dec. 7, 1988, Section "1988," Trustees online, UM/A.

115 According to the Board of Trustees Executive Committee "Minutes" for Jan. 25, 1989, "Mr. Sherman is currently Associate Vice President for Development at Boston University. His previous experience includes a similar assignment

at Boston University Medical School and he has held a variety of management positions outside of higher education." Left unsaid was Sherman's lifelong friendship with William Bulger, president of the Massachusetts senate, one of the state's most powerful politicians. In 1995, Bulger was designated the new president of the University of Massachusetts system. Aaron Lazare told an interviewer that William Bulger told Albie Sherman, "'I just saw your boss [Dr. Laster]. He's dead. Tell him to lie down.'" Lazare, Oral History Interview transcript, Part 2, p. 12.

116 Dr. Arthur Pappas was at the time a part owner of the team, and arranged the meeting. H. Brownell (Brownie) Wheeler, Oral History Interview transcript, Part 1, pp. 63-66, interviewed by Ellen More, Aug. 21, 2006, South Portland, Maine; H. Maurice Goodman, Oral History Interview transcript, pp. 18-19; Aaron Lazare, Oral History Interview transcript, Part 2, pp. 10-13; Michael T. Foley, personal communication, Sept. 24, 2009, all in Oral History Collection, UM/W; Board of Trustees, "Minutes," Feb. 22, 1990, Section "1990," Trustees online, UM/A.

117 Board of Trustees, "Minutes," Dec. 7, 1988, Section "1988;" Board of Trustees, "Minutes," Aug. 2, 1989, Section "1989;" Board of Trustees Executive Committee, "Minutes," Jan. 25, 1989, Section "1989;" Board of Trustees, "Minutes," Feb. 22, 1990, July 25, 1990, Oct. 3, 1990, Section "1990;" Board of Trustees, "Minutes," June 5, 1991, Section "1991," all in Trustees online, UM/A; Thomas Manning, "Remarks for Lazare WDMS 2008 Career Achievement Award," typescript, 11 pp., Aaron Lazare Papers, unprocessed, UM/W. [Hereafter, Lazare, UM/W.]

118 Michael Foley et al, "Report of the Interim Institutional Evaluation Committee of the University of Massachusetts at Worcester," May 15, 1991, p. 1, Aaron Lazare, M.D. Collection, unprocessed, UM/W.

Chapter 9
Becoming a Research University, Part 2: 1990-2012

The institution Aaron Lazare inherited, according to many accounts, was reeling from a crisis both financial and of esprit de corps. This chapter will describe Chancellor Lazare's efforts and those of his successors, Dean Terry Flotte and Chancellor Michael Collins—largely successful—to bring some stability and even harmony to the campus by addressing the needs of basic and eventually clinical researchers. (Parallel efforts to enhance undergraduate medical education are described in Chapters 7 and 10.) The chapter begins with Lazare's initiatives and follows with several examples of institutional expansion through scientific innovation, acquisitions, and innovative service; these initiatives include AIDS research and therapy, the Program in Molecular Medicine, the Worcester Foundation for Biomedical Research, MassBiologics, and Commonwealth Medicine.

Aaron Lazare: Finding a Balance among Stakeholders

Looking back on this period in 2005, Lazare wrote of his administration, "Our first goal in 1990 was (literally) to survive."[1] Dean Hanshaw's resignation, a result of finding it impossible to work with Chancellor Laster, had occurred only six weeks before the Liaison Committee for Medical Education (LCME) accreditation visit in November 1989. Lazare was asked to succeed him. In the LCME report, both Hanshaw and Lazare were singled out for praise. The LCME visiting committee plainly stated its concern with "the governance and administrative structure of the institution, the stability of its leadership, and whether an effective and harmonious working relationship among top management has been achieved." Further, the LCME reviewers noted that, "The proposed molecular medicine program…arouses considerable concern among a sizable number of faculty that it may dilute or erode effective teaching

programs…and downgrade education as a priority."[2] Finally and most important, they cited the unstable "financial resources and management" of the institution.[3]

After taking over the Medical Center's leadership in September 1990, Dr. Lazare concluded that its poor financial health was tied to its troubled relations with its major "stakeholders," notably the legislature, the media, and business and community leaders in central Massachusetts.[4] Relations with the state legislature were at low ebb in the early 1990s. For example, the state contribution to UMMC's budget had been 11% in fiscal year 1988; by fiscal year 1990 it dropped to 8.5%. In 1994 it was further reduced to 7.84%, a level that remained largely unchanged.[5] Worse, in 1991, as described in Chapter 5, Governor Weld threatened to entirely eliminate the Medical Center from the state budget. Although that threat was overcome, it would take several years for Chancellor Lazare and others to establish reasonably smooth dealings with Beacon Hill. Indeed in 1991, as mentioned in Chapter 5, the state imposed a furlough resulting in the sequestration of $3 million of the institution's budget. UMass Med employees felt battered, unsure of their future, and this applied to the researchers as much as anyone.[6]

The institution seemed to be at a crossroads. Could UMass reinvigorate its primary care curriculum at the same time as it re-committed itself to promoting basic science research? Would it find the resources to pay for such ambitions? Fortunately, it is no exaggeration to say that Lazare established "a special rapport with the legislature and the city of Worcester."[7] He made a special effort to cultivate the business, cultural, and political leaders of Worcester. And he revitalized the school's identification with public service by "committing the school's resources and expertise" on behalf of better care at state institutions such as Worcester State Hospital and Framingham State Prison for Women. These contracts supplied the model for an extensive program of consulting to state departments through the new division of Commonwealth Medicine, formally established in 1999. Within a decade of its creation, Commonwealth Medicine, led for many years by Thomas Manning, was able to contribute enough to underwrite a significant portion of the school's yearly budget.[8]

Chancellor Lazare also turned his attention to healing the damaged sense of collegiality among faculty and staff, a quality which many faculty and staff cited as a major reason for remaining at UMMS over the years. Maurice Goodman reflected that

> Aaron did a lot of smart things. The first thing that he did was involve the entire community in developing a mission statement. And I think that...got people feeling that we're all part of the same [organization]. He didn't make any overt moves to strengthen the basic sciences immediately. He did manage to pour oil on the waters... And Aaron made the connection with Worcester. He turned that around completely...He became Chairman of the United Way of Worcester [and] a lot of moves...that tied the medical school to Worcester.[9]

As one of his first actions as dean (but while still the interim chancellor), Dr. Lazare engaged the entire campus in the process of writing a mission statement, the first since 1975 and the first ever to involve faculty, students and staff, not only upper level administrators and department chairs. It was complete by the beginning of 1991. Clearly the *process* of writing it, involving the input of hundreds of campus employees and students, was intended to boost campus morale. Significantly, it emphasized that "we operate on the assumption that the three major health care objectives (education, service, and research), are complementary and inseparable...The pursuit of all three objectives must occur at the same time." Unlike the statement of 1975, research was declared an equal partner with education and service, and no attempt was made to mask this reality. Chapter 7 described some of the initiatives that energized primary care-based curriculum reform during the 1990s such as the Generalist Physician Initiative. Just as visible were efforts taken by the Lazare administration on behalf of basic research.[10]

When the Trustees appointed Lazare the permanent Chancellor and united that position with the position of medical school dean, they were responding to an overwhelming mandate from almost all sectors of the Worcester campus. Lazare, according to the report solicited by the Trustees, was seen as a "healing"

and unifying influence on the campus and the Worcester community. That confidence was not fully shared by a "vocal" minority group of scientists who sincerely believed that a national search would yield a Chancellor more in tune with their needs.[11] Lazare was surely aware of these reservations and worked hard to counter them. Early in his first year as Chancellor/Dean, Lazare authorized a strategic planning report for research, completed in September 1991. The report's three recommendations, including the creation of the position of Vice Chancellor for Research, the establishment of a formal technology transfer office, and a new office of development, were implemented over the next three years.[12] A retreat specifically for the basic science department chairs and relevant administration leaders was held in June 1992.[13] Researchers on campus had good reason to insist that the administration attend to the needs of the research faculty. As they looked at a recent tabulation of the Medical Center's rank in NIH awards, it was clear that between 1990 and 1993, UMass-Worcester's standing had significantly declined as growth stagnated due to lack of space and funds:

UMass Medical Center Summary of NIH Extramural Support [14]

Year	Rank	Total Number of Awards	Dollars
1989	36	141	$29,043,067
1990	37	151	$30,794,921
1991	40	149	$31,115,855
1992	45	139	$29,613,026
1993	47	141	$31,844,085

True, compared to public medical schools in the Northeast for fiscal year 1992, UMass ranked second, just behind the University of Maryland and in the top quarter of all public medical schools founded after 1965. Nevertheless, other schools were putting more resources into the effort and rising in the ranks. UMass Med was falling behind.[15] A second research retreat, held in April 1993, concluded that, "Basic science departments have experienced shrinkage of revenue from all sources simultaneously." Among other key points from the

retreat was the following: "Bold investment of capital that permits expansion of faculty is our best hope for survival and continued vitality. Dollars invested in Molecular Medicine, for example, will be recouped within less than 5 years after inception of the Program."[16]

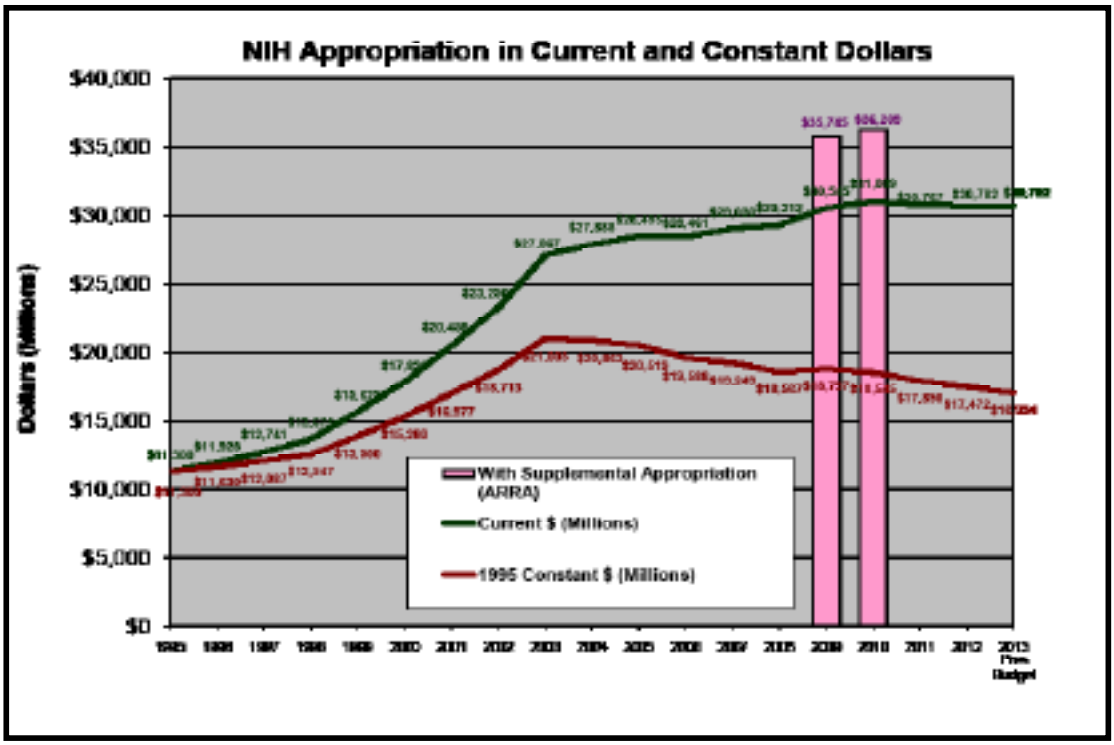
With so much riding on initiatives like the Program in Molecular Medicine, and a feeling of pervasive belt-tightening in the other basic science departments, research leaders in concert with the Scientific Council requested certain measures to improve the institution's chances of making progress. For one, they persuaded the Chancellor to increase the outlay for recruitment packages for both junior and senior research faculty and chairs. By 1994, the Chancellor had agreed to fund such recruiting packages from his budget.[17] The administration was now committed to coordinated research planning; the basic science chairs began meeting on an increasingly frequent and regular basis with Lazare. In addition, Edward Bresnick, Ph.D., hired in 1994 for the new position of Vice Chancellor for Research, began centralizing all research-related functions. Bresnick, who also was the president of the American Association for Cancer Research, had been director of the Norris Cotton Cancer Research Center at Dartmouth Hitchcock Medical Center before coming to UMMS. He is often credited with helping to actualize many initiatives of importance to basic science research at UMMS, including the details of the absorption in 1997 of the Worcester Foundation for Biomedical Research by the school.[18] After Bresnick's retirement around 2000, the basic science chairs established the Research Advisory Council to coordinate research priorities. John Sullivan, whose important role in the prevention of mother-to-infant transmission of HIV will be described below, was appointed director of the Office of Research and in 2006, Vice Chancellor for Research.[19]

Edward Bresnick, Ph. D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

Lazare and his executive team of Tom Manning and Rick Stanton

settled on a strategy of diversification of revenue sources as the means to free the institution from its vulnerability to decreased state funding. Lazare was successful to an unprecedented degree in external fund raising for the Worcester campus. During his nearly 17 years as chancellor, for example, the medical school received funding for 28 endowed chairs or professorships.[20] In all, the campus benefited from more than $200 million in philanthropic gifts. Commonwealth Medicine also supplied key resources (described below). Finally, at a time of expansion at NIH, it made good sense to invest heavily in research and hope to reap a return on that investment in both dollars and institutional reputation. The NIH budget increased dramatically between 1998 and 2003 and thereafter somewhat less steeply until 2010.[21]

NIH Appropriations, 1995 - 2013 [22]



During this period, as part of a drive to secure high quality research space at a reasonable and predictable cost, the school purchased both Biotech 1 and 2 buildings and an office building on South Street in Shrewsbury. In 2000, the Irving and Betty Brudnick Neuropsychiatric Research Institute (BNRI),

part of the Department of Psychiatry, opened under the sponsorship of the Massachusetts Department of Mental Health for research of the biological underpinnings of mental illness. In 2001, the Aaron Lazare Research Building (LRB) opened. The Ambulatory Care Center (ACC), developed to house a variety of clinical centers of excellence, was begun in 2006 and completed in 2010. Finally, the Albert Sherman Center (ASC) was opened on December 12, 2012.[23]

Lazare Research Building *(Photo courtesy of the Office of Communications, University of Massachusetts Medical School)*

Research of "National Distinction"

These accomplishments required years to bring to fruition. At the beginning of Lazare's term as Chancellor/Dean, as we have seen, the prospects for achieving what Lazare habitually referred to as "national distinction" looked far from promising. Despite this environment, from the end of the 1980s, one can easily discern the institution's maturation into a multifaceted school with a research identity at least as robust as its identification with primary care. During this period, the development of programs in HIV/AIDS therapeutics and research, the Program in Molecular Medicine and other research initiatives, the acquisition of the Worcester Foundation for Biomedical Research and the Massachusetts Biologics Laboratories, and the creation of Commonwealth Medicine, should be examined in some detail.

AIDS Research and Therapy, 1987-present

Immunology, virology, and, specifically, research on HIV/AIDS straddled the line between the worlds of the clinician and the bench researcher. From the beginning, despite the paucity of research faculty, there existed what John Sullivan has characterized as "little pockets" of common research interests in infectious disease mechanisms, in particular in virology and immunology. Barry Hanshaw, M.D., founding chair of Pediatrics, was a well-known researcher of cytomegalovirus (CMV), while Neil Blacklow, M.D., chief of the division of Infectious Diseases in the department of Medicine, was also well known for his work on gastroenteric viruses. In Pathology, David Purtilo, M.D., the discoverer of X-linked lymphoproliferative disease (XLP)—a fatal vulnerability to Epstein-Barr virus, was continuing to research the effect of the Epstein-Barr virus on the immune system. Francis Ennis, M.D., who was recruited from NIH by Dr. Blacklow, was nationally recognized for work on the immune response to influenza. In the basic science departments, these interests coalesced with the work of people like the immunologists Raymond Welsh, Ph.D. whose lab demonstrated that "natural killer cells become activated during viral infections and contribute to natural resistance to viruses," and Robert Woodland, Ph.D.,

Raymond Welsh, Ph. D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Robert Woodland, Ph. D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

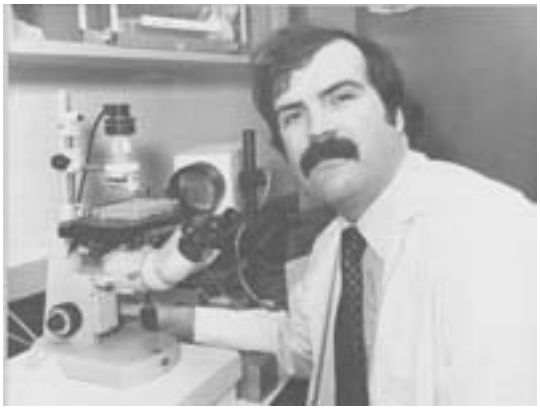
who studied the role of lymphocytes in the regulation of the immune response.[24] Even in 1978—two years after the Hospital's opening—when Sarah Cheeseman, M.D., an internist and virologist interested in CMV, and John R. Sullivan, M.D., a pediatrician and viral immunologist interested in Epstein-Barr virus, arrived at UMMC intending to become clinical investigators, these were not misguided ambitions.[25]

In 1981, when what became known as HIV (the Human Immunodeficiency Virus) was first described, Sullivan, Cheeseman, Blacklow, Ennis, and others were positioned to adapt their efforts to respond to its demands. Cheeseman, who had worked on CMV as a fellow in the Harvard laboratory of Martin Hirsch, was a member of the Infectious Disease division in the department of Medicine, eventually running the Diagnostic Virology Laboratory. Sullivan joined the department of Pediatrics and soon headed the Pediatrics inpatient service. Both were drawn into the deepening enigma of HIV/AIDS.[26] Sullivan, along with Neil Blacklow, M.D., chief of Infectious Diseases and after 1990, chair of the department of Medicine, Francis Ennis, M.D., Richard Koup, M.D., then an instructor in Medicine and part of Sullivan's laboratory and at this writing, the director of immunology at the NIH Vaccine Institute, and Katherine Luzuriaga, M.D., a postdoctoral fellow in Sullivan's lab in 1987 who went on to become a faculty member in 1990 and an internationally known AIDS researcher, all became central figures at UMass in the search for a drug to effectively treat—and even prevent transmission of—HIV. Cheeseman, Sullivan, and Luzuriaga, as well as nurse practitioners Carol Bova and others became early members of the tight-knit cohort of clinicians who staffed the early AIDS clinics, one for adults and one for

Sarah Cheeseman, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

children, at UMass Hospital.[27]

This is a story in which bench science, clinical research, and patient care are braided together. For example, Sullivan began studying primary Epstein-Barr virus in adolescents, which is infectious mononucleosis, for which he received his first RO1 (an NIH investigator-initiated research grant) in 1981. Soon he learned that infants who had received blood transfusions and as well as hemophiliacs who had received Factor 8 concentrate were presenting with immune system devastation. According to one hypothesis at the time, herpes viruses such as Epstein-Barr and CMV might be the source of infection. Sullivan contacted Drs. Peter Levine and Doreen Brettler at Memorial hospital, who were running the New England Area Comprehensive Hemophilia Program. They agreed that Drs. Sullivan and Cheeseman could test these patients' immune responses to E-B and CMV viruses. That led to a second RO1. "And," as Dr. Sullivan noted, "we actually...ended up being the first to describe that the majority of individuals with hemophilia who were receiving Factor 8 concentrates had in fact been infected with this virus [HIV], because of the Factor 8."[28]



John Sullivan, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

When it became clear that the unknown agent was likely a virus, Sullivan began to study ways to identify it—to "culture the virus."

> And then in 1985, in my immunodeficiency clinic, I saw this child... had swollen lymph glands, and there was some question about the immune system. And that was our first case of congenital HIV infection. And then it became apparent that this was a virus that was really spreading in our population, that women were getting pregnant and then passing the virus to their babies. So we immediately took the focus on: well, how does this virus get passed from mother to child? And we started investigating when it's transmitted by collecting specimens—identifying women who are infected when pregnant, and then collecting specimens from

> cord blood and placenta at birth, and then following the babies and taking samples, and isolating the virus. And we were actually one of the first laboratories to show that most of the virus was transmitted during the birth process—that as the baby passes through the birth canal, the baby is exposed to the virus and infected.[29]

As soon as the retrovirus had been isolated, first by the Pasteur Institute (1983) and then by Robert Gallo's laboratory at NIH (1984), Sullivan acquired a sample and, before a commercial assay was available, designed his own antibody assay to isolate and identify the virus in patients. In 1984 Sullivan and his colleagues set up an anonymous HIV testing site, the first in central Massachusetts, at UMass Hospital. As he later told an interviewer, there was "a lot of controversy in those days about: well, if you can't do anything about it, why test for it? But I thought it was important that if people knew they were infected, they could at least take precautions not to infect somebody else."[30] They advertised the anonymous testing site all over the city of Worcester.

> In the evenings we would see...*not* patients, these were at the time mostly healthy people, who thought they were healthy, anyway, who knew they had risk factors for HIV, whether it be sex—males having sex with males, or intravenous drug use, or contact with prostitutes. So in the evenings, we would stay around, at 6 o'clock here, and people could come in, and we gave them directions, and they could come up and we would do pre-test counseling, take a blood sample. It was anonymous—they'd have a number, and we didn't know people's names or anything. And we'd run the test, and then they'd come back two weeks later and we would give them the result with the appropriate counseling.[31]

At first, they could do nothing for the adults except to warn against infecting others or, in the case of a pregnant woman, treat her newborn with Bactrim for pneumocystis carinii. AZT (Zidovudine), the first AIDS drug to be approved by the FDA for clinical use (in 1987), became available for investigational use in 1986. At that point, Sullivan, Cheeseman, and their colleagues at UMass were able to start treating with it. In 1987, with Neil Blacklow as principal investigator, UMMC received a five-year NIH grant to

become one of 17 U.S. clinical study sites for treatment of adult AIDS patients with antiviral therapy which, for the next six years, meant AZT.[32]

But, as a pediatrician, Sullivan was primed to consider the problem of mother-to-infant transmission of HIV, the timing of transmission, the mode of infection, and the need to find a way to prevent it. Just as important, by 1987, the clinic was seeing more and more women and children infected with HIV.[33] At just this point, another virologist from UMass who worked just down the hall from Dr. Sullivan, Robert Eckner, Ph.D., was hired by a German pharmaceutical company named Boehringer Ingelheim (BI). BI, which had a research and manufacturing facility less than two hours by car from Worcester in Ridgefield, Connecticut, was in the early stages of a search for a new AIDS drug. Eckner was hired to work on the new project in December 1987. At Eckner's suggestion, BI also contracted with Sullivan to screen their new products. As science writer Rebecca Anderson has written, "Sullivan had developed methods to safely isolate HIV from infected patients and use it to observe the virus's ability to infect and proliferate in human cells under controlled laboratory conditions." Now he began screening several BI compounds against the virus. The first BI compounds were ineffective, but in 1989 Sullivan showed that a compound—later named Nevirapine—could prevent HIV replication in his assay.[34]

From this point on, Sullivan and colleagues from UMass Medical School, along with Douglas Richman, M.D. from UCSD, began a collaboration with BI. Their work eventuated in the development of a drug that became a foundation of worldwide efforts to prevent mother-to-infant transmission of the AIDS virus, Nevirapine. In 1990, with the support of the NIH's AIDS Clinical Trials Group network (ACTG), of which Sullivan and Cheeseman were members, the FDA approved clinical trials of BI's Nevirapine. It also urged BI to design a trial of the drug for children, something that Sullivan himself was advocating with the company and with the ACTG.[35]

The first clinical safety trial of Nevirapine for adults (after the drug's accelerated approval by the FDA, BI marketed it under the name "Viramune") was begun at UMMS on January 21, 1991 under the supervision of Dr. Sarah

Cheeseman.[36] As she recalled it:

> [W]ell, first for Boehringer Ingelheim we did a true Phase One pharmacokinetic study [of Nevirapine]. And Rick [Koup] handled the lab specimens. His wife, who was my clinical trial coordinator, Carol Bova, who was our nurse practitioner, and I. We were the team...we had these groups of four patients per dose come in, and they had to spend the night, so they had observed [a] fast from midnight on. And at the time we had a four-bed observation unit, where people who had procedures and needed to stay longer than two or three hours were kept. That wasn't in use on the weekends, so we could use it Sunday night for our patients to stay over, and then on Monday there was another room that was available for actually administering the drug, and having the patients wander around...
> [W]e would come in on Sunday night, review again with the patients what was planned, and then they would spend the night, and I think one of us was always here. And then the next day—I mean, we gave the first dose of Nevirapine ever to a living human being here...[37]

At the same time, John Sullivan and Katherine Ruiz de Luzuriaga, M.D., by then a young assistant professor, Richard Koup, and others, were working in Sullivan's lab to try and determine how to diagnose HIV infection in newborns so as to effectively time therapeutic interventions. It was a tricky problem. Luzuriaga explained that,

> ...we did a lot of the work on early diagnosis...and applying those methods to figuring out when babies were infected. So when you apply those diagnostic criteria, there are actually patterns. So about 20 percent of babies were positive at birth...they had been infected in utero. About 60 percent [were] negative at birth, but positive after birth, like a week or so after birth, and those babies were likely infected during delivery, or intrapartum. And then a small percentage in places where there is breast-feeding—it's anywhere from actually 20 to 40 percent—were negative at birth, but positive sometime later, suggesting that they had been infected through breast milk.[38]

Between 1991 and 1994 Sullivan, Koup, Luzuriaga, and others, in the words of

Dr. Luzuriaga, "published what is now widely used as the definition for timing of infection."[39] Since Sullivan had been working with BI all along, and since he had been advocating for a pediatric trial of Nevirapine almost from the start of his collaboration, UMass Med became the first site for the pediatric Nevirapine studies.[40]

Katherine Luzuriaga, who was pregnant with her first child, carried out the first pediatric safety trial of Nevirapine in June 1991. As she emphasized, "it's one thing to be a pediatrician when you haven't had kids. It's another thing to have gone through pregnancy, and have the kids, and really you develop a lot of empathy, you know, with the parents and the children. And it was tough to see these moms get sick, or die, and no longer be able to care for their kids. It was tough to see these kids get sick so quickly. So I think that's what really drove us." As with the adult clinic, the pediatric AIDS clinic and clinical studies were "a story of teamwork." Many of the families had very limited resources, sometimes even lacking basic electricity and water and reliable refrigeration for medicines at home. "We had fabulous nurses who helped us in the clinics every step of the way...They just served as case managers and got these kids and their families whatever they needed. We also had fabulous social workers..."[41]

Katherine Luzuriaga, M.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

Tragically, many of the mothers and infants in those first trials in 1991 did not survive, but the picture has since improved. In 1995 the FDA approved the three-drug retroviral "cocktail" for clinical use in adults, an approach developed by the lab of Martin Hirsch, Dr. Cheeseman's former mentor at Harvard. From then on, in developed countries where the cost and complexity of this regimen could be managed, survival rates climbed dramatically. (After the FDA approved Nevirapine in 1996, it or another drug in its class of non-nucleoside reverse transcriptase inhibitors became one of the three drugs in this regimen—again, a regimen available only in wealthier nations; nowadays, however, the regimen

usually includes a protease inhibitor rather than a Nevirapine-like drug.)[42] Today Luzuriaga sees patients, some of them now in college, who are quite healthy. Dr. Cheeseman, describing her experience with adult patients who received the combination antiretroviral therapy, put it this way:

> Well, I mean the big change is we're not focused on death... And now...I'm still a primary care physician for a great many of my patients... A large majority of my patients date from the late eighties, so we've been together a long time and some of them, many of them, were very sick back then, and expected to die anytime. And so we look at each other with these sort of silly grins: "We're talking about your cholesterol! Can you believe it?"[43]

Sullivan, Cheeseman, and Luzuriaga are unanimous in their spontaneous expressions of appreciation and respect for the nurses who worked alongside them in the AIDS clinics and trials. Their work has also evolved. Today Carol Bova, nurse practitioner and Ph.D., for example, is a professor in the Graduate School of Nursing at UMass-Worcester and runs the Positive Life Skills Program for HIV-infected women in Central Massachusetts. Her clinical work focuses on improving community-based clinical care for HIV- and hepatitis C-infected individuals and their families, particularly those with comorbid conditions such as depression and substance abuse. With Carol Jaffarian, another UMass nurse-researcher, she helped create an HIV education and prevention program in Armenia. Another nurse practitioner and Ph.D. recipient, Donna Gallagher, joined UMMS after two decades of work in Boston, first as an oncology nurse and then, in the early 1980s, as a palliative care specialist for patients dying of AIDS. The transition did not feel radical to Gallagher, who saw her oncology practice as being "a partner in a struggle," a partnership with the patient. In the mid-1980s, Gallagher helped

Carol Bova, Ph.D., R.N., A.N.P. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

to create an AIDS home health care referral and care service located in Boston but serving the entire state of Massachusetts, the Community Medical Alliance. As a result of her work there, in 1987 she received a call from Allan Chuman, now with the Department of Family Medicine and Community Health but at the time affiliated with the Center for Health Policy and Research at UMass. He invited Gallagher to become the director of a Health Resources and Services Administration (HRSA)-financed project to train Massachusetts providers in AIDS care. It was called the New England AIDS Education and Training Center. From 1988 on, they began developing curricula and workshops to train health care providers and medical and nursing students in the care of persons with AIDS. The program continues as of this writing, from within UMMS's Commonwealth Medicine; Gallagher has faculty appointments in both the department of Family Medicine and Community Health and the Graduate School of Nursing. She has also been extensively involved in global health care, whether in Romania, Haiti, South Africa, or Liberia, particularly to organize health care for populations facing HIV/AIDS in epidemic proportions. She and Katherine Luzuriaga co-direct the UMMS Office of Global Health, which was established in 2009.[44]

Donna Gallagher, Ph.D., A.N.P., F.A.A.N. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Today, it might seem as if the questions underlying research and therapeutics for HIV+ persons have changed—at least in wealthier nations, just as the combinations of drugs being used have changed. In Luzuriaga's words, pediatric AIDS specialists can now wonder about "...what are the best markers for a state in which the virus is so low that it would not rebound if we took them off [antiretroviral medication]?"[45] The problem of prevention, however, persists as urgently as ever, especially the prevention of mother-to-child viral transmission. A case from 2012, known through the media as the "Mississippi baby," demonstrated again how difficult it will be to effect a "cure" in individuals who have contracted the infection. Drs. Luzuriaga and Deborah

Persaud, M.D., a pediatric HIV specialist at Johns Hopkins, consulted on the case of a baby born to an HIV+ mother who was treated by Hannah Gay, M.D. at the University of Mississippi Medical Center—Jackson. Dr. Gay, another pediatric HIV specialist who was a member of the NIH clinical trials network and had collaborated previously with Luzuriaga and Persaud, treated the baby with a three-drug antiretroviral combination only 30 hours after birth. The triple-drug regimen was continued for 18 months, but stopped when the mother interrupted the treatment. The baby was next examined by Gay after a five-month hiatus, and showed no detectable trace of the virus. Initially the case was hailed as a "functional cure" of AIDS and Luzuriaga, Persaud and Gay were celebrated worldwide. Unhappily, in 2014 the virus reappeared in the child who was restarted on antiretroviral therapy and seemed to be doing well. Dr. Anthony Fauci, National Institute of Allergy and Infectious Diseases (NIAID) director, concluded, "The case of the Mississippi child indicates that early antiretroviral treatment in this HIV-infected infant did not completely eliminate the reservoir of HIV-infected cells that was established upon infection but may have considerably limited its development and averted the need for antiretroviral medication over a considerable period."[46]

No easy cure of AIDS seems in the offing, but prevention does seem to be feasible. That is where the work of John Sullivan reenters the narrative. Sullivan was always focused on the problem of protecting the newborn from the risk of infection either in utero or while passing through the birth canal. Would Nevirapine, given while an HIV+ woman was pregnant, prevent transmission of the virus to her baby? While AZT was shown to be effective, the dosage was intense, complicated and unforgiving—conditions that made AZT an unappealing drug for use in developing countries where the rate of new infection was exploding. Nevirapine proved to be a less expensive, more convenient drug that helped prevent maternal-to-infant infection in poorer countries.

Sullivan worked with the World Health Organization to develop a trial and designed it specifically for use of Nevirapine. In 1995, the ACTG authorized a small clinical safety and bioavailability trial led by Sullivan and Luzuriaga,

and the NIH established the HIV Network for Prevention Trials (HIVNET). By 1999, a protocol designed by Sullivan of a dose of Nevirapine for the mother during labor plus a booster dose for the baby two to three days postpartum had proven effective in prevention of infection to the infant. That same year, he launched the South African Intrapartum Nevirapine Trial (SAINT) comparing Nevirapine, short-term AZT and the drug 3TC. Although South African internal politics bogged down the trial for two years, the protocol was utilized in a trial in Uganda that demonstrated its effectiveness.[47] In 2000, BI announced that it would "offer Nevirapine free of charge for five years to developing countries for use in preventing mother-to-child HIV transmission." The same year, WHO and UNAIDS "endorsed single-dose Nevirapine for use in general practice."[48] John Sullivan credits the collaborative spirit he found at UMMS for the eventual success of Nevirapine:

> I mean, it was an incredible experience, because very few of my colleagues had the...luxury, I should say, of being in a place where you're involved in discovery. You can take it in the clinic, and then actually see it through clinical trials to FDA licensure, and then see it used throughout the world. I mean—that's an incredible journey that very few have the opportunity to participate in. And you know, just being in the right place at the right time, and it happened.[49]

The Program in Molecular Medicine

In addition to the ongoing AIDS research, Chancellor Lazare inherited another significant research nexus that, like the work of Sullivan and Luzuriaga, was poised to blossom. Despite Chancellor Laster's administrative shortcomings, his few years in Worcester proved to be a watershed for basic science research at the Medical Center. In Michael Czech's words,

> Len Laster had a terrific vision, and a very inspiring vision...of how UMass Medical School could participate in changing the world by high impact science... [Laster's] leadership created the notion of building [the Program in] Molecular Medicine as a vehicle to start that process. [W]ithout Len, we wouldn't have Molecular

Medicine.[50]

The initiative Dr. Laster launched for a Program in Molecular Medicine (PMM) had barely begun when he resigned. Fortunately, just enough progress had been made by the end of 1990 that it would have been almost unthinkable to withdraw the institution's support.

The campus expansion carried out during the Lazare administration played a crucial role in allowing the PMM to succeed. The vision of a cross-disciplinary unit of molecular researchers struck a deep chord with many scientific leaders at UMass Med. As noted previously, in 1989 40,000 square feet of laboratory space had already been leased for five years in Biotech Park.[51] This was the first tangible step toward realizing the vision shared by Laster, Maurice Goodman, Michael Czech, and other researchers on campus. (And in 1992, Chancellor/Dean Aaron Lazare received approval from the University's Board of Trustees to purchase Biotech 2 for $14.4 million.)[52] The LCME reviewers of 1989 had noted that UMMS "has a proud record of rapid growth, development of fine facilities, and the achievement of pre-eminence among the nation's newer medical schools in its biomedical research activities, including the level of external financial support for such research." The "Basic Science" portion of the 1989 Self-Study had stated that among the 41 medical schools founded since 1960, UMMS ranked 3rd in NIH research support.[53] But, as Roger Davis explained (Chapter 8), the departures of a few highly promising researchers during the late 1980s and a lack of resources, including appropriate space, to recruit their replacements suggested that UMMC's research achievements could evaporate unless strong countermeasures were taken as soon as possible.[54]

Michael Czech, Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

The Program in Molecular Medicine thus was deliberately conceived

to spark a research growth spurt across the entire campus, as measured by recruitment, external funding, scientific discoveries, and honors and awards. Dr. Laster, on the advice of senior researchers internally and externally, had approached Michael Czech, Ph.D. to develop and lead it. Seed money was supplied mainly from approximately two million dollars in accumulated Scientific Council funds.[55] According to the Program's founding charter, drawn up by an advisory committee consisting of all the basic science department chairs or their representatives, PMM was established to:

> strengthen and promote the research efforts of the entire Medical Center, by developing and fostering a strong interdisciplinary scientific environment with multiple technical capabilities. The Program is expected to facilitate recruitment of internationally recognized scientists and to catalyze productive collaborations among faculty at this institution. The long-term goal for the Program is to serve as a major catalyst in the continued growth and stature of biomedical research at the Medical Center.[56]

Although Michael Czech and the school's administration fully intended to recruit researchers in a national search for PMM, initially their only option was to recruit from within the school itself. At first, this did not engender much resentment. John Sullivan recalled that the reaction of his colleagues when he joined PMM was more like, "You guys are crazy...What are you doing? You're going to go across the street? How could you possibly leave this building?'"[57] But, after the program began to be more successful and internal recruitment had begun to leave noticeable gaps in existing departments, a certain amount of resentment became evident. A white paper on "The future of Basic Science Departments at UMMS" from 1992 referred to feelings of "anguish" and the "alienation" within the basic science departments resulting from the seemingly arbitrary way that PMM faculty were selected.[58] As Gary Stein, who was then chair of Cell Biology and did not lose people from his department, viewed it:

> Okay, so we're looking at a period of time when you had, really, an austere budget. And...I felt very strongly that you don't build

> programs at the expense of existing programs... what you are doing is you're subtracting expertise. You're subtracting components of a department's environment. I was very strongly in favor of building Molecular Medicine, but my preference was to go ahead, to allocate resources, and recruit some outstanding people from the outside, rather than going into departments and taking.[59]

The anguish resulting from the creation of the PMM, however, reflected deeper issues than personal resentment or differences in administrative strategies. The white paper, written by Gary Stein and Maurice Goodman, elaborates the issues clearly and merits extended quotation:

> At one time there was a readily identifiable approach or philosophy that went along with each of the basic sciences, and although each might have attacked the same problem and perhaps even reached the same solutions, the experimental techniques, strategies, emphasis, and interpretation were unique for the discipline. Thus, anatomists (now cell biologists) emphasized the structure and the organization of a biological system while to the physiologist, organization was interpreted in a functional sense, and the biochemist emphasized the reaction mechanisms and perhaps molecular structure of the components involved. All of these aspects are now fair game for the cellular biologists that populate the 6 basic science departments...
>
> ...Now cell biologists, biochemists, microbiologists, physiologists, pharmacologists, and pathologists all use the same 'tools.' It can be argued that the current arrangement of departments coincides more with curricular needs and with memberships in professional societies than with scientific endeavor. The question arises as to whether there is adequate justification to maintain the 6 basic science departments, especially with shrinking resources and the potential for moving to an integrated or problem-based curriculum...[60]

The argument continued with a strong affirmation of the rationale for retaining the traditional scientific departments on both scientific and political grounds.[61] In the short run, the traditional departments were retained but, in keeping with national trends—budgetary as well as intellectual—a number of departmental consolidations occurred at UMMS between 2006 and 2015.[62]

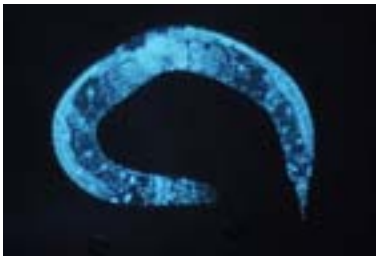
With few extra dollars available for recruitment in the early 1990s and, at the time, modest starting salaries relative to competing institutions, the only way the PMM could grow was to develop a track record from within which would then act as a magnet, it was hoped, for up-and-coming external recruits. Czech was authorized to invite selected UMMS researchers to join Molecular Medicine, researchers with "diverse, but overlapping scientific interests in order to probe molecular mechanisms that underlie physiological processes and the diseases associated with them."[63] In practice, this meant they moved their labs and overhead funds from existing departments to the new Biotech Park across a fairly busy thoroughfare from the rest of the campus. Initially the PMM faculty all held tenured or tenure-track appointments in one of the regularly constituted medical school departments. By 1996, an internal report on the basic sciences at UMMS reported the following: "Although campus enthusiasm for the PMM was initially tempered by concerns about its distance from the main building and its apparently elite status, such concerns have diminished substantially as the PMM faculty have become integrated into the research community," and the Graduate School.[64] In 2000, when the "Program" was designated a department (although it retained its original name), faculty could be recruited or transferred into PMM as their home department.

John Sullivan's lab was the first to move to the PMM in Biotech 2 in December 1989. Dr. Czech's laboratory soon followed. About the same time (1990), Roger Davis, who also moved into PMM, was successfully nominated to become a Howard Hughes Medical Institute Investigator, the first of a string of such successful nominations.[65] Over the next two years 10 other laboratory groups drawn from seven different UMMC departments moved into the PMM space.[66] Initially the PMM researchers were organized into three major concentrations: structural biology, cellular signaling pathways, and regulation of gene expression and function. In some cases, an individual laboratory was deemed to be sufficiently successful and complex to require designation as a program in itself. An example is the laboratory of Michael R. Green, M.D., Ph.D., another Howard Hughes Medical Institute Investigator, whose field of gene

function and expression was designated a "program" and eventually moved into the Lazare Research Building when it opened in 2001.[67]

The recruiting of Dr. Green illustrates what the scientific leadership at UMMS hoped to accomplish through the PMM. Michael Czech's approach to recruiting had always been, as he put it, "to advertise universally, world-wide, to make calls to senior leaders...and look for the very, very best athletes, so to speak, the best scientists—in terms of the highest possible quality—that were out there, without too much regard for what they'd work on..."[68] But he was acutely aware that he needed to recruit a senior scientist of the first rank from outside UMass in order to cement the program's credibility in the eyes of the general scientific community and, given the transition occurring in the Chancellor's office, at home, too. One potential senior recruit in 1990, from Harvard, changed his mind at the last minute and instead of coming to UMMS, went to Stanford. That was a low point. But within months, Czech succeeded in bringing Michael Green, M.D., Ph.D., and his laboratory, also from Harvard, to the PMM. Green's studies of eukaryotic gene transcription have identified genetic factors that inhibit melanocytes from progressing to melanomas. His lab uses "transcription-based approaches and functional screens to identify new genes and regulatory pathways involved in cancer."[69] Green was named a Howard Hughes Medical Institute investigator in 1994, to the National Academy of Sciences in 2014, and to the National Academy of Medicine (formerly, the Institute of Medicine) in 2015.[70]

In 1994, too, Michael Czech was able to recruit a young scientist to the Program in Molecular Medicine, Craig C. Mello, Ph.D., directly from a postdoctoral fellowship at the Fred Hutchinson Cancer Research Center in Seattle. Mello, principally (although not exclusively) in collaboration with Andrew Z. Fire, then of the Carnegie Institution of Washington's Baltimore laboratory and, after 2003, Stanford, has investigated and elucidated the workings of RNA interference, or RNAi, to silence and thus to regulate genes. As they worked with the nematode worm, *C. elegans*,



C. elegans *(Public domain image courtesy of the National Library of Medicine)*

or, as Mello has called them, "these poor elegant little animals...," it was not initially clear what they had discovered. As Andrew Fire wrote, "[W]e had every reason to think we were in 'the twilight zone."[71] From the perspective of Michael Czech and the intended purpose of a unit such as the PMM, Mello's story is instructive. As Czech recalled:

> Craig came, and he was a great young investigator. He was a young kid; he had his bumps in the road. There were times where his funding was very tight, and I think uniformly we always said to Craig what we said to everybody, and that is, 'We don't care about the money. We care about your science. Can we help? Go ahead and go into the red if you need to, just keep doing the great science you're doing, especially when you're working in an area like RNAi, that is completely new and we don't know what's going to happen.' Because this could [have been] a total artifact...
> And...for a couple of years, Craig was going around to faculty meetings and around the corridors saying, 'I've got this amazing finding. I don't know what to do with it.' Many people would have waited to get tenure before putting all their energies into something so unusual. But to Craig's credit, he stuck with what he knew to be... important, had to be something real—couldn't be an artifact, if it were that dramatic, that amazing.[72]

Craig Mello, Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusets Medical School)*

Mello and Fire were awarded the 2006 Nobel Prize in Physiology or Medicine. Mello has continued to explore the role of RNA in genetic regulation and information dissemination.[73]

UMass has continued to attract leading scientists working on RNA biology, its role in gene expression and regulation, and the potential of using RNA in designing therapeutic interventions in humans. The presence of top-tier laboratories certainly helped, as did the successful campaign to fund and build a new research building on campus, the Aaron Lazare Research Building (LRB), designed (with serious input by the researchers for whom it was intended) in a much more open style than

the original medical sciences building. Money for the LRB was made possible both by the agreement concluding negotiations with Memorial Health Care for UMass hospital (see Chapter 5), but also from what was, at that time, the most successful fund-raising campaign in the school's history. The LRB opened in 2001.[74] The LRB's open floor plan reinforced the sense that departmental affiliations would no longer define, to whatever extent they had done so before, research collaborations. Scientists such as Phillip Zamore, who arrived less than 2 years before the LRB opened, remember this period as one of great expectation: "It was a really exciting time, because the sense was, given the opportunity to reorganize where people were, how they were grouped, and what resources they had, plus the ability to recruit new young people, and for even junior faculty like me to have a strong voice in who got recruited—it was really empowering."[75] And, as noted above, this was a period of unprecedented expansion of NIH funding.

Phillip Zamore, Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

From 2006, the University Board of Trustees urged the creation of a university-wide strategy for stem cell research. In the wake of Craig Mello's award of the Nobel Prize in the fall of 2006, the University and, especially, the medical school became beneficiaries of the Governor Deval Patrick administration's new willingness to jump start biotechnology via university-based as well as private-sector initiatives. The Patrick administration established a Life Sciences Initiative with the Massachusetts Life Sciences Center (LSC) as the agency through which state monies would be disbursed in a competitive proposal process. The University received $90 million from the LSC toward the construction of the Albert Sherman Center at UMass Medical School, a 500,000 square foot research and education facility which opened at the end of 2012, nearly doubling the research capacity of the school. Designed to foster collaboration and translational research,

the Sherman Center is home to the Advanced Therapeutics Cluster, which is composed of the RNA Therapeutics Institute and the Gene Therapy Center.[76] The LSC also provided the medical school with funding for a stem cell bank and registry on the former Worcester Foundation campus in Shrewsbury.[77]

Just as important in successfully attracting additional top-tier scientists to UMass Medical School was the presence of other top-tier scientists. Phillip Zamore, Ph.D., who in 1998-99 with Thomas Tuschl and colleagues (their senior author was Phillip Sharp, a Nobel laureate from MIT) was the first to produce the phenomenon of RNA interference *in vitro*, was persuaded to accept his first faculty position at UMMS because of the presence of Michael Green (his dissertation advisor) and Roger Davis. Davis, whose lab had been across the hall during Zamore's work with Green in the early 1990s and who recently had been the most cited researcher in the world, went out of his way to tell him how welcome his presence would be.[78] In 2007, Craig Mello and Zamore personally initiated recruitment of two other RNA research leaders, Melissa J. Moore, Ph.D., and Victor Ambros, Ph.D. The results were described in a *Boston Globe* headline as "UMass Medical School recruits two RNA stars." Melissa Moore, a Howard Hughes Medical Institute Investigator, was in part recruited by Zamore, whom she had known when working in the lab of Nobel laureate Phillip Sharp. Moore's work focuses broadly on gene regulation through RNA mechanisms, such as the structure and mechanism of the spliceosome, "a macromolecular machine" that removes introns, or "incoherent strings of nucleotides that interrupt the coding regions of genes." More recently her work also has explored the role of RNA metabolism in neurodegeneration.[79] Victor Ambros, after deciding to move to UMass Medical School from Dartmouth, was quoted as saying, "When I heard that Melissa Moore was planning to move [to UMass], that was sort of the clincher." Ambros and Moore had known each other since their days at MIT

Melissa Moore, Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

when Ambros worked in a lab across the hall from her. In 1993, Ambros and his lab, using *C. elegans* as a model, identified the first microRNA molecule. Ambros studies the role of microRNAs in regulating development. In 2008 he received the Lasker Award for Basic Medical Research.[80]

Victor Ambros, Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Responding to the intensification of molecular biology research at UMMS, especially RNA research, the school announced plans in 2009 for an RNA Therapeutics Institute (RTI) to be led by Craig C. Mello, Ph.D., with Melissa J. Moore, Phillip D. Zamore, and Victor Ambros as co-directors. That same year, groundbreaking took place for the Albert Sherman Center (ASC), a building intended to provide space not only for the RTI and other molecular research programs, but also for medical, nursing, and graduate education. With the completion of construction of the ASC, the RTI began operations.

When in 2007 Terence R. Flotte, M.D. arrived at UMMS to become dean of the medical school, executive deputy chancellor and provost, he brought with him an outstanding research program in gene therapy.[81] He was instrumental in creating the Gene Therapy Center, directed by Guangping Gao, Ph.D., to facilitate research using the adeno-associated virus (AAV) vector in gene therapy design.[82] Dean Flotte's own research focuses on lung diseases such as cystic fibrosis and alpha-1 antitrypsin (AAT) deficiency. A deficiency of AAT, a genetic mutation, results in conditions consistent with emphysema and chronic obstructive pulmonary disease (COPD). In 1993, Flotte, with colleagues at Johns Hopkins, was the first to use the adeno-associated virus as a vector to deliver "corrective" genes into the bodies of adults with cystic fibrosis.[83] Beginning in 2003 and reported in 2006, he directed a first-in-human Phase I clinical trial of an intramuscular recombinant AAV2-AAT trial in adults. He and his lab are conducting Phase II clinical trials and are hopeful that it will become a viable therapy for lung disease due to AAT deficiency.[84] The AAT mutation also is a

contributor to liver disease. In 2012, Phillip Zamore, Christian Mueller, Ph.D., and Terence Flotte designed an artificial microRNA to suppress mutant AAT genes occurring in the liver, combining it with a corrective AAT gene using the AAV delivery system.[85]

Neurotherapeutics also has come to represent a significant target of the research under way at UMMS in the past decade, a development strongly signaled by the arrival in 2008 of the neurologist and leading amyotrophic lateral sclerosis (ALS) researcher Robert H. Brown, Jr., D. Phil., M.D. as Chair and Professor, Department of Neurology. In 1993, while director of the Day Neuromuscular Laboratory and the Muscular Dystrophy Association Clinic and a professor at Harvard Medical School, Brown and colleagues, "discovered the first gene linked to the inherited form of ALS, called *SOD1*." At UMMS, in 2009 with John Landers, Ph.D., Associate Professor, Department of Neurology, Brown discovered an ALS gene variant that substantially improves survival of individuals with ALS. With a longtime UMMS collaborator, Dr. Zuoshang Xu, Brown and his lab are engaged in "pre-clinical development of a novel therapy for familial ALS, using a viral vector to deliver synthetic microRNA."[86] In 2009, Brown and Melissa Moore organized a monthly faculty discussion group drawn from several dozen laboratories working on neurological mechanisms of disease. In 2010, this group formalized as the Neurotherapeutics Institute under the leadership of Drs. Moore, Brown, Neil Aronin (who specializes in research on Huntington's Disease, independently and in collaboration with Phillip Zamore), and Marc Freeman (who studies glial cells).

Robert H. Brown, Jr., D. Phil., M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Neil Aronin, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

UMMS Research Funding 1978-2014***

Fiscal Year	Number of Institutions Receiving NIH Funding	UMass Medical School Rank	NIH Funding Amount (in millions)
1978	*	*	$ 6.3 **
1979	*	*	$ 9.3 **
1980	*	*	$ 10.7 **
1981	*	*	$ 12.9 **
1982	*	*	$ 17.4 **
1983	*	*	$ 21.7 **
1984	*	*	$ 22.7 **
1985	*	*	$ 29 **
1986	*	*	$ 30.4 **
1987	*	*	$ 34.7 **
1988	*	*	$ 39.5 **
1989	*	*	$ 46 **
1990	*	*	$ 50 **
1991	*	*	$ 54 **
1992	1980	68	$ 30.7
1993	1519	*	*
1994	2216	69	$ 35
1995	2270	70	$ 35
1996	2257	56	$ 46
1997	2405	56	$ 50.5
1998	2170	54	$ 57
1999	2536	57	$ 60.8
2000	2659	58	$ 73.7
2001	2490	56	$ 81.5
2002	2627	58	$ 89
2003	3127	58	$ 98.8
2004	3224	56	$ 106.8
2005	3459	56	$ 114.7
2006	3402	57	$ 109
2007	3335	49	$ 119
2008	3043	50	$ 122.8
2009	3035	45	$ 135
2010	2944	42	$ 152
2011	2818	43	$ 150
2012	2598	45	$ 140
2013	2503	46	$ 130
2014	2527	42	$ 131.6

*information not available
** includes sponsored activity – federal and private grants, contracts and overhead
*** Source: UMMS Annual Reports

The laboratory of Allan Jacobson, since 1994 the chair of Molecular Genetics and Microbiology (renamed Microbiology and Physiological Systems in 2012), has focused on the definition of and elucidation of the mechanistic functioning of a process named nonsense-mediated mRNA decay (NMD), a form of genetic quality control. Jacobson explained, "This turned out to be a quality control pathway which would rid the cell of messenger RNAs that had these premature stop codons. And basically, it prevented the accumulation of partial proteins that were synthesized, because these were toxic to the cell." NMD is a process found in all eukaryotic cells and presents a robust possibility for design of a molecule that can treat the many heritable disorders in humans that result from "nonsense mutations," such as cystic fibrosis or Duchenne muscular dystrophy.[87]

Many other examples of UMMS's strengthened research profile can be noted. In the department of Cell and Developmental Biology, for example, Gary Stein (who was department chair from 1988 to 2012) and Janet Stein had made a significant contribution by cloning the human histone gene and in the understanding of cell cycle control and cell growth mechanisms, especially in

Janet Stein, Ph. D. and Gary Stein, Ph.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

bone tissue. They were joined here by their collaborator, Jane Lian, Ph.D. in 1989. Lian's laboratory at Boston Children's Hospital had focused on early stem cell differentiation into osteoblasts. At UMass, the Stein and Lian labs focused on understanding the full cycle of cell specialization, growth, and

division of bone tissue. Jeanne Lawrence, Ph.D., who joined the Department of Cell Biology in 1985, and is currently interim chair of the department, has long been recognized for her studies of chromosome regulation by non-coding RNA and nuclear and genome organization. As she explained, "Our lab has long worked on uncovering basic mechanisms whereby the expression of normal genes is controlled during development—the process known as epigenetics."[88] Specifically, Dr. Lawrence identified the XIST gene (located on the X chromosome) that is responsible for turning off one of the two X chromosomes in female cells by effectively "painting" it with a nuclear RNA. This discovery led to the realization that this naturally occurring X chromosome "off switch" can be rerouted to neutralize the extra chromosome responsible for trisomy 21, also known as Down syndrome. In 2013, Dr. Lawrence was able to confirm this theory by turning off the extra chromosome in trisomy 21 cells in a laboratory setting.[89]

Jeanne Lawrence, Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

The laboratory of C. Robert Matthews, Ph.D., who became chair of the department of Biochemistry and Molecular Pharmacology in 2001, carried out important research into the mechanisms of protein folding.[90] In 2012 Celia Schiffer, Ph.D., professor of Biochemistry and Molecular Pharmacology, was named founding director of the Institute for Drug Resistance. Building on work she had begun at UMMS more than a decade earlier, her research derives from the insight that drugs are not typically designed to ward off resistance; yet microorganisms causing diseases such as AIDS or tuberculosis are quick to evolve into pathogens that can evade previously effective drugs. Schiffer and her collaborators work to unravel the mechanisms of

Celia Schiffer, Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

drug resistance in order to develop therapeutics that can avoid resistance.[91]

These and numerous other research networks at UMMS reflect the ubiquity of interdisciplinary collaboration in the basic sciences today. They also attest to the success of the vision first entertained by Chancellor Laster, and carried forward by Drs. Czech and Goodman and, ultimately, by Chancellor Lazare and his successors, Dean Terry Flotte and Chancellor Michael F. Collins.[92]

The Worcester Foundation for Biomedical Research, 1944; 1997-

One of Lamar Soutter's earliest allies in the Worcester community was Hudson Hoagland, Ph.D., co-founder and co-director of the Worcester Foundation for Experimental Biology, as it was known from 1944 to 1995. As noted in earlier chapters, Hoagland gave spirited public support to the medical school's being located in Worcester. In 1997 the Foundation, now known as the Worcester Foundation for Biomedical Research, merged with UMass Medical School. Today it is principally recognized for its crucial role in the development of the first oral contraceptive and in carrying out the first systematic study of the breast cancer drug Tamoxifen. The Foundation had deep roots in Worcester

Hudson Hoagland, Ph. D. and Gregory Pincus, Ph. D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

history. It was founded by two Clark University biologists, Hudson Hoagland, Ph.D. (1899-1982), at the time chair of Biology, and Gregory Goodwin ("Goody") Pincus, Ph.D. (1903-1967), his friend and a professor in his department. The two had known each other since graduate school at Harvard. By 1944, both had suffered setbacks in traditional academic settings such as Harvard, Columbia, and now, Clark University. It seemed time to try something new. Hoagland, a neuroendocrinologist, came from a family that had owned a prosperous foundry and rolling mill machinery plant; he had many connections in the Worcester business and manufacturing community—which was fortunate. Were it not for financial contributions received from the Worcester community in their early years—the Foundation's benefactors ranged from the heads of large companies to small business owners and everyday working people—the Foundation's co-directors would not have been able to purchase a 12-acre estate in neighboring Shrewsbury to house their enterprise.[93] Nor would they have been able to recruit researchers, such as the reproductive biologist M. C. (Min Chueh) Chang, Ph.D. (1908-1991), who arrived from Cambridge University in 1945 to work with Gregory Pincus as a fellow. Chang's distinguished career was spent entirely at the Foundation. (Resources were so tight in the early years that Hoagland, Pincus, and Chang all pitched in with chores such as mowing the lawn, maintaining the animal quarters, or acting as night watchman.)[94] Chang originally intended to exclusively pursue his interest in vitro fertilization by working with Pincus. But six years later, Margaret Sanger (founder of Planned Parenthood Federation of America) and Katherine McCormick (the widow of the heir of the International Harvester

Min Chueh Chang, Ph. D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Company's founder, Cyrus McCormick, and herself, an early MIT graduate and staunch supporter of contraception) persuaded Pincus to focus on the search for a safe and effective oral contraceptive. At that point, Chang joined Pincus in trying to tackle the problem.[95] Pincus was aware of earlier research from 1937 showing the antiovulatory effect of progestins in rabbits. His great contribution lay in his decision to focus on research using progesterone-like hormones.[96]

It is fair to say that from 1951 until Gregory Pincus' death in 1967, the creation of the birth control pill occupied the majority of his attention. At Sanger and McCormick's urging, Pincus negotiated with an initially hesitant Planned Parenthood Federation to pay for the initial testing until other sources of funding could be found. Eventually, however, McCormick herself supplied the majority of their funding for contraceptive research from her own funds, with some funding provided by the G.D. Searle Company. Both the G.D. Searle and Syntex companies supplied synthetic progesterone for testing—an essential condition since the substance was difficult to isolate and expensive. Pincus and Chang worked as a team. Pincus oversaw research and testing at the Foundation, sought out pharmaceutical company partners, and arranged a partnership with Dr. John Rock of Harvard to conduct clinical trials. Meanwhile, Chang indefatigably performed the majority of the tests in search of a potential contraceptive that was sufficiently active in animals to be worth testing in humans. And McCormick, through periodic visits and letters, not to mention her generosity, added the impetus to move ahead quickly. On June 23, 1960, the federal Food and Drug Administration approved Searle's compound, Enovid, as an oral contraceptive based on the research conducted at the Worcester Foundation and the results of more than 2000 clinical trials conducted in Haiti and Puerto Rico.[97]

Although the Foundation was best known to the public for the development of the first oral contraceptive, researchers worked on many other projects during the more than half century of its independent existence.[98] M.C. Chang's major scientific achievements, for example, lay in his pioneering investigation of in vitro fertilization, work that prepared the way for the first successful human birth through in vitro fertilization in England in 1978.[99]

John McCracken, Ph.D., another senior scientist at the WFBR who arrived as a fellow in 1964 and remained until 1997, chose to come to the WF because, in his estimation, it was at that time the leading steroid research center in the world. The Foundation hosted NIH training programs in steroid biology, in neurobiology and a Ford Foundation-funded program in reproductive biology; these programs supported 10 fellows each. By 1951, they employed 57 men and women; by the late 1960s, approximately 300 international researchers had worked at the Worcester Foundation.[100] In 1967, the Foundation employed 350 people (including postdoctoral fellows), occupying 11 buildings. Its budget ran to $4.5 million.[101]

Endocrine, reproductive, and neuroendocrine biology, reflecting the interests of Pincus, Chang, and Hoagland respectively, took precedence until Pincus' death in 1967 and Hudson Hoagland's retirement the following year. A gradual shift began after 1970. In that year, after a brief interregnum under the directorship of Mason Fernald, Hudson Hoagland's elder son, Mahlon Hoagland, Ph.D., an eminent molecular biologist in his own right and a co-discoverer of transfer RNA, agreed to become the director of the Worcester Foundation.[102] Reflecting Hoagland's interests, research at the Foundation now turned toward work in molecular biology and cancer. In 1976 the Mimi Aaron Greenberg Cancer Research Institute was established. During the 1970s, WFBR researchers "undertook the first systematic study of anti-tumor effects of the anti-estrogen tamoxifen and initial studies of aromatase inhibitors."[103] In 1985, Thoru Pederson, Ph.D., a molecular biologist who had joined the Foundation in 1971 and had become the head of its Cancer Research Institute, became President of the Foundation. In 1995, two years before the Foundation's merger with the medical school, its name was changed to the Worcester

Thoru Pederson, Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Foundation for Biomedical Research (WFBR).

In 1997, a time when the WFBR was facing severe financial challenges, the medical school's strategy, as we have seen, called for an expansion in both space and in basic research. As a result of the merger of the Foundation with UMMS, a number of WFBR scientists became members of the faculty at UMMS. Thoru Pederson, for example, investigates the "functional significance of specific protein-RNA interactions in eukaryotic gene expression, with particular emphasis on RNA traffic and processing as well as domains in the cell nucleus where these events are set in motion."[104] Pederson is now the Vitold Arnett Professor in the department of Biochemistry and Molecular Pharmacology as well as Associate Vice Provost for Research. Many other Worcester Foundation scientists such as Joel Richter, Ph.D., George Witman, Ph.D., and Gregory Pazour, Ph.D., also transferred their activities to the medical school, principally in the departments of Cell and Developmental Biology, Biochemistry and Molecular Pharmacology, the Program in Molecular Medicine, and Microbiology and Physiological Systems.[105] The Worcester Foundation today continues as a philanthropic entity through the Hudson Hoagland Society, working on behalf of research and education at UMMS.

MassBiologics, 1895; 1997-

On December 4, 1996, the University Board of Trustees voted to accept the transfer of the Massachusetts Biologics Laboratories (MBL) from the jurisdiction of the Massachusetts Department of Public Health to that of UMass Medical School.[106] The transfer became effective on January 1, 1997. Following the transfer to UMMS, the first Executive Director of what became known as MassBiologics was Donna Ambrosino, M.D., formerly of Harvard Medical School. In 2011, Dr. Ambrosino was succeeded by Mark S. Klempner, M.D., previously the founding director of the National Emerging Diseases Laboratories at Boston University. Klempner was named Executive Vice Chancellor for MBL.

Originally established in 1895 as the Massachusetts State Antitoxin and

Vaccine Laboratory and directed by renowned epidemiologist and bacteriologist Theobald Smith, M.D., the Laboratory was housed in a few small rooms at Harvard's Bussey Institution. Over the next decade, the laboratory manufactured and distributed such vaccines and antitoxins as those for smallpox, typhoid, meningitis, tuberculosis, and diphtheria—all without charge—through a distribution network initially to Massachusetts physicians and then through hundreds of municipal Boards of Health. Originally, these were to be distributed only within the state, but after 1914, the state laboratory received a federal license for interstate sale of its biologic products. In 1914, the Antitoxin and Vaccine Laboratory and the Diagnostic Laboratory were incorporated together as the Division of Biologic Laboratories of the Department of Public Health. By the 1990s, the Laboratories had grown into a large research, development, and manufacturing unit devoted to research and production of vaccines, antitoxins and, since 1977, antiviral immune globulins. Much of its work began to focus on so-called orphan diseases such as cytomegalovirus (CMV), infant botulism, or respiratory syncytial virus (RSV). Some misunderstanding and confusion arose, however, from the management of the licensing for manufacture of RespiGam, the immune globulin for RSV. As a result, the state was directed to transfer management of the Biologic Laboratories to UMMS, a transaction viewed as beneficial both to the University, to the Laboratories, and to the public. As the UMass Trustees' official motion of 1996 declared, the Laboratory's

Donna Ambrosino, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Mark Klempner, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

work benefits the public through programs "supporting childhood immunization, orphan products, and the public health." The Trustee also authorized what became known as MassBiologics to enter into subcontracting agreements to manufacture biologic products for private companies.[107] Throughout the 2000s, MBL was engaged in the creation of monoclonal antibodies for diseases such as Shiga toxin-producing *Escherichia coli* (*E.* coli), severe acute respiratory syndrome (SARS, in collaboration with NIH), and *Clostridium difficile* (*C.* diff.). Projects since 2011 have included a partnership with the University of Maryland School of Medicine under a joint contract with the Defense Advanced Research Products Agency (DARPA) to produce the monoclonal antibodies for a study intended eventually to produce a vaccine against Enterotoxigenic *Escherichia coli* (ETEC). In addition, MBL is developing an agent to prevent the tick-borne infection of Lyme disease. At the time of writing, MassBiologics is the only remaining non-profit, FDA-licensed vaccine manufacturing institution in the United States.[108]

Commonwealth Medicine, 1999-

Realizing that neither the state of Massachusetts, the NIH, or other external funding sources could keep up with the medical school's expanding research budget needs, Chancellor Lazare, with Richard (Rick) Stanton, Deputy Chancellor for Finance Administration, and Thomas (Tom) D. Manning, Vice Chancellor for Operations, sought other ways to attract support. In 1999, Lazare, Stanton and, especially, Manning created a health care consulting division of the medical school, named Commonwealth Medicine. Its success has been crucial to the school's continued expansion. The underlying principle of Commonwealth Medicine (CWM), to further the public service mission of UMMS, was first elaborated by Chancellor Roger Bulger in the 1970s, as mentioned in Chapter 5. At the time, he agreed to Governor Dukakis' request that the state's medical school help solve one of the Commonwealth's pressing health and human service problems—deficient health care at state schools for developmentally delayed

individuals. The resulting contracts between UMass Med and the state dispatched UMMC-affiliated health care professionals to provide care at a small number of state-run institutions such as the Belchertown State School. Again in the 1980s, when Worcester State Hospital (since 2012, called the Worcester Recovery Center and Hospital) was threatened with closure, Lazare and Manning arranged for the Department of Psychiatry at UMMS to take responsibility for medical and psychiatric care at the hospital, helping to ensure WSH's continued viability.[109]

With the initiation of CWM in 1999, the concept of partnering with the state expanded dramatically. Commonwealth Medicine describes itself as a "public, non-profit consulting and service organization" serving government agencies and non-profit and managed care organizations. Through CWM, UMMS continues to provide direct clinical services to state institutions. But CWM has vastly expanded its mandate to improve health outcomes for Massachusetts citizens while also saving money for the state through research, consulting, and staff management in the areas of "health care operations and administration, health law and economics, and health care financing." In Massachusetts and, since 2006, in states beyond Massachusetts, CWM has helped state governments to manage correctional health systems, Medicaid infrastructure and cost recovery, community case management, learning disability assessments, and health policy studies, most recently regarding the "Patient Centered Medical Home" initiative in Massachusetts.[110] In 2007, CWM was responsible for staff at more than 30 locations in the state. CWM consulting groups have assisted state agencies including the Department of Mental Health and the Executive Office of Health and Human Services in streamlining and consolidating reimbursement claims for Medicaid services, planning the implementation of new state health policies, and in providing continuing professional education in best practices for pharmacy managers and others. In the process, CWM has also contributed to many of the key operations at the medical school in financial as well as intellectual ways. At the end of the 2006 fiscal year, CWM revenues totaled $324.5 million, coming close to doubling its earnings in four years.[111] As Chancellor Michael F. Collins wrote in 2011, "Conservative estimates of

Commonwealth Medicine's impact suggest savings for the state of Massachusetts on the order of billions of dollars over the past decade."[112]

In large part, CWM's successes were due to the vision and specific experiences of CWM's developer and leader for thirteen years, Tom Manning. Starting with a career in counseling, his responsibilities rose steadily upward in administrative scope and responsibility over the course of a 35-year career. Beginning as a school counselor for the Department of Youth Services at the Lyman School in Westborough, Massachusetts, by 1977 Manning had become the Business Manager and Steward for Worcester State Hospital. A year later, after Aaron Lazare had become chair of the UMMC Psychiatry Department, he hired Manning to be his department administrator. Of importance to the future creation of CWM, Manning devised strategies to carry out Dr. Lazare's and his commitment to UMMS's public service mission. Manning formulated a public sector policy for the Department of Psychiatry that contributed to its increased responsibility for psychiatric services at Worcester State Hospital as well as its numerous contracts with the Department of Mental Health. When Lazare became Chancellor/Dean in 1991, he appointed Manning the medical School's CEO and Associate Vice Chancellor for Operations. (Among the many duties Manning took on, none was more visible than managing the replacement of the original medical school's dark granite facade with weather-tight, lighter materials.) In 1998, he became Vice Chancellor for Operations at UMMS, adding Commonwealth Medicine to his responsibilities in 1999. In his role as one of Chancellor Lazare's two principal advisers (along with Rick Stanton), and particularly in his leadership of CWM, Manning had an impact on the growth of UMMS, indeed, in Chancellor Collins' words, a "legacy that few can match."[113]

Thomas Manning *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Messachusetts Medical School)*

After Manning's retirement in 2012, he was succeeded by Joyce Murphy,

who had joined UMMS in 2006 as Vice Chancellor and CEO for CWM, and was named Executive Vice Chancellor at Manning's retirement. Murphy joined CWM after having been president and CEO of Carney Hospital, founding president of St. Mary's Center for Women and Children, and vice president of St. Margaret's Hospital for Women, all in the Dorchester neighborhood of Boston.[114] Murphy's career, like Manning's, began within the orbit of Massachusetts social services. Murphy noted that:

> You know...some people have lots of opportunities. Other people, by an accident of birth, are born into circumstances that are very challenging, and I am a big believer in early intervention, and prevention, and rehabilitation. I mean, people make mistakes, but I do think in most cases that there is hope for change.[115]

Early in her career, Murphy became the superintendent of the Massachusetts Correctional Facility in Framingham, Massachusetts, a facility for women. There she created the first pre-release residency program for women prisoners, many of whom were mothers of young children. The program focused, in her words, "on women's issues" including vocational training. Murphy also persuaded the Children's Museum in Boston to create a space at the prison for inmate mothers to be able to play with their children during visits. Creativity and a sense of mission were called upon again when she took over as the head of St. Margaret's Hospital in Dorchester, a subsidiary of the Caritas Christi Health Care System. Caritas had decided that the hospital, which housed a large perinatal unit and was a fixture of this low income Boston neighborhood, must be closed—both for fiscal and for medical reasons. Murphy's charge was to find a way to salvage this anchor of its North Dorchester community. Within about 18 months, she created the St. Mary's Center for

Joyce Murphy, M.P.A. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Women and Children on the site, redeveloping the hospital by attracting tenant partners and investors, including a nonprofit daycare center and an early intervention center for at-risk children.[116]

In 1997, after six years at St. Mary's, Murphy was recruited to become the CEO of Carney Hospital in South Dorchester, a part of the Caritas Christi Health Care System. At the time, the Caritas System's CEO was Dr. Michael Collins, who in 2007 became the Chancellor of UMass Medical School. Murphy, as it turned out, joined UMMS in 2006, a year before Collins' appointment as interim chancellor. She was recruited by Rick Stanton (with whom she had briefly worked in the state Department of Revenue) to work as Tom Manning's second in command specifically because Commonwealth Medicine needed someone with experience in managing hospitals, prisons, and revenue systems—a natural fit for Murphy. Commonwealth Medicine was trying to develop a more innovative and fiscally astute management approach to the state's prison health care system. More than that, Murphy could see the potential in Commonwealth Medicine because, "it has the public service, it also has the business acumen, and the economic force to support the medical school, science, education, and discovery."[117] Since 1999, Commonwealth Medicine has been important to the state and it has been crucial to UMass Medical School.

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Looking back over the transformation of UMass Medical School's research culture, environment, and accomplishments from 1970 to 2012 and beyond, the contrasts are striking. From their beginnings in a tobacco warehouse and a few borrowed laboratories at Harvard and the Worcester Foundation, researchers by 2012 had filled the basic science wing of the original building, spilled over to Biotech Park and the Lazare Research Building, and moved into the Albert Sherman Center. From the perspective of the University of Massachusetts system, the medical school's emergence as a research leader can be discerned in statements made to the Board. In 1997, for example, University Vice President for

Economic Development Thomas J. Chmura told the Board that, "the University historically generated an income of less than a couple hundred thousand dollars [from licensing intellectual property]; last year, primarily at the Worcester campus the University generated about three quarters of a million dollars in fees and royalties and brought in about $3 million dollars of industrial R&D [largely because of the] leadership of the Worcester campus."[118] More striking, by 2007 the medical school ranked 49th among all U.S. institutions receiving NIH funding. By 2014, it ranked 42 out of 2527 institutions, the 2nd percentile.[119] Another marker of its changed status, seemingly made inescapable by the presence of a "home-grown" Nobel Prize, was the recognition by state officials of UMMS's impact on the state's economy and centrality to the growth of biotechnology research and development across the five-campus UMass system. Governor Deval Patrick's Life Sciences Initiative of 2008, which earmarked $60 million for medical school programs and infrastructure, definitively marked this new standing. In 2015, UMMS Chancellor Michael Collins received the Massachusetts Biotechnology Council's MassBio Leading Impact Award.[120] This is a far cry from the constant threat of de-funding that dogged the Medical School during its first 25 years.

Maurice Goodman commented in 2006, "This is a different era. I mean, we're big time now! We're not small potatoes anymore. We're not striving for recognition, and we have big time competition."[121] Goodman expressed some concern, however, about the effect of the school's rapid growth. He commented, "we've hired an awful lot of people who have very little teaching responsibility, and so their performance in getting grant dollars tends to be the criterion for measurement, just as earning clinical dollars is the criterion for measurement of success in productivity [within the clinical system]—which I think very unfortunate."[122] In short, UMMS is engaged in a delicate balancing act. The following chapter will consider how the educational mission enshrined in the 1975 "Goals" of UMass Medical School—to produce primary care physicians for the state—has been carried forward amidst the pressure to establish (and to pay for) UMMS's transformation into a leading research institution and will look at

the school's culture from the point of view of its students and faculty.

NOTES
CHAPTER NINE

1 Aaron Lazare, "UMass Medical School Review and Self Assessment, 1990-present," May 2005, n.p., Lazare, unprocessed, UM/W.

2 "Summary of Surveyors' Findings and Recommendations," in "Report of the Survey of the University of Massachusetts Medical School, Worcester, MA, Nov. 13-16, 1989," prepared by an ad hoc survey team for the LCME representing the American Medical Association and the Association of American Medical Colleges, Box 6, fol. "1996 LCME Accreditation Review of UMass Medical School," unprocessed, MAPS, unprocessed, UM/W.

3 Harry S. Jonas, M.D., Secretary, Liaison Committee on Medical Education, to David C. Knapp, President, University of Massachusetts, March 2, 1990, fol. "1996 LCME Accreditation Review of UMass Medical School," Box 5, fol. 32, unprocessed, MAPS, UM/W.

4 Lazare, "UMass Medical School Review and Self Assessment." Lazare was appointed Chancellor on a permanent basis in June, 1991.

5 Board of Trustees, "Minutes," Aug. 2, 1989, Section "1989," Trustees online; Lazare, "UMass Medical School Review and Self Assessment," both, UM/A. The UMMC "Annual Reports" for the years 1990-1994 tell the tale:
1990: State appropriation $28 million (8.3%), Research funding $50 million
1991: State appropriation $24 million(7%), Research funding $54 million
1992: State appropriation $21 million (6%), Research funding $56 million
1993: State appropriation $24 million (5.5%), Research funding $57 million
1994: State appropriation $25 million (5.2%), Research funding $61 million.

6 Looking back at the end of Lazare's era as Chancellor, this sense of "an institution in turmoil" had become an indelible memory. Cf. Office of Public Affairs, "An Era of Achievement: The Lazare Years at the University of Massachusetts Medical School," June, 2007, p. 1; Lazare, "UMass Medical School Review and Self Assessment," both in Lazare, UM/W.

7 Manning, "Remarks for Lazare WDMS 2008 Career Achievement Award."

8 Lazare, "UMass Medical School Review and Self Assessment."

9 Maurice Goodman, Oral History Interview transcript, Part 3, p. 22.

10 E. F., "The Making of a Mission Statement," *The Voice*, n.d. [1991]; "University of Massachusetts Medical Center, Statement of Mission, Objectives,

and Operating Principles," Jan. 1991, both in Aaron Lazare, M.D. Collection, unprocessed, UM/W.

11 Foley et al, "Report of the Interim Institutional Evaluation Committee, etc.," pp. 4, 7.

12 Board of Trustees Executive Committee, "Minutes," April 5, 1994, p. 3, Section "1994," Trustees online, UM/A.

13 Aaron Lazare to Basic Science Chairs, May 14, 1992; Aaron Lazare to Basic Science Chairs, May 21, 1992, Box 5, fol. "Basic Science Chairs, 1992-1996," unprocessed, MAPS, UM/W.

14 Table in David Entin to Aaron Lazare, Dec. 20, 1993, Box 5, fol. 1, "Scientific Council: Meetings, Agendas and Minutes, 1993-1994," unprocessed, MAPS, UM/W.

15 *Ibid.*

16 "Observations and Conclusions," April 13, 1993 [transparency from retreat], Box 5, fol. "Basic Science Retreat: Agenda, Transparencies, Documents, 1993," unprocessed, MAPS, UM/W.

17 Departmental budgets previously had picked up most of those expenses. Maurice Goodman, personal communication, Feb. 25, 2015; Michael Czech et al to H.M. Goodman, Dec. 15, 1993; "Scientific Council Minutes: Budget Meeting," May 12, 1994, Box 5, fol. 1, "Scientific Council: Meetings, Agendas and Minutes, 1993-1994," unprocessed, MAPS, UM/W.

18 The Foundation had been renamed from the Worcester Foundation for Experimental Biology in 1995. Bresnick was credited with being the "point person" in negotiating the merger/acquisition of the Worcester Foundation for Biomedical Research by the Medical School, as well as being the PI on a $2.2 million grant from the Howard Hughes Medical Institute to create an interdepartmental program in genetics. Board of Trustees Committee on Academic and Student Affairs, "Minutes," Nov. 30, 1994, Section "1994," Trustees online, UM/A; Goodman, Oral History Transcript, Part 2, pp. 41-42, 43; "Self-Study Task Force 14: Basic Science Departments," April 26, 1996, p. 3, Box 5, fol. 32, "LCME Study, 1995-1996," unprocessed, MAPS, UM/W; *UMMC Magazine*, 17:1, p. 4; *UMMC Magazine*, 18:2, p. 21, Publications Collection, UM/W.

19 By then the office functioned less as the primary initiator of policy and more as a collaborator with the Chancellor and the Research Advisory Council. Goodman, Oral History Interview transcript, Part 2, p. 43; John L. Sullivan, M.D., *Curriculum vitae*, John Sullivan Papers, UM/W.

20 Lazare, "UMass Medical School Review and Self Assessment."

21 Lazare, "UMass Medical School Review and Self Assessment;" Aaron Lazare, "Summary and Conclusions," in "The University of Massachusetts Medical School," Presentation to the UMass Board of Trustees, Dec. 1998, courtesy of Elaine Martin, D.A., M.L.S., Lazare, unprocessed, UM/W. Sabrina Tavernise, "The Condition Cancer Research Is In, *New York Times*, March 30, 2015, accessed at http://www.nytimes.com/2015/03/31/science/the-condition-cancer-research-is-in.html?ref=science on March 31, 2015.

22 Accessed at https://web.archive.org/web/20150818161603/http://opa1.faseb.org/agendas/pdfs/NIHFundingFigure1.pdf on Aug. 13, 2015. Thanks to Diego Vazquez, Assistant Vice Provost for Research, for making this graph accessible to me.

23 Thomas Manning, "Remarks for Lazare WDMS 2008 Career Achievement Award," typescript, 11 pp., Aaron Lazare Papers, unprocessed, UM/W.

24 Raymond Welsh, Oral History Interview transcript, pp. 6, 15-17, interviewed by Ellen More, Worcester, MA, July 19, 2011, Oral History Collection, UM/A; *idem.*, "UMass Profiles," accessed at https://web.archive.org/web/20150818162101/http://profiles.umassmed.edu/Profiles/display/131008 , on Feb. 16, 2015; Robert T. Woodland, "UMass Profiles," accessed at https://web.archive.org/web/20150818162419/http://profiles.umassmed.edu/profiles/display/133038 on Feb. 16, 2015.

25 John L. Sullivan, Oral History Interview transcript, pp. 8-9, interviewed by Ellen More, May 19, 2011, Worcester, MA; Raymond Welsh, Oral History Interview transcript, pp. 3-4, 16, interviewed by Ellen More, July 19, 2011, Worcester, MA, both in Oral History Collection, UM/W.

26 Centers for Disease Control, "Pneumocystis Pneumonia—Los Angeles," *Morbidity and Mortality Weekly Report,* 30 (June 5, 1981), pp. 250-252; "AIDS," *UMMC Quarterly*, 1988, *X*: 1 (Spring), p. 10; Sarah Cheeseman, *Curriculum Vitae*, Sarah Cheeseman papers, UM/W; John L. Sullivan, *Curriculum Vitae,* John L. Sullivan papers, UM/W; Rebecca J. Anderson, *Nevirapine and the Quest to End Pediatric AIDS* (Jefferson, North Carolina: McFarland and Co., 2014), pp. 20-21. I am indebted for research assistance for the following discussion of AIDS research at UMMS to Molly Higgins, MLIS, a Lamar Soutter Library fellow in 2014. Cf. "Surviving and Thriving: AIDS, Politics, and Culture," https://web.archive.org/web/20150818163244/http://library.umassmed.edu/omha/aids_umms/. The U.S.'s adoption of the term Acquired Immune Deficiency Syndrome (AIDS) was the result of a CDC consensus conference in 1982. See Paula A. Treichler, "AIDS, Gender, and Biomedical Discourse: Current Contests

for Meaning," in *AIDS: The Burdens of History*, ed. Elizabeth Fee and Daniel M. Fox (Berkeley, CA: University of California Press, 1988), pp. 190-266, esp. pp.197-199.

27 Anderson, *Nevirapine*, pp. 35-36; "AIDS," p. 10.

28 Sullivan, Oral History Interview transcript, pp. 11, 14-15; Cheeseman S.H., Sullivan J.L., Brettler D.B., Levine P.H., "Analysis of cytomegalovirus and Epstein-Barr virus antibody responses in treated hemophiliacs: implications for acquired immunodeficiency syndrome," 1984, *JAMA, 252*: 83-85.

29 Sullivan, Oral History Interview transcript, pp. 15-16; Sullivan J.L., Brewster F.E., Brettler D.B., Forsberg D., Cheeseman S.H., Byron K.S., Baker S.M., Willitts D.L., Lew R.A., Levine P.H. Hemophiliac immunodeficiency: Influence of exposure to Factor VIII concentrate, LAV/HTLV III and Herpesviruses," 1986, *J Pediatr, 108*: 504-510.

30 When the commercial assays became available, they switched over to those. Sullivan, Oral History Interview transcript, pp. 16,17.

31 Sullivan, Oral History Interview transcript, pp. 17,18.

32 "AIDS," *UMMC Quarterly*, 1988, *X*: 1, p. 10; Sarah H. Cheeseman, M.D., Oral History Interview transcript, pp. 17-18, interviewed by Ellen More, March 31, 2014, Worcester, MA, Oral History Collection, UM/W.

33 Katherine F. Ruiz de Luzuriaga, Oral History Interview transcript, p. 9, interviewed by Ellen More, Worcester, MA, April 4, 2014, Oral History Collection, UM/W.

34 Rebecca J. Anderson, *Nevirapine and the Quest to End Pediatric AIDS* (Jefferson, North Carolina: McFarland and Co., 2014), pp. 19-20, 24-28, quotation, pp. 20-21; Anderson, p. 24; Vincent J. Merluzzi et al, "Inhibition of HIV-1 replication by a nonnucleoside reverse transcriptase inhibitor," 1990, *Science*, *250* (Dec. 7), pp. 1411-1413; Paul P. Heldman, "AIDS drug called promising, *Worcester Telegram and Gazette*, Oct. 23, 1990. John Sullivan and Richard Koup were co-authors on the Merluzzi paper.

35 Douglas Richman, a professor of Pathology and Medicine at UCSD, had shown that AZT induces severe resistance in patients after a fairly short course of treatment. He, like Sullivan and Cheeseman, were treating AIDS patients. He was also running a clinical trial of AZT in adults. He was able to show that AZT in combination with Nevirapine worked better than either one acting alone. BI invited him to join the collaboration so that he and Sullivan could design their drug's clinical trials. Anderson, *Nevirapine*, pp. 39, 53-54, 55, 58, 66-67.

36 Anderson, *Nevirapine*, p. 66.

37 Cheeseman, Oral History Interview transcript, pp. 22-23.

38 Luzuriaga, Oral History Interview transcript, p. 10.

39 Luzuriaga, Oral History Interview transcript, p. 11.

40 Luzuriaga K., Koup R.A, Pikora C.A., Brettler D.B. and Sullivan J.L. Deficient human immunodeficiency virus type 1-specific cytotoxic T cell responses in vertically infected children. J Pediatr 1991; 119:230-6; Alimenti A., Luzuriaga K., Stechenberg B. and Sullivan J.L. Quantitation of human immunodeficiency virus in vertically infected infants and children. J Pediatr 1991; 119:225-9; Koup R.A., Pikora C.A., Luzuriaga K., Brettler D.B., Day E.S., Mazzara G.P. and Sullivan J.L. Limiting dilution analysis of cytotoxic T lymphocytes to human immunodeficiency virus gag antigens in infected persons: in vitro quantitation of effector cell populations with p17 and p24 specificities. J Exp Med 1991; 174:1593-600; Alimenti A., O'Neill M., Sullivan J.L. and Luzuriaga K. Diagnosis of vertical human immunodeficiency virus type 1 infection by whole blood culture. J Infect Dis 1992; 166:1146-8; Luzuriaga K., McQuilken P., Alimenti A., Somasundaran M., Hesselton R. and Sullivan J.L. Early viremia and immune responses in vertical human immunodeficiency virus type 1 infection. J Infect Dis 1993; 167:1008-13. Also see Anderson, *Nevirapine*, pp. 78, 151-154.

41 Luzuriaga, Oral History Interview transcript, pp. 12-14.

42 Anderson, *Nevirapine*, p. 162, 174-175.

43 Cheeseman, Oral History Interview transcript, pp. 31-32.

44 Board of Trustees Committee on Academic and Student Affairs, Oct. 21, 2003, Section "2003;" Board of Trustees "Minutes," May 24, 2006, Section 2006, both Trustees online, UM/A; Molly Higgins, "Surviving and Thriving," n. 112 above; Donna M. Gallagher, Oral History Interview transcript, pp. 5, 12-14, interviewed by Ellen More, May 1, 2014, Worcester, MA, Oral History Collection, UM/W. For the Office of Global Health, see: https://web.archive.org/web/20150818163719/http://www.umassmed.edu/globalhealth/about/about-ogh/.

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47 Anderson, *Nevirapine,* pp. 198-200, 220-222, 230, 240-245.

48 Anderson, *Nevirapine*, pp. 114-124, 182, 185-198, 200-207, quotation, p. 205. In the published study of the definitive trial, conducted in Uganda by Laura Guay and colleagues, the key contributions of Sullivan and others were acknowledged in "proposing the concept for the study, designing the protocol, and supporting the trial." Cited in Anderson, p. 282, n. 66: Laura A. Guay et al, "Intrapartum and Neonatal single-dose nevirapine compared with zidovudine for prevention of mother-to-child transmission of HIV-1 in Kampala, Uganda: HIVNET 012 randomized trial," *Lancet*, 199, *354*: 795-802; Sullivan, Oral History Interview transcript, p. 24.

49 Sullivan, Oral History Interview transcript, pp. 20-21.

50 Michael Czech, Oral History Interview transcript, pp. 18-19.

51 Board of Trustees Committee on Budget and Financial Affairs, "Minutes," April 4, 1989, Section 1989, Trustees online, UM/A.

52 Board of Trustees Committee on Administration and Finance, "Minutes," March 31, 1992, Section 1992, Trustees online, UM/A.

53 "1989 LCME Accreditation Review, Institutional Self-Study, Subcommittee on the Basic Sciences," p. 39; "Summary of Surveyors' Findings and Recommendations," Box 6, fol. "1996 LCME Accreditation Review of UMass Medical School," unprocessed, MAPS, UM/W.

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55 Michael Czech, Oral History Interview transcript, p. 21; Goodman, Oral History Interview transcript, Part 3, p. 15 (n. 26 above).

56 "Charter for the Program in Molecular Medicine (drafted April 17, 1992),"

Box 3, fol. "Program in Molecular Medicine, Charter Draft, Correspondence," unprocessed, MAPS, UM/W. One should note that those drafting the Charter, which was completed more than two years after the PMM was established, likely felt the need to counter the resentments and fears of existing researchers who had not been invited to join the program. A sticking point in the program's governing principles, something redrawn several times between 1989 and 1992, was the distribution of overhead funds between PMM faculties' departments of origin and the PMM. Cf. Neal [Brown] to H. Maurice (Moe) Goodman, "Memo: Revised Draft of Guidelines Governing Overhead Distribution and Department Obligations re: Salary and Services for Selected Faculty Participants in the Molecular Medicine (MM) Program, Nov. 17, 1989," Box 3, fol. "Molecular Medicine, Program Charter, Correspondence, Catalogue, 1988-1992," unprocessed, in MAPS, UM/W.

57 Sullivan, Oral History Interview transcript. pp. 28-29.

58 Gary S. Stein to H. Maurice Goodman, Nov. 19, 1992; [Maurice Goodman and Gary Stein], "The Future of Basic Science Departments at UMMS," c. Nov. 1992, typescript, 24 pp., quotation, p. 13, Box 3, fol. "Future of Basic Science Departments at UMMS, Document and Correspondence, 1992," unprocessed, in MAPS, UM/W.

59 Stein, Gary, Oral History Interview transcript, pp. 11,12, interviewed by Ellen More, May 3, 2012, Worcester, MA, Oral History Collection, UM/A.

60 [Goodman and Stein], "The Future of the Basic Science Departments," pp. 9-10.

61 In the words of the white paper:
"In summary, multiple basic science departments organized along the current lines continue to have an essential role in medical schools for the following reasons:
"1. Each of the basic science departments still maintains a core philosophy that enriches both our educational and scholarly capacities.
2. Each represents one or more nuclei for development of new research approaches and technologies.
3. Each provides a haven for diversity that otherwise would be lost...in order for the institution to be positioned to develop and participate in newly emerging areas, it must maintain cores of expertise that such areas will require.
4. "Finally, the existence of multiple departments in the basic sciences rather than a single megadepartment provides a stronger voice for the basic sciences in the decision making councils of the Medical Center." [Goodman and Stein], "The Future of the Basic Science Departments," p. 12.

62 A merger of the Physiology Department with the Department of Molecular

Genetics and Microbiology, for example, occurred in 2010, resulting in the Department of Microbiology and Physiological Systems (MAPS), with Allan Jacobson, Ph.D. as chair of the new department. (Maurice Goodman, Ph.D., founding chair of Physiology, had retired.) In 2012, when Gary Stein left UMMS for the University of Vermont College of Medicine, Jeanne B. Lawrence, Ph.D. became the interim chair and the department was renamed Cell and Developmental Biology in keeping with its predominant research activities. Cf. Terence R. Flotte to UMMS Faculty and Staff, Nov. 8, 2010; Michael F. Collins and Terence R. Flotte to UMMS Faculty and Staff, June 6, 2012; Peter Laub, Sofia Mueller, and Terence R. Flotte, "Trends in Number of Academic Basic Science and Clinical Departments Among American Medical Schools," unpublished manuscript, 14pp., esp. p 1.

63 "History and Overview of the Program in Molecular Medicine," accessed online at https://web.archive.org/web/20150818164715/http://www.umassmed.edu/pmm/pmm-home/molecular-medicine-history/ on Nov. 24, 2015.

64 "Self-Study Task Force 14: Basic Science Departments," April 26, 1996, Box 5, fol. 32, "LCME Study, 1995-1996," unprocessed, MAPS, UM/W.

65 Subsequent UMMS researchers who became Howard Hughes Medical Institute Investigators, to date, include: Michael Green, M.D., Ph.D. (1994), Craig Mello, Ph.D. (1999), Melissa Moore, Ph.D. (2007), Philip Zamore, Ph.D. (2008), and Marc Freeman, Ph.D. (2013).

66 The departments were both basic science and clinical groups, initially including Biochemistry and Molecular Biology, Cell Biology, Molecular Genetics and Microbiology, Pediatrics, Pharmacology Physiology, and Surgery. "Program in Molecular Medicine," p. 2, in Box 3, fol. "Molecular Medicine, Program Charter, Correspondence, Catalogue, 1988-1992," unprocessed, in MAPS, UM/W.

67 In November 2014, Dr. Green was made the chair of the new Department of Molecular, Cell, and Cancer Biology, a consolidation of the Department of Cancer Biology with his Program in Gene Function and Expression. In 2015, Dean Flotte also announced that Green would concurrently direct the UMMS Cancer Center, thus consolidating all cancer research programs, clinical and basic science. Terence R. Flotte to UMMS Community, Nov. 17, 2014; *ibid.*, April 29, 2015.

68 Michael Czech, Oral History Interview transcript, p. 9.

69 UMass Profiles: Michael Richard Green, M.D., Ph.D., accessed at https://web.archive.org/web/20150818165107/http://profiles.umassmed.edu/profiles/display/132099 on Jan. 15, 2015; Howard Hughes Medical Institute, "Biography: Michael R. Green, M.D., Ph.D.," accessed at https://web.archive.org/

web/20150818165402/http://www.hhmi.org/scientists/michael-r-green on Jan. 15, 2014.

70 He currently is Director of the UMMS Cancer Center and chair of the new department of Molecular, Cell and Cancer Biology "Michael Green appointed director of UMass Cancer Center," April 29, 2015, UMMS press release, accessed at https://web.archive.org/web/20150818180348/http://www.umassmed.edu/news/news-archives/2015/04/michael-green-appointed-director-of-umass-cancer-center/on July 14, 2015. For a more complete list of major honors and awards received by UMMS faculty see the online historical timeline of UMMS at https://web.archive.org/web/20150818180718/http://library.umassmed.edu/omha/umms_timeline/.

71 Craig C. Mello, "Biographical Statement," p. 244, accessed at https://web.archive.org/web/20150818181407/http://www.nobelprize.org/nobel_prizes/medicine/laureates/2006/mello-bio.html on Jan. 14, 2014; Craig C. Mello, "Nobel Lecture: Return to the RNAi World: Rethinking Gene Expression and Evolution," Dec. 8, 2006, accessed at https://web.archive.org/web/20150818181627/http://www.nobelprize.org/nobel_prizes/medicine/laureates/2006/mello-facts.html, Jan. 14, 2015; Andrew Z. Fire, "Nobel Lecture: Gene Silencing by Double Stranded RNA," Dec.8, 2006, quotations pp. 209-210, 212, accessed at https://web.archive.org/web/20150818181842/http://www.nobelprize.org/nobel_prizes/medicine/laureates/2006/fire_lecture.pdfon Jan. 14, 2015;Andrew Z. Fire, "Biographical Statement, accessed at https://web.archive.org/web/20150818182041/http://www.nobelprize.org/nobel_prizes/medicine/laureates/2006/fire-bio.html on Jan. 15, 2015.

72 Czech, Oral History Interview transcript, pp. 38-40, quotation, p. 39.

73 "Craig C[ameron] Mello, Ph.D.," UMass Profiles, accessed at https://web.archive.org/web/20150818182540/http://profiles.umassmed.edu/profiles/display/129741 on Jan. 15, 2014; "Surfing the Web of RNA-Mediated Regulation," accessed at https://web.archive.org/web/20150818182759/https://www.hhmi.org/research/surfing-web-rna-mediated-gene-regulation on Jan. 15, 2015; Mello, C.C., and Fire, A. (1995). DNA transformation in C. elegans. *Methods in Cell Biology*, Vol. 48. Diane Shakes and Henry Epstein, editors. p. 451-482; Seydoux, G., Mello, C.C., Pettitt, J., Wood, W.B., Priess, J.R. and Fire, A. (1996) Repression of gene expression in the embryonic germ lineage of C. elegans. *Nature* 382, 713-716; A.Fire, S. Xu, M. Montgomery, S. Kostas, S. Driver, C. Mello, "Potent and specific genetic interference by double-stranded RNA in Caenorhabditis elegans," *Nature*, 1998, *391*: 806-811.

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and $21 million from a gift by philanthropists Jack and Shelly Blais. The Blais family insisted that the building be named for Chancellor Aaron Lazare.

75 Phillip D. Zamore, Oral History Interview transcript, p. 22, interviewed by Ellen More, Feb. 18, 2015, Worcester, MA, Oral History Collection, UM/W.

76 A Stem Cell and Regenerative Medicine Center was named in the initial legislation for the ATC, but has not been pursued.

77 The state closed the Stem Cell Bank at UMMS in 2012 for lack of funding. Carolyn Y. Johnson, "UMass stem cell lab to close. Funding to run out by end of year," *Boston Globe*, June 28, 2012. Cf. Chapter 130, Acts of 2008, Commonwealth of Massachusetts, "An Act Providing for the Investment in and Expansion of the Life Sciences in the Commonwealth," June 16, 2008; Board of Trustees, "Minutes," May 24, 2006; Board of Trustees, "Minutes," June 21, 2007; Board of Trustees, "Minutes," Sept. 19, 2007, both in Trustees online, UM/A. My thanks to James Fessenden of the UMMS Office of Communications for clarifying my understanding of the creation of the ATC.

78 Zamore, Oral History Interview transcript, pp. 2, 12, 19. Zamore holds the Gretchen Stone Cook Chair in Biomedical Sciences and is a Howard Hughes Medical Institute Investigator. Phillip D. Zamore, Ph.D., "Transcript of an Interview Conducted by Karen A. Frenkel for the Pew Scholars Program in the Biomedical Sciences," Dec. 20, 21, 2007, Worcester, MA, pp. 21, 26, 41-42; P.D. Zamore, T. Tuschl, P.A. Sharp, D.P. Bartel, "RNAi: Double-stranded RNA directs the ATP-dependent cleavage of mRNA at 21 to 23 nucleotide intervals," *Cell*, 2000, *101*: 25-33; T. [Thomas]Tuschl, P.D. Zamore, R. Lehmann, D.[David]P. Bartel, P.[Phillip]A. Sharp, "Targeted mRNA degradation by double-stranded RNA in vitro," *Genes and Development*, 1999, *13*:3191-3197. Also see Schwarz, D.S., Hutvágner, G., Du, T., Xu, Z., Aronin, N., and Zamore, P.D. (2003). Asymmetry in the assembly of the RNAi enzyme complex. *Cell* 115, 199-208.

79 Moore is the Eleanor Eustis Farrington Chair of Cancer Research and Co-Director of both the RNA and Neuro Therapeutics Institutes at UMMS. Quotations from "Melissa J. Moore, Ph.D.," UMass Profiles, accessed at https://web.archive.org/web/20150818184133/http://profiles.umassmed.edu/profiles/display/129823 on Jan. 16, 2015; "Origins of the NTI," accessed at https://web.archive.org/web/20150818184355/http://www.umassmed.edu/nti/about-us/origins/ on Jan. 18, 2015.

80 Ambros holds the Silverman Chair in Natural Science. In 2008 he won the Lasker prize with his Harvard Medical School collaborator, Gary Ruvkun, Ph.D. and David Baulcombe of Cambridge University, as well the Gairdner Foundation International Award (with Ruvkun); he and Ruvkun were also the recipient of the 2015 Breakthrough Prize. "Victor

R. Ambros, Ph.D.," UMass Profiles, accessed at https://web.archive.org/web/20150819150140/http://profiles.umassmed.edu/profiles/display/129913 on Jan. 16, 2016; Lee, Rosalind C., Feinbaum, Rhonda L., Ambros, Victor, "The *C. Elegans* heterochronic gene lin-4 encodes small RNAs with antisense complementarity to lin-14", 1993, *Cell* 75 (5): 843–854; Elizabeth Cooney, "UMass Medical School recruits two RNA stars," *Boston Globe*, Sept. 5, 2007, accessed at https://web.archive.org/web/20150819153300/http://www.boston.com/yourlife/health/blog/2007/09/umass_medical_s_1.html on Jan.16, 2014.

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86 Terence R. Flotte and Eric Dickson, Memo to University of Massachusetts Medical School Faculty and Staff and UMass Memorial Medical Center Physicians and Staff, "Department of Neurology Interim Leadership," May 28, 2014; UMASS ALS Cellucci Fund, "Dr. Brown vs. ALS," at https://web.archive.org/web/20150819154110/http://www.umassals.com/drbrown ; The Angel Fund, "Research at Day Lab," at https://web.archive.org/web/20150819154607/http://theangelfund.org/research-at-day-lab/ both accessed on Feb. 27, 2015.

87 Jacobson, Oral History Interview transcript, pp. 26-29; Allen S. Jacobson, Ph.D., "UMMS Profiles," accessed at https://web.archive.org/

web/20150819154848/http://profiles.umassmed.edu/profiles/display/132330 on Feb. 4, 2015. Cf. Welch E.M., Barton E.R., Zhuo J., Tomizawa Y., Friesen W.J., Trifillis P., Paushkin S., Patel M., Trotta C.R., Hwang S., Wilde R.G., Karp G., Takasugi J., Chen G., Jones S., Ren H., Moon Y.C., Corson D., Turpoff A.A., Campbell J.A., Conn M.M., Khan A., Almstead N.G., Hedrick J., Mollin A., Risher N., Weetall M., Yeh S., Branstrom A.A., Colacino J.M., Babiak J., Ju W.D., Hirawat S., Northcutt V.J., Miller L.L., Spatrick P., He F., Kawana M., Feng H., Jacobson A., Peltz S.W., Sweeney H.L., "PTC124 targets genetic disorders caused by nonsense mutations," *Nature*, 2007, *447:* 7140 (May 3), pp. 87-91; Amrani, N., Sachs, M.S. and Jacobson, A. (2006) Early nonsense: mRNA decay solves a translational problem. *Nat. Mol. Cell. Biol.* 7, 415–425; Amrani, R. Ganesan, S. Kervestin, D.A. Mangus, S. Ghosh and A. Jacobson, "A faux 3'-UTR promotes aberrant termination and triggers nonsense-mediated mRNA decay," *Nature* 432 (2004), pp. 112–118.

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112 Michael F. Collins to University of Massachusetts Medical School Faculty and Staff, Sept. 20, 2011, in Thomas D. Manning Collection, unprocessed, UM/W [hereafter, Manning, UM/W].

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115 Murphy, Oral History Interview, p. 3.

116 Murphy, Oral History Interview, pp. 7, 13.

117 Murphy, Oral History Interview, pp. 16-18, quotation, p. 18.

118 This comment was made in the context of a progress report on the university-wide Office of Commercial Ventures and Intellectual Property including, "Campus Status of Collective Bargaining for Technology Transfer: Specific objectives of the initiative (discussed above), include "increasing disclosures and patents, generating commercial licenses and income, expanding industrial collaboration/R&D, encouraging start-up companies and enhancing the public image of the University." Board of Trustees Committee of the Whole, "Minutes," Feb. 4, 1997, Section 1997, Trustees online, UM/A. It should be noted that the Massachusetts Biologics Laboratories had not yet become part of the medical school at the time of these comments.

119 Figure based on NIH RePorter data, excluding American Recovery and Reinvestment Act of 2009 funding, courtesy of Diego Vasquez, Assistant Vice President for Research Services, UMMS, personal communication from Mr. Vasquez, March 9, 2015.

120 UMass Medical School Department of Communications, "UMMS Chancellor to receive MassBio's Leading Impact Award," *UMassMed Now, 5*: 12 (March 21, 2015), Publications online, UM/W. Accessed athttps://web.archive.org/web/20150819161337/http://www.umassmed.edu/news/news-archives/2015/03/umms-chancellor-to-receive-massbios-leading-impact-award/?utm_source=UMassMedNow+weekly+roundup%3A+March+30%2C+2015&utm_campaign=03-30-2015+CC&utm_medium=email on March 31, 2015.

121 Maurice Goodman, Oral History Interview transcript, Part 2, p. 44.

122 *Ibid.*, pp. 45-46.

Chapter 10
Education: Students, Faculty, Curriculum

Despite what members of the public may think, we do not manufacture doctors as the Ford Company turns out cars. What we do is to enable you to develop your minds scientifically, to provide you with an opportunity to learn much of the body of knowledge of medicine which man has accumulated, and to inculcate into you those principles of conscientious concern, kindness and thoughtfulness which the physician must use...to serve sick people to the fullest extent of his ability.[1] — Lamar Soutter, "Welcoming Address to the First Class," September 15, 1970

Introduction

This penultimate chapter examines the nature of the educational mission at UMass-Worcester, including the evolution of its three schools: the Medical School, the Graduate School of Nursing, the Graduate School of Biomedical Sciences, and their educational partner, the Lamar Soutter Library. It will also attempt to convey more directly than in previous chapters, the character and culture of the institution as expressed by medical students, faculty and administrators. Education, surely, was the primary raison d'être for the founding of UMMS. Yet, the school's reputation for excellent primary care education took two decades to nurture. Thus the story of medical education at UMass Medical School hews closely to the trajectory described in Chapter 7 for the full emergence of primary care at UMass Med in the 1990s. It has been a theme of this book that the school always had as its core mission—albeit implicitly in its first two decades—the integration of primary care and biomedical research. Interestingly, the emergence of primary care as a full partner in the curriculum occurred in tandem with the growing maturity of the school's research enterprise. The seeds of educational revitalization were planted in the 1980s, but only during the 1990s

and beyond, first under Chancellor/Dean Aaron Lazare and then, Dean Terry Flotte, did they visibly flourish.

Medical Education in the United States: Flexner and Beyond

By the late 1960s, medical education reform—frequently termed the "Flexnerian revolution" in acknowledgment of Abraham Flexner's catalytic influence half a century earlier—had reached the limit of its capacity to improve medical school curricula. Flexner had theorized a model of medical pedagogy in which the "hypothetico-deductive reasoning process" of the basic medical sciences would be applied to clinical reasoning—clinical medicine as an applied science. Two years of pre-clinical, basic science courses typically preceded two years of clinical clerkships, electives, and trial internships. In the Flexnerian "discipline-based" pre-clinical curriculum, students were taught "normal structures, functions, and processes of the body organized by disciplines such as anatomy, physiology, microbiology, histology, and biochemistry, followed by pathophysiology and disease management."[2]

Far from supplying a basis for the second, *clinical* half of medical education, students experienced little carry-over from the methodology and content of pre-clinical course work into the clinical years. By the sixties, widespread dissatisfaction with the bifurcation of the medical curriculum was evident. Such concerns prompted Western Reserve School of Medicine (today, Case Western Reserve) to initiate an organ-based curriculum in the 1950s to maximize opportunities to integrate the basic science material as well as create linkages to its clinical implications. In the 1970s, "problem-based" curricula were developed at McMaster (in Ontario, Canada), Michigan State, and the University of New Mexico medical schools to remedy the problem of the basic science-

clinical science divide.[3]

Nevertheless, most medical school curricula perpetuated the structure of the classic, post-Flexner model. From the end of World War II subspecialization rather than primary care, cast a long shadow over medical curricula; the development of new technologies and the availability of clinical fellowships encouraged clinical subspecialization. In the basic medical sciences, opportunities for NIH funding encouraged the growth of full-time research at medical school campuses.[4] In 1984, when the Association of American Medical Colleges (AAMC) published the GPEP Report (on the "General Professional Education of the Physician"), it elaborated two disappointing, overall trends in U.S. medical schools: the increasing specialization of medical practice and education; and, the "priority most medical faculty members accord to research, patient care, and training of residents and graduate students," rather than to medical student education. The GPEP authors hoped to reignite an interest in the "general professional education of medical students." The report called for a reduction in lecture hours, the establishment of specific criteria for evaluating clinical performance, an emphasis on problem-solving rather than mere retention of facts, and the integration of clinical problem-solving with basic science principles.[5]

Financial constraints made this difficult to accomplish. Federal capitation payments to medical schools, begun in 1971, were terminated in 1981.[6] Moreover, new attempts to control health care costs through inpatient prospective payment systems led hospitals to hire clinical faculty whose main job was to see patients, produce clinical revenues, and teach relatively little. The availability of clinical models and mentors for medical students was slowly reduced to what medical sociologist Renee Fox called "a small, diminishing percentage of the members of massively large and continually expanding medical

school faculties." By the 1990s, several studies of medical education reform concurred that the results could be labeled, "reform without change."[7] These same cost pressures also resulted in shorter hospital stays and an increased acuity of condition of hospitalized patients. Such conditions are less conducive to effective instruction either of medical students or residents and gave rise to public concerns over patient safety. As one response, resident duty hours were shortened and, more profoundly, studies were undertaken to explore the interlocking issues of quality assurance, professionalism, and medical pedagogy, first for resident education and then for medical students.[8] Early in the 21st century, curriculum reforms began to focus on outcomes, that is, "an emphasis on abilities, a de-emphasis of time-based training, and the promotion of learner-centeredness." The implementation of what has been termed "competency-based medical education" (CBME) centers on specific competency standards and skills for lifelong learning and problem-solving.[9] Most recently, the AAMC has promulgated a list of "entrustable professional activities" (EPAs) that encode the core set of professional skills that every medical graduate must certifiably master before entering residency. While the ostensible goal of this initiative is to maximize patient safety, the potential drawbacks of CBME or EPA curricula lie in their potential to emphasize pragmatic, task-oriented aspects of physician competence while overlooking the less tangible—or measurable—qualities of clinical excellence.[10] Although the evolution of the medical curriculum at UMMS reflects national trends and local pressure, it has retained the multidimensional understanding of medical professionalism inherent in its original mission to educate primary care doctors.

The Shaw Building Years, 1970-1974

Early Curriculum

Planning for the UMMS curriculum began at least two years before the school opened in 1970. Lamar Soutter was considering the school's educational program when he first approached Hugh Fulmer about teaching community medicine in 1968, as discussed in Chapter 6. When he and Brownie Wheeler drew up the application for federal construction funds for the teaching hospital, they devoted an entire section to the planned curriculum.[11] Both men envisioned a nontraditional curriculum for their brand new school. They entertained a range of innovative ideas. Dr. Wheeler remembered that,

> ...one thing we wanted to do differently was have a more multidisciplinary curriculum, and particularly to introduce the clinical department teaching early in the course of the student's education, so that the basic science seemed more relevant to the ultimate practice of medicine. We had been impressed with...Case Western Reserve, in terms of curriculum change, and thought it might be interesting to try to have a more fluid curriculum in which different departments participated in a multidisciplinary course which introduced clinical elements early on, and made the basic science relevant to the clinical issues involved...We thought having one campus with a smaller group of faculty would allow us to do things somewhat better.[12]

Initially they hoped that students could individualize their programs of study as much as possible and that students would utilize "free, unscheduled time within each period" for his or her own benefit. As described in Chapter 6, at Hugh Fulmer's direction a curricular pathway was reserved throughout the first three years for students to learn community medicine both through formal class work and mini-clerkships out in the communities of Massachusetts. This was genuinely innovative

for its time. Another desired innovation was the institution of a grading system of "fail, pass, and honors," the latter to be reserved for students showing "exceptional interest, endeavor, and achievement."[13]

Only the latter two ideas initially came to fruition. Integrating clinical material systematically into the first two years of the curriculum proved impossible. Again in Brownie Wheeler's words, "We simply didn't have the people on board to start that way...We had some volunteer faculty members from the community, but we couldn't really put on an integrated program with a lot of clinical specialties starting early in the curriculum. We didn't even have people, department chairs in some cases, for second year courses, let alone clinical years. And it took us a while to recruit the faculty. We really needed the teaching hospital to do that."[14]

As a testament to their intentions, Dr. Wheeler gave the very first lecture of the first medical school class. He explained his approach this way:

> ...in line with our thoughts about introducing clinical material early, I focused on a case presentation. I had a patient, a man who was down for a follow-up, who had had an unusual surgical procedure, an axillo-bifemoral graft. This is a procedure in which, because of blockage of the abdominal aorta and the vessels going to the legs, and for various reasons, an inability to repair those vessels directly, a graft is taken from the armpit, basically, down to the groin, just under the skin. So you can feel it and you can see it; you can feel the pulse. And it was a pretty dramatic case for the students to see, and to be able to examine the patient, and talk to him.[15]

To understand the impact of starting medical school this way—regardless of the traditional curriculum that followed—here is a recollection by Leonard Finn, M.D., a member of that first class who became a family practitioner:

> So our first day at medical school, Brownie Wheeler, who was the Chief of Surgery, brought in one of his patients, whom he'd treated in Boston, I think, but somebody who'd had vascular reconstruction of his arms and legs by Dr. Wheeler. And he brought in the patient. And all the faculty who had been hired so far were present, you know, six or ten faculty people and the sixteen of us students were present. And Dr. Wheeler introduced the patient to us and we talked with the patient, talked about his medical history and his social situation, his family situation, his work situation, his leisure activities and how his vascular problems had interfered with that, and how the surgery had helped improve that. And...so that we had a bio-psychosocial experience with our very first day at school, the very first...medical school experience; the first day was not with cadavers.[16]

Such opportunities in the first semester were not the norm for many years. Rather, the curriculum followed the traditional pattern of 20th century medical education. During most of year 1 the students focused on "the study of the normal structure and function of cells, tissues and organs." In practice, this meant two semesters of anatomy, one semester of biochemistry followed by a semester of physiology. By 1972, however, the second semester of year 1 also incorporated a block, carved out of the combined anatomy/physiology course, devoted to "an interdisciplinary consideration of topics related to clinical problems." In that segment, clinical and basic science faculty worked together, presenting problems that "correlate closely with the material being studied in physiology."[17] During year 2, again following tradition, the focus shifted from normal structures and functions to the pathological, including a year of pathology, and large curricular blocks for microbiology and pharmacology. A curricular pathway allowed for coverage of physical diagnosis, medical history-taking, plus a smaller block for genetics. By 1972, a new feature of the curriculum added a two-year course run by the psychiatry department to address "fundamental aspects of personality development" and human behavior. Singularly true to the founders' original vision was a required course in community medicine in years 1 through 3 which,

as described in Chapter 6, exposed students to problems of health care delivery, various modes of and settings for health care delivery, and introduced them to epidemiology. A three-week project in communities across the state provided students with their first encounter with health care as it was delivered outside the hospital setting. As for electives, they were limited to the last month of year 1 (to be used for an individual project), and in years 3 and 4.[18]

All in all, as Donald Abbott, M.D., a member of the first class, summed it up, it was "a very, very traditional medical school curriculum. It was not an integrated curriculum, the way some of the schools are doing now, where you learn more about systems and everything that goes with a system...you learned biochemistry; you learned physiology; you learned pathophysiology; you learned pathology."[19] Resources were simply too scarce; innovation would have to wait. As Chancellor Roger Bulger wrote in 1978, "In retrospect, the decision to develop a fairly standard curriculum while trying to grow with limited resources seems to have proven most efficient. While the State has invested a considerable amount of money in the Medical School, there has never been enough invested in learning resource centers and the usual office of education, largely because every available dollar had to go to salaries for new faculty. Capitation funds, too, have gone toward faculty support."[20]

For the first six or seven years, all of the clinical clerkships of the third and fourth year classes were conducted at the community hospitals of Worcester and, for obstetrics, at Wesson Women's Hospital in Springfield. Before UMass's hospital became fully functional, most instruction was provided by volunteer faculty, many of whom were "glad, even excited, to teach students, and devoted a fair amount of time to them."[21] One of the first volunteer faculty members, Paul Schwartz, M.D., a cardiologist located at Memorial Hospital, echoed this comment:

> At that time the Chief of Surgery was Brownell Wheeler, and his office was at Saint Vincent Hospital. And the Department of Medicine [chair] was Roger Hickler, and his office was at the Memorial Hospital of Worcester, and they were the only two paid medical clinical faculty at that time…So all of the staff were essentially clinical staff on a volunteer basis, and most of us, at least those of us who were more recently trained and board-certified, were very excited about having the medical school here, and participating…in the clinical teaching of the medical students.[22]

Students

The cultural imprint of the "Shaw building" era—improvisational, collaborative, generous—made a deep and long lasting impression on students and faculty alike. UMMS students from those first three years in the Shaw building overwhelmingly recalled their experiences as "pioneering" or "unique." The student body itself was minute: 16 students matriculated in 1970, 24 in 1971 and 1972, 40 in 1973, and 64 in 1974.[23] Only in 1975 did the number of students in the entering class reach the projected number for a full class of 100 students.[24]

UMass Medical School Entering Class Size, 1970-2016[25]

1970	16
1971	24
1972	24
1973	40
1974	64
1975	100
1976	100
1977	100
1978	100
2008	114
2009	125
2016	150 (projected)

The first class was especially close knit. As one class member admitted, "With sixteen of us, we got to know each other pretty well—sometimes better

than we wanted to."[26] To the disappointment of some, all the students were men. Apparently two women had been accepted for the first class, but neither wanted to gamble on such a risky proposition—being a woman medical student was hard enough in 1970 without the additional stress of a school that might not last long enough for her to graduate. Nor did the class contain any non-white students, a matter which was immediately noticed by Boston representatives of the NAACP. As will be discussed later in this chapter, ethnic and racial diversity proved to be a more challenging goal than achieving gender balance.[27]

That first class did represent a good balance of students in both economic and geographic terms, a circumstance deliberately facilitated by the $600 yearly tuition (raised to $900 in 1978, $4740 by 1981, and $10,262 in 1994-1995, standing at the 75th percentile for all U.S. public medical schools). The sixteen represented public and private education; some came from affluence, others did not. Five of the original 16 students were graduates of a state university—the University of Massachusetts at Amherst (4) and the University of Massachusetts-Boston (1). Four of the 16 original students came from central Massachusetts, including three from Worcester and one from Pittsfield in western Massachusetts; the remaining 11 students lived in the eastern counties.[28]

Writing of the classes entering from 1974 through 1978, Chancellor Roger Bulger noted that, "Many students have turned down offers from the most prestigious medical schools in the country. Thus far we have had an unusually high proportion of students who have not attended the more prestigious undergraduate colleges; their parents are not college graduates, but are in blue-collar or other nonprofessional occupations." A detailed look at the occupations of 63% of UMMS students' fathers for the entering class of 1981 showed a wide range of activities including 21 professionals of various kinds, one "toolmaker," one telephone company "lineman," one truck driver, one grocer, one printer, one

fireman, five salesmen, and two mail carriers. Of 84 mothers surveyed, 30 were "housewives," seven were secretaries, five were bookkeepers, two were waitresses, and one was a factory foreman.[29] The mothers also included 18 professionals including one mathematician. One member of the first class was 28 years old and had come to medical school directly from service in the Navy. Susan Schooley, M.D., who graduated in 1980 and later became the chair of family medicine for the Henry Ford Medical Group and Medical Director for its Detroit region, recalled her class this way:

> We were an interesting group, ranging in age from people who were straight out of undergraduate work and young and inexperienced, to some of us who had been out in either science-related careers or...out in the working world, coming back in. We had a fireman in our class. We had people coming back into the workplace after raising a family. (I'm talking about the women.) [There was] enormous diversity.[30]

Socioeconomic diversity continued to characterize the student body. In a report for fiscal year 1984, the socioeconomic profile remained fairly constant: 77% of students applied for financial aid and 38% of those students "came from families in which the combined parental income was below $30,000."

Such diversity of backgrounds was not an accident. Robin Davidson, a neurosurgeon, became Assistant Dean for Student Affairs from 1973 to 1975 until his clinical practice at the hospital required his full attention. He affirmed that in the admissions process, "we looked at their life experience significantly," not merely at grades and MCAT scores, "so if someone had been out and had been to graduate school...or in the work force or...had been raising a family, or were trying to come back...we looked at that seriously and valued that, and it...became part of the entire equation."[31] This tradition was maintained. Jeffrey Bernhard,

M.D., chair of the Department of Dermatology and from 1989, Associate Dean for Admissions, was adamant that the Admissions committee took "particular note of whether or not someone was the first member of their family to go to college, so those were FGC's, first generation college graduates...One other thing that we had a reputation for was being open to non-traditional students...people who...had other careers. I remember one who was a college biology teacher, who really made a very convincing case for wanting to be a physician...So we were not age-biased either."[32]

Jeffrey Bernhard, M.D. *(Photo courtesy of the University of Massachusetts Medcial School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Possibly the most iconic admissions story at UMass Med centered on James (Jim) McGuire, M.D., the first student to be admitted to UMMS. Robert Schell, M.D., also a member of the first class, remembered McGuire as a "dynamic, bubbly, kind of rambunctious, eager, energetic kind of person." Faculty members, no less than students from the early classes, remember the late Dr. McGuire, who became a rheumatologist, as a leader, an outstanding member of the class. As an undergraduate at UMass-Amherst, McGuire acquired an enviable reputation for scholarship, for sports, and for loving a good time. Nevertheless, as Sandy Marks, D.D.S., Ph.D., one of the earliest members of the faculty, laughingly explained, "Jim McGuire signed up under duress." He'd always wanted to go to Duke. As the story has been recounted by his friends and by faculty members like Dr. Marks who became his friend, in the year before the school's opening, Dean Soutter was in a bind. As Part 1 of this book has explained, successive threats to rescind funding for the school made recruiting difficult and planning, an act of defiance. Soutter realized that a fait accompli, namely, the admission of a student to the

medical school's first class—a Massachusetts resident—would make de-funding the school much less palatable to the legislature. Michael Foley, M.D., a member of the class of 1976, a longtime member of the University's Board of Trustees, and a friend of McGuire's in college, told the story:

> When there was a critical vote that threatened to de-fund the medical school in 1969 [Dean Soutter], in his wisdom, saw the need to accept a student as soon as possible...He himself personally scoured through the pre-med records of the University of Massachusetts-Amherst...Dr. Soutter saw his man [James McGuire] and called him up and said, 'Jim, we want you to come to UMass..." and Jim says, 'Thank you. But I always wanted to go to Duke.' And Dr, Soutter says, 'We just want you to be "accepted" for a few days, or a week. We want someone of your caliber to bring before the Legislature...'[33]

In the end, Dean Soutter persuaded McGuire to accompany him to a hearing at the Boston statehouse. The next day, the *Boston Globe* ran a photograph of McGuire, describing him as the medical school's first student, something he learned about only when his mother called to alert him. Outmaneuvered, McGuire accepted his fate, signed on, and—in the memory of classmates and faculty—immediately became a class leader.[34]

At the outset, Lamar Soutter, Richard Saunders, M.D. (the first dean of students), Hugh Fulmer and Maurice Goodman, Ph.D., were all closely involved with admissions decisions. Robert Schell, who became a neurologist, applied to the school sight unseen. After his acceptance, he moved back from Seattle where he was working following graduation from Reed College, and took his first good look. He was interviewed by Dr. Saunders in the Shaw building:

> ...and I think at that point virtually the whole thing was just gutted. And he showed me blueprints. There might have been an architectural model of the new building, but we basically walked around these work areas where there were exposed cinder blocks, and sheet rock. And I remember going to... a draftsman's table

> or work bench, and there was just this stack of blueprints, and he kind of pointed to things...that was my introduction to the physical plant...[By September] it looked more like a going concern.[35]

Richard Aghababian, M.D., a member of that first class and someone whose career in emergency medicine brought him back as a member of the faculty and a department chair at UMass, was initially interviewed by Dr. Soutter. Unlike Schell, he had not yet been accepted and drove out to Worcester from Harvard where he was a student to look over the place. He remembered thinking, as he was on his way into the Shaw building, "Well, gee, this doesn't look like a medical school."

> ...But then I got into [Dr. Soutter's] office, and here was this man with this beaming smile and very fatherly-like demeanor about him, who I sat down with and immediately and just really said, 'I can work with this person.' I could just feel that. I mean, he just had... so much excitement about him, and...the excitement had to do with the creating of the new medical school...he made you feel like it was going to succeed on the power of his will alone.[36]

Donald Abbott, M.D., who became a family physician in Maine and was another of the first class, was interviewed by Richard Saunders and by Hugh Fulmer (who appeared to like Abbott's interest in socioeconomic issues and the health of communities). Abbott had been accepted to dental school, but chose to attend UMass:

> ...I do have visions of what things can be, and I don't have to go to something that is perfect to start with. [For] me—the medical school experience was more about the people, and I was very impressed with Dick Saunders and Hugh Fulmer, and you know, thought that this was a really pretty neat idea, because the school was trying to be very much primary care-oriented, going forward, or at least that's what they kept telling us.[37]

Leonard Finn, like Abbott a family practitioner, also was influenced by his

perception of the school's goals, goals conveyed by his particular interviewers, Richard Saunders and Hugh Fulmer. He was accepted at another school with a "more ordinary" reputation. To him, "it was an easy choice…they weren't using the word primary care, but the idea of primary care was prevalent at UMass, and that was attractive."[38]

The intimacy of the early set-up also appealed to Dr. Finn: "There were only going to be sixteen people in the class, and they were going to be collegial with professors in developing the school. And that was significant to me…I liked the idea of innovating, and developing. It was exciting to be starting a new school."[39] P. David Jarry, M.D., who became an internist with an emphasis on pulmonary medicine, echoed these impressions. So did Robert Schell: "There was a lot of personal attention—a close working relationship—a warm kind of environment," Schell told a reporter in 1974. When one of the students, for example, hadn't yet gotten housing in Worcester, Maurice (Moe) Goodman—who hadn't yet moved to Worcester either—picked him up near his parents' house in Newton on the way into Worcester so they could drive out together. Dr. Soutter and the faculty cultivated the sense of intimacy. For example, in March 1970, six months before the first class was due to arrive, Dean Soutter wrote them a letter to give them "news of progress in the development of the school." He enclosed a list of the names of the 19 students invited to attend UMMS, even though he knew a few would choose to attend other schools. He proceeded to let them know the faculty's current thinking about the curriculum, the current state of faculty recruitment (he was pleased to announce that the "young, able and very enthusiastic" Maurice Goodman had just been hired). But, he also gently reminded the students that "it takes time to recruit outstanding men," and they should not be concerned that the task was still ongoing.[40]

Dean Soutter hired Mayre Coulter as the first registrar, foreseeing

correctly that she would also help the students solve the day-to-day problems of med student life. Knowing that housing might be a problem, Coulter met with the president of the Worcester chapter of the University of Massachusetts Alumni Association and together they set out to find suitable quarters for the students. Three of the first class members were married and may not have needed this kind of support. But for the remaining 13 students, Mayre Coulter was an enormously helpful presence. Remembering Coulter, Michael Foley said, "the medical students were kind of all her nieces and nephews, and she just knew everything about everyone...She had everybody figured out and she was a great read of character, and a great read of need, and anticipated things tremendously."[41]

Coulter solved the housing problem for half the class by finding a large Victorian house in Worcester, near WPI and what was then Becker Junior College. The house, on Marston Way, became the headquarters for eight students. Dr. Schell described it as a "rambling old house, a three-story, single-family house that could squeeze in eight medical students. One lived in the old dining room, one lived in probably an old servant's room behind the kitchen... there were four who lived on the second floor, and then there were two people on the third floor...I actually liked my room quite a bit, but I think it was clearly the room that nobody wanted...I lived in a gable." The monthly rent was about $40.00 per student. A second house, known as Anderson House, became part of the university's property and was within two blocks of campus on Plantation Street. Students would eat together at their houses and often have faculty and other guests over for dinner. Dr. Foley remembered that Lamar Soutter would "grace" them with his presence two to three times a year. Opportunities for recreation were limited; the Shaw building had no space for an exercise room or gym, but it did have a ping pong table. Of course, the students' free time was limited, too. Everyone was given a membership at the Jewish Community

Student running group-UMMS Flux, c. 1975 *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Masachusetts Medical School)*

Center for swimming, exercise and, especially, squash, but pick-up games of lacrosse, volleyball, softball, or picnics also became part of the campus culture. Photos from those early "Shaw building" years reveal Bill Butcher and other faculty hanging out with students on the campus and near Lake Quinsigamond, playing softball, canoeing, and picnicking.[42]

Faculty and students playing softball, 1975-1976 *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Faculty and students found other ways to spend time together outside of formal classes. Frank Chlapowski, Ph.D., then a very young assistant professor of anatomy, reminisced:

> Sometime...we would take the whole group home with us and work with them in the evening to go over things and prepare them for the various exams and whatnot...One night, to my wife's dismay, I showed up with the entire class of 16, asked her to make lasagna, which she did... Eventually [after] having a little too much beer or wine, the entire class slept over at my house...Obviously nothing you could do now with 100 students, and probably something I shouldn't have done then with 16 students![43]

The Shaw building's lunch room was furnished only with tables, chairs, and

vending machines, but students, faculty, and staff—including Dr. Soutter—all ate there and talked. The collaborative spirit was captured in the dean's two-day Orientation schedule for the opening of the year. On day two, following Brownie Wheeler's presentation of the first clinical case (described above), a student-faculty picnic was scheduled by the lake. "Swimming, tennis, touch football, etc. will be in order," Soutter wrote. "Unfinished discussion of the morning may be continued."[44]

Parties were part of the culture, too. Dean Soutter's punch and cookie parties were meant for everyone at the school. As Muriel Sawyer (Harrington), the Dean's administrative assistant and another impressive problem-solver for students, vividly recalled, "I remember very well...everybody was invited at every level, and that's one thing that I insisted upon, and Dr. Soutter insisted upon: that it wasn't only the top level that went to the parties. Everyone—the janitors went to the parties, the maids went to the parties...Everybody came to the parties, because that's when we got to know them."[45] Dianne DeBenedetto, M.D., an internist and gastroenterologist, one of eight women in the second graduating class, keenly recalled the dean's Christmas party "rums punch" (made, in fact, with Irish whiskey, according to Frank Chlapowski), adding that it "took us days to get over it." Chlapowski supplied additional details:

> There were several Christmas parties that occurred. One was the Chancellor's party, where absolutely everybody goes...[At] the initial ones [Lamar Soutter] *insisted* on making the punch and he would use Irish whiskey and he would serve the punch and he would stand there for hours until everyone was served.
>
> The Department of Biochemistry, though, had something very special...We had a punch...and we called it Thunderbird. Let's just say that the alcohol did not come from very far away. Nor was it very expensive.[46]

When the entire medical school community—including custodial staff—consisted

of only 30 to 50 people, such camaraderie was not only possible, but essential. As Dr. DeBenedetto explained, to the early classes, UMass Med felt like a "medical school without walls." In her view, this feeling changed "when the new building went up." Dr. Chlapowski, too, had the impression that this "close knit" atmosphere lasted until the school got to be around 80 students, or, in other words, after it moved from the Shaw building in October 1973. Then it became hard to remember everyone's names, although, he added, "I think it is still a school that is very personal to students despite the size of the class."[47]

Shadowing this perceived intimacy, however, was a feeling of intense peer pressure—at least among the first cohort of students—the pressure to perform, to live up to the expectations of the people of Massachusetts, the Legislature, the faculty, and each other. That may have dissipated among subsequent classes, but the first group of 16 felt it acutely. Dean Soutter's opening address to the first class calmly admonished them to remember that just by entering the building, "you will find that you have inherited the entire reputation of the profession [and] you will find that you are part of this reputation." He also informed them that they would be considered not simply as students, but as "the junior colleague of members of the faculty."[48] Several graduates of the first class mentioned their feelings of responsibility to do well. They were impressed by the quality of the faculty and knew that, as Donald Abbott put it, "they really cared about making the school successful." As a result, the first class was highly sensitive to any sign that they were not holding up their end of the bargain. Dr. Aghababian, for example, was conscious that he, "didn't want to disappoint the State of Massachusetts, we didn't want to disappoint the Worcester community, that had just put everything into getting this school up and running...And it just felt that if we made some missteps, if we didn't cut the mustard...you know, live up to people's expectations, the school wouldn't survive and it would be all on our

heads...there was a real pressure to perform internally...just because the whole system was being scrutinized both in Worcester and in Boston." Leonard Finn commented, "We were all in the boat together, and we all had to row together to make sure that we were all successful. So we had a special urgency to see that all of us succeeded in building the medical school, and graduating our class." Most of their time was spent studying, either in groups or independently. The pressure could be intense. One of the original class members commented, "We supported each other really well in creating a study milieu, and we encouraged each other to study sufficiently hard that we looked like high achievers to each other and to our faculty...we let each other know that we had expectations for excellence."[49] Quality control took many forms, but perhaps the most memorable was recounted by Dr. Abbott about a student who drove in from his home near Boston for classes:

> And he would traditionally get there about ten minutes late, and the only seat left was right up front. And he would get his yogurt out, eat his yogurt, clean off his mustache, and fall asleep. At the end of our second year, we all had to do projects, and make presentations to the entire faculty. And...when [that student] got up there, all the faculty...put their heads down and went to sleep...[50]

Setting a tone for UMass Med that has persisted, the first class valued collaboration and esprit de corps. The grading system reflected these values. The faculty, especially those handling the basic science curriculum, intended to use a pass-fail-honors system. The students had other ideas. They decided among themselves that,

> ...it was going to be pass/fail. And [the faculty] really struggled with that, because it was...anathema to what they were used to. That is, they were used to...sorting out people as to better and worse, and we...came with the theory that we had to have a certain degree of knowledge to become physicians, and we either got it, or we didn't.

> We negotiated with them for a while, and they still—I'm pretty sure it was Moe Goodman who really wanted us to be pass/fail/honors, but we said, 'That's A, B, C…We just want pass/fail.' And so they did acquiesce to us in the long run.[51]

Along with pass/fail grades, narrative comments went far toward describing a student's strengths and weaknesses.[52] The system's drawbacks did not become meaningful until the class size was substantially increased. For example, with only 16 or 24 students in a class, letters of recommendation for residencies could adequately distinguish among students and describe their suitability for a particular specialty. Moreover, since the early classes received highly tailored counseling in regard to off-campus electives and were able to rely on the faculty's well developed national contacts to win desirable residencies, honors that depended largely on class rank, such as being designated a member of AOA (Alpha Omega Alpha Honor Medical Society), made little difference to the first students. Indeed, they voted not to join AOA. By 1978, however, with a class size of 100, these distinctions began to matter. Chancellor Bulger applied to AOA to launch a UMMS chapter and the grading system was changed to honors-pass-fail or condition (tantamount to a time-limited grade of "incomplete").[53] Narrative comments continued to be an important part of the grading process; narratives might contain reports of "marginal" student performance and any student receiving two such ratings in a given year, or three over the four years of the curriculum, could be subject to dismissal.[54]

The first UMass Med graduation, held in 1974, was held in the Library, soon to be re-named the Lamar Soutter Library. Dean Soutter welcomed the class to an "honored profession" and complimented the group for their "great courage" and modesty. Donald Abbott was chosen by his classmates to deliver the student graduation speech, but, as he related, the speech "typified how we did things. The class got together and decided who they wanted to give the speech. And we

kind of concocted the speech together. It went by everybody in the class, and everybody had to agree. We changed it. We took things out; we added things as to what they thought should be in it, and what shouldn't be in it. So...that's kind of who we were at the time." Abbott faithfully relayed the students' gratitude, affirming that they had indeed become "junior partners in their education."[55]

Class of 1974 *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

In addition to the class gift of a scholarship in honor of Lamar Soutter, the class also decided to give a more personal gift to the dean. It needed to be something distinctive—something that would reflect Dr. Soutter's personality but also something that would remind him of the group's own distinctive place in UMMS history. Bimi Soutter always wore suspenders. Some of them were, in one student's memory, "kind of flamboyant." So the students, at a suggestion from Robert Schell, decided to give him a pair of suspenders as a memento of their

class. Just to be sure, a graphic artist lithographed the portrait of each student on the suspenders, eight to a side. The dean was honored. Indeed, at graduation the next morning, the dean was wearing them, just as he did for the class's 10th reunion.[56] The 16 students of UMass's first medical school class demonstrated

Dean Soutter, third from left in front row, with members of the class of 1974 at their tenth reunion *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

the power behind the original mission for the school. Richard Aghababian remembered that "**...**there was a lot of emphasis on making good physicians, because one of the things the legislature wanted was more physicians...primary care types, to go and practice in the state in a front-line way, and I think we fulfilled that. And not too many of us from the first classes, you know, went on to be great researchers. We were more—we were cultivated to be good clinicians and good people, to interact with people."[57]

Primary care gradually did become central to the culture of the school. Of the first class, 4 students, or 25%, became primary care physicians, two specialized in emergency medicine, and the remaining 10 became specialists. But,

the faculty as represented by the Admissions Committee and the Educational Policy Committee adopted an attitude that, "With one hundred spots, we could have a diverse class, diverse interests, diverse socioeconomic backgrounds, diverse intentions of what they wanted to be, and diverse racial groups as well."[58]

First Graduation Class Specialty Choice and Practice Location*

Name	Specialty	Practice Location
Donald W. Abbott	Family Practice	Maine
Richard V. Aghababian	Emergency Medicine	Massachusetts
William W. Estabrook, III	Psychiatry	California
Leonard M. Finn	Family Practice	Massachusetts
Donald J. Gentile	Family Practice	Pennsylvania
P. David Jarry	Internal Medicine	Massachusetts
Dana G. Killam	Emergency Medicine	Florida
Kenneth M. Kornetsky	Nephrology	Virginia
James L. McGuire	Rheumatology	Massachusetts
Robert G. Oppenheimer	Radiology	Vermont
Armen L. Roupenian	Surgery	Massachusetts
Jonathan S. Rothman	Psychiatry	Massachusetts
Paul D. Sabel	Radiology	New York
Robert A. Schell	Neurology	New York
Gary G. Winnelberg	Radiology	Massachusetts
John V. Young	Surgery	Oregon

* The information contained in this table is based on the following sources: Richard H. Jaskowiak, "Medical School to Graduate 16 at First Commencement," *Evening Gazette*, May 26, 1974; University of Massachusetts Medical Center, 25th Anniversary Alumni Directory, 1995-96; University of Massachusetts Medical School Alumni Directory, 2001; personal communication with Donald Abbott, M.D.

As noted in previous chapters, this attitude reflected that of the school's founders. Students, in turn, have steadily expressed their satisfaction with their education. In interviewing some of the members of UMMS's first class 40 years after their graduation, one finds that they still express their gratitude to Dr. Soutter and the faculty. Dr. Schell insisted that, "In some ways I feel that I was kind of lucky... I have absolutely no regrets. Quote me on that." Donald Abbott emphasized, "I will always be indebted to UMass."[59]

Every class, to some extent, has had its own personality and identity. But one major distinction separated all subsequent classes from the incoming class of 1970, namely, the presence of substantial numbers of women. Starting in 1971 with the matriculation of eight women out of 24, 33.3% of the class, UMMS has maintained a proportion of women students above the national average. By comparison, the national average for graduates of 1975 was 13.4%. By 1984, overall enrollment of women medical students at UMass-Worcester stood at 41.5%; the national average was 30.5%. By 1985, the entering class consisted of 49% women. In 1992, the figure had jumped to 56%. (The national average was 41.9%.)[60]

Student Characteristics, UMMS, 2000-2006[61]

Admission Year	Number of admitted students			Age at admission	Gender		*Race/ Ethnicity*						
	Total	MD	MDP	(Average)	Female	Male	*American Indian or Native Alaskan*	*Asian*	*Black or African American*	*Hispanic*	*Native Hawaiian or Other Pacific Islander*	*White*	*Unknown*
00-01	101	95	6	25.42	52	49		*13*	*2*	*2*		*83*	*1*
01-02	100	98	2	25.02	52	48		*9*	*4*	*1*		*84*	*2*
02-03	100	91	9	24.91	46	54		*20*	*2*	*1*		*77*	
03-04	100	95	5	24.80	59	41	*2*	*15*	*2*	*2*	*1*	*78*	
04-05	103	97	6	24.88	55	48		*8*	*3*	*1*		*91*	
05-06	104	99	5	24.57	61	43	*1*	*19*	*5*	*3*		*76*	
06-07	103	95	8	24.78	61	42		*15*	*6*			*82*	

Over the 30 years from 1974 to 2004, 42% of UMMS alumni have been women;

in 2014, the entering class comprised 60% women, 75 women and 50 men.[62]

Like almost every other medical school in the 1970s, however, UMMS made no particular accommodation for women students. No official, or even semi-official, housing (such as the Marston Way house) seems to have been available for them and, according to one woman graduate of the class of 1975, they did not hang out together.[63] But, for women medical students in the pivotal decade of the 1970s, when the percentage of women students began its steep rise, UMass was a good place to be. Michael Foley concluded—admittedly, from a man's perspective—that for the men and women in his classes, "it was a seamless existence. I mean, women were—everybody was—'the guys.' I mean it was just—women did things that were inseparable from the guys. We all did everything together." With classes of 24 or 40 students, most everyone could hold their own, establish their place in the group. Bruce Karlin, M.D., a member of that same class who became an internist practicing in Worcester, also recalled groups of men and women students getting together outside class, particularly for dinner. (One of them, Evelyn Love, M.D., a rheumatologist practicing in Worcester who was one year behind Karlin, also became his wife.)[64]

Christine Cassel, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Mssachusetts Medical School)*

Christine Cassell, M.D., was also a member of the class of 1976. A pioneering geriatrician and ethicist, Cassell was the founding chair of the first department of geriatric medicine (at Mt. Sinai), the first woman president of the American College of Physicians and of the American Board of Internal Medicine, and is internationally known for her health care policy work with the Institute of Medicine. Like Foley, Dr. Cassell became a member of the University of Massachusetts Board of Trustees. In 1972, Cassell was about 25 or

26 and thus considered an "older medical student." (Times have changed.) She recalled being part of a group of four women who "rented a large, old house in Shrewsbury, just on the line, and shared the rent and...lived together and studied together, etcetera." One was a woman from the preceding class (a second year student). Those became "very important friendships in my life." Dr. Cassell had been a philosophy major and while taking her pre-med courses after graduation worked as an administrator at a free clinic in Boston. It was there that she "learned something about...the real needs of uninsured and poor people and the kind of volunteer model that was very prevalent at that time. [It was an] all-purpose free clinic for homeless people and runaway kids and...people who just couldn't get care any other way." She was attracted to UMass partly by its low tuition, as were many other students, but,

> the thing that really excited me was that I didn't have a standard pre-med background, and I knew I was going to need some kind of individualized teaching. And, here was this start-up school, with faculty who were passionate about medical education, innovative in their methods, and because we were one of the early classes, a very small class, there were more faculty than students. You could just go up to anybody in the hall and say, 'Hey, would you explain this to me?'[65]

Michael Foley observed that the women students in his cohort, no matter how well treated in the medical school, seemed to have had a harder time than the men once they were out in the community hospitals for their clinical clerkships, especially with nurses, he believed. But when he commiserated with one of his women peers, Deborah Hartley, she told him, he recalled, "'Ah, this is the way it is.'" But, he added, "the women...gradually won them over. I mean really, the attitude kind of left, the more familiar the [nurses] became with the [women] medical students." Dr. Cassell remembers something similar, although the experience was compounded by the Harvard hospitals' general hostility

toward UMMS at the time. The UMass students often did rotations in the Boston hospitals in the 1970s and, just as often, they would feel like a "second-class citizen…I'll tell you a story about Mass General and what some of us had to put up with. When I did my rotation there, I reported to duty where there was a Harvard resident. And I went up and introduced myself and I said, '…I'm Chris Cassell, a student from UMass.' And he looked at me up and down, looked at my feet—and said, 'You don't have any mud on your shoes.'"[66]

But at UMass itself, there seems to have been little of that sort of "House of God"[67] arrogance or belittlement, whether on account of gender, social background, or anything else. Dr. Cassell's career was in some ways propelled by the opportunities she received at UMass, first by a research project in which she collaborated with David Purtillo, Ph.D., an immunologist. With her assistance, Purtillo "discovered…an inherited genetic immunodeficiency disease, and so…tracked down the family…and mapped the family trees." It resulted in a publication in *The Lancet*, "a very big deal." But more telling, she also was exposed to a class on "the care of patients who are dying—a sort of early hospice model. It was very important to me." Ruth Purtilo, Ph.D., wife of David Purtilo and now an internationally known bioethicist, had just received her doctorate from Harvard and was leading small groups in medical ethics at UMMS. Cassell considers both of them to have been important mentors.[68]

Faculty

For the earliest faculty members, teaching at UMMS in those years was also quite special—and not least because they were often called upon to improvise and make do. With little more than a year until the arrival of the school's first class in 1970, the Commonwealth still had not appropriated the money needed

to hire most of the faculty. And, as noted in Chapter 5, University Hospital was still considered "optional" in some quarters. Thus faculty members were hired at what could be described euphemistically as a deliberate pace. Anyone necessary to teach in the first semester was brought in by the summer of 1970; by the end of 1970, the second semester's teaching slots were filled, although some of those early faculty instructors were actually being "borrowed" from Harvard or UMass-Amherst until a permanent appointment could be made.[69] According to the school catalogue, by the fall of 1970, only four departments were represented: Anatomy, Biochemistry, Community Medicine, and Physiology. A year later, additional departments with one or more faculty members were in place, including Medicine, Microbiology, Orthopedics, Pathology, Psychiatry, and Surgery. Dr. Soutter told the Trustees in the spring of 1971 that the faculty "now numbers 51, with only 11 of this number salaried. The rest volunteer their services." Over the following two years, the departments of Obstetrics-Gynecology, Pediatrics, Pharmacology, Radiology, and a Program in Family Medicine were populated with at least one faculty member, usually a department chair or interim chair.[70]

Sam L. Clark, Jr., M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Taking the attitude that UMass Med was a work-in-progress, the small but excellent early basic science faculty did not feel strait-jacketed either by their close quarters or by the conservative curriculum. As Dr. Cassell, Dr. Foley and other former students made plain, the faculty took pains to interact individually with the students and to introduce innovative adjuncts to the coursework. First-year anatomy was an outstanding example. The department chair, Sam Clark, Jr., M.D., was described as "a fine,

southern gentleman: tall, thin, white-haired, had a Tennessee twang…" On at least one occasion he entered the classroom for the first anatomy session of the year and, "a cappella, sang at the top of his lungs, *Ezekiel Saw the Wheel,* as part of our very first lecture." In the mind of at least one student, "that kind of set the tone for the relationship of that faculty to the student body, and the elevation… of the kind of learning we were doing to something that had some spiritual connectedness and some meaning beyond a profession."[71] Other members of the early anatomy faculty also were memorable: Merrill K. (Ken) Wolf, M.D., came here from Harvard during the first academic year initially as a lecturer in anatomy, but especially for neuroanatomy, his area of specialization. Wolf, besides having been a precocious young man who graduated from Yale at the age of 14, was also a professional pianist.[72] For decades, he served as the organist for the UMMS graduation at Mechanics Hall.

Standing about five feet tall, he had no difficulty in keeping the students' attention. For example, he would fluidly draw the hemispheres of the brain, using

Susan Gagliardi, Ph.D. and Merrill K. (Ken) Wolf, M.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

left and right hands simultaneously. Sometimes, Dr. Schooley remembered, Wolf's lecture "would just be turned over to a concert, and sometimes he

would schedule a concert separately from class, but what I remember about his performance is that he demonstrated the consequences of neuroanatomic lesions by demonstrating gait, demonstrating thought patterns—imitating the effects of these lesions so that you could tangibly experience a clinical consequence of these things we were learning in anatomy."[73] Wolf shared the lecture duties with another respected and appreciated neuroanatomist, Susan Gagliardi, Ph.D., who arrived several years later from Harvard. Gagliardi, too, was known for her effective teaching. As it happened, she stood at something close to six feet tall. Anatomy lectures were not dull.

Another favorite among the basic science lecturers, Guido Majno, M.D., was chair of the Department of Pathology and an accomplished historian of medicine. As an indication of his scholarly breadth, each of Majno's major books, *The Healing Hand: Man and Wound in the Ancient World, and Cells, Tissues, and Disease: Principles of General Pathology* (co-authored by Isabelle Joris, Ph.D.) received a major literary award. (*The Healing Hand* was a Book-of-the-Month Club offering.) In addition to his more than 200 scholarly articles, abstracts, and books, Dr. Majno received 16 "Outstanding Medical Educator" awards from UMass classes every year except one, from 1987 to 2001. (He became professor emeritus in 2002.) A native of Milan, Majno moved to Geneva, Switzerland for his residency in pathology. In 1952 he came to the United States, first to Tufts and then to Harvard Medical School. After a year working in the lab of future Nobelist George Palade at the Rockefeller Institute (now, Rockefeller University), Dr. Majno returned to Harvard. But, he was restless there. As he told an interviewer, "Harvard is enormous...it's totally stable. It's like a rock, full of tradition." Initially he returned to the University of Geneva as chair of the Department of Pathology. While in Geneva, he and his colleagues characterized myofibroblasts as well as the "wavy fibers" present in early myocardial infarction.

But, the opportunity to come back to Massachusetts where, as Majno put it, "there was nothing," and build a new program proved too tempting. He also enjoyed the challenge of explaining why he was leaving Geneva for Worcester. Majno arrived at UMass in 1973 and stayed for the rest of his career—one of the most beloved of faculty members.[74]

Guido Majno, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Dr. Majno launched each year's general pathology course by telling the students something about his background and interests and, once the class size became fairly large, asking them to do the same by writing up a brief autobiography. Dr. Joris, his wife, colleague at UMass and, often, his co-investigator in the field of vascular pathology, explained that, "This manner of starting the course let students understand that Dr. Majno cared about them and was eager to share his enthusiasm for pathology and learning." Majno also regularly rewarded students for giving a correct answer in class by tossing chocolates to them. In at least one instance, he received back more than he gave. One student from the class of 1977 regularly sat up front, knitting. She was an excellent student and Dr. Majno was not concerned. As he told a visiting lecturer, "'If you say anything important, she'll write it down.'" At the end of the year, the future Dr. Evelyn Love completed her knitting—a vest—and gave it to Dr. Majno, who wore it.[75] He and Dr. Joris' philosophy of medical education was well epitomized by something he wrote for the student yearbook, *Iatros:*

> We tried not to burden you with details and tried to keep focused on the Big Picture. Here and there we may have failed, because

> even the Big Picture is made of details. This is precisely one of the problems that you will have to face: remembering certain details can also save lives. What's an unnecessary detail? There may be no such thing...However, there is a way out. WHEN IN DOUBT, ASK...you will find that even experts are not necessarily right. And don't forget that however hard you may try, you will never know it all—the best you can do is to attain your own acceptable level of ignorance.[76]

Students recalled Dr. Majno as, "a medical historian [who] never lost an opportunity to bring into perspective the past...going back into the eons."[77] Because at the beginning UMMS had no courses in history or the humanities, Dr. Majno began to organize some lectures, first in history of medicine, and then what he called "Medicine and Society" seminars. He and Dr. Joris acquired a small grant for the series and asked Ruth Purtilo to coordinate it. They sponsored the seminars from approximately 1977-1980. As Dr. Joris recalled, "the topics discussed were related to current issues discussed at that time: work-related ailments, neonatal intensive care, and even a mock medical trial...enacted by a Worcester physician and Worcester lawyers." One speaker who returned several times to the school, Jamake Highwater, was an American Indian writer who spoke about how, in Dr. Majno's words, "the white man puts body and soul together—or doesn't." Highwater referred to the differing styles of healers, i.e. orthodox, Western physicians vs. Native American healers, as being "earth doctors" or "sky doctors." At graduation in 1991, when Dr. Majno received an honorary degree, he told the students, "At the end of the day, you've got to be a 'sky doctor.'"[78]

Sandy Marks, one of the original professors in the Department of Anatomy who taught the gross anatomy class for many years, organized the Anatomical Gifts program for the school and in 1972, instituted a

memorial service to honor body donors. (First year students later took responsibility for organizing the service in conjunction with the gross anatomy faculty, who eventually included Susan Gagliardi, John Cooke, and Anne Gilroy; it has been held every year since then.)

Sandy Marks, D.D.S., Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Marks, like Guido Majno, left an outsize impression on students and faculty as a teacher and human being. He joined the faculty in 1970 and remained here until his death in 2002. Marks' research established the "hematopoietic origin of the bone-resorbing osteoclast," and his grant, "Bone Matrix and Bone Resorption," was continuously funded for 22 years. Marks believed in the integration, whenever possible, of teaching and research. As his colleague, Paul Odgren, Ph.D., wrote after Marks' unexpected death, "He always tried to get medical students to think about patients as people, and to consider the anatomical basis for clinical findings."[79] The son of a missionary dentist, Marks "took teaching as a calling," in the words of Chancellor Aaron Lazare. He always related to students as people. Early in his tenure at the medical school, he noticed that some students found the process of dissecting the human

body profoundly unsettling. In a few cases, students' inability to resolve the anxiety provoked during dissection labs led to "prolonged leaves of absence." The late 1960s and 1970s were years in which increasing attention was paid to the potentially dehumanizing effect of medical education. (The first medical humanities department was established at Penn State Hershey College of Medicine in 1967; the second was founded at the University of Texas Medical Branch in 1973.[80]) Gross anatomy courses, in part because they represented many students' first encounter with patients—*dead* patients—came to seem more like hazing than education.[81]

Marks decided to respond to a demonstrable student need. In so doing, he put UMass Med in "the vanguard for explicitly incorporating emotional lessons into its learning objectives for gross anatomy."[82] As Marks related, "The departmental faculty chose to at least try, in its own limited way, to acknowledge that such feelings exist, that they are present in most human beings, that it is valuable to be able to recognize these and other human emotions, and that academic failure may be related to a student's inability to deal with them." For several years Marks and his departmental colleagues organized small group discussions during the early part of the gross anatomy course—discussions focused on articles about death "as a process." But after several years they realized the need to focus directly on what the students themselves were feeling about "death, dying, and dissection." They therefore decided to hold hour-long small group discussions for two weeks, followed by a tour of the dissection lab, discussion of the body donation program, and finally, discussion of the care of cadavers and basic techniques of dissection. Only then did actual dissection assignments begin.[83]

By chance, in 1976, while Dr. Marks was developing this preamble to the gross anatomy lab, the hospital was establishing a Palliative Care Service under the direction of Dr. Melvin Krant, director of cancer programming. As part of the new program, Dr. Krant brought in Sandra Bertman, a former English teacher and social worker, and a well-known Boston consultant on death and dying—a thanatologist, or "death educator." Bertman used literature and the arts to assist patients and their families in the difficult process of coming to terms with mortality.[84] Soon Marks and Bertman began to collaborate on, and redesign, the multi-session seminar that served as a preamble to the dissection course. The course Bertman designed, called "Death, Dying, and Dissection," was followed by other (optional) classes on topics such as coping with cancer, handling bad news, AIDS, and aging, as well as brown bag lectures open to all. She also created the book, *One Breath Apart: Facing Dissection*, largely based on the essays and drawings created by UMass medical students during the summer prior to their first year of medical school.[85]

Sandra Bertman, Ph.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

The increasing involvement by the students themselves in the Anatomy department's Memorial Service testifies to the success of Marks' and Bertman's efforts to humanize the experience of human dissection. For example, Mary Ann Foti, M.D., a first-year student in 1979-1980 who became a psychiatrist and a Deputy Commissioner for the Massachusetts Department of Mental Health, told a local journalist that the course, "got us thinking of some of these issues before we met the body...I feel a strong responsibility that I must learn as much as I possibly can from this body."[86] Another student, Nancy Long, M.D., UMMS class of 1995 and a family physician, wrote a poem as part of her assignment for anatomy. It was incorporated in Bertman's *One Breath Apart* as well as in the

Memorial volume created in memory of Dr. Marks. It reads:

You came to take me for a walk with you.
I was afraid at first
To meet you,
To take your hand.
I pretended you were here
To teach me the details—
Muscles, arteries, nerves—
And I held on tight.

Then I saw your face,
And I knew
You came to take me for a walk with you—
On the edge
You on one side,
Me on the other,
We are one breath apart.[87]

In 2002, at the memorial for Dr. Marks, a member of the class of 2005 spoke to what Dr. Marks (and his colleagues) had accomplished. Matthew Logalbo, M.D., who is now a family practitioner, wrote:

> How we relate to each other and our anatomical donors reveals tenets of our character that may have been obscured in any previous setting. And in the degree to which we are willing to acknowledge the conflicted emotions we encounter, we discover fundamental truths about who we are and what we believe. I think Dr. Marks saw all this and more. He shared with us his own struggles with questions about life and death, and how he had been changed by the experience of dissecting a human body...He met us where we were.[88]

The Integration of Preclinical and Clinical Education, 1978-1990

Once the entering class reached its projected size of 100 and the Medical Science building and hospital were both up and running, the school's leaders could address some of the unfinished business of curriculum development. As was often true at UMass, students involved themselves in the process. In 1978, for

example, 85 first-year students signed a petition, delivered to Acting Provost Moe Goodman, "requesting the establishment of a course in clinical medicine within the second-year curriculum for the coming academic year." The Educational Policy Committee (EPC) had recently been reconstituted and directed to address such issues. Accordingly, Dr. Goodman delivered the petition to the EPC which designated an ad hoc committee to develop a proposal.[89]

A few months later at an all-faculty curriculum retreat, EPC chair Sam Clark told the group that, "From the beginning it was intended that the curriculum should evolve as the school grew; instead, it seems to have rigidified... For instance, during the first two years, 35 hours per week are devoted to scheduled student activities—a high figure nationally." The list of recommendations drawn up at this retreat nearly 40 years ago sounds uncannily like the problem list of most medical school curriculum committees in the early 21st century. Among a list of objectives, they called for using the admissions process to select applicants who were "more humane and are committed to a career in primary care." Likewise, they sought to increase the teaching of primary care, including "longitudinal experience in ambulatory primary care." Perhaps most challenging, they called for "reinforcement of basic science in the third and fourth years." The faculty also reiterated that education for primary care was just one of several of the school's educational goals: "we should not fail to provide opportunities for students with other interests." [90] Many of these concerns made their way into the school's 1978 Self-Study for the LCME:

> Some movement toward interdepartmental teaching is beginning. A multidisciplinary course entitled Introduction to Patient Care has been incorporated in the first year and provides an avenue for the introduction of the behavioral and social sciences along with family and community medicine, human sexuality, ethics, emergency medical training and introductory physical diagnosis. The course in human genetics offered in the first year is another example of

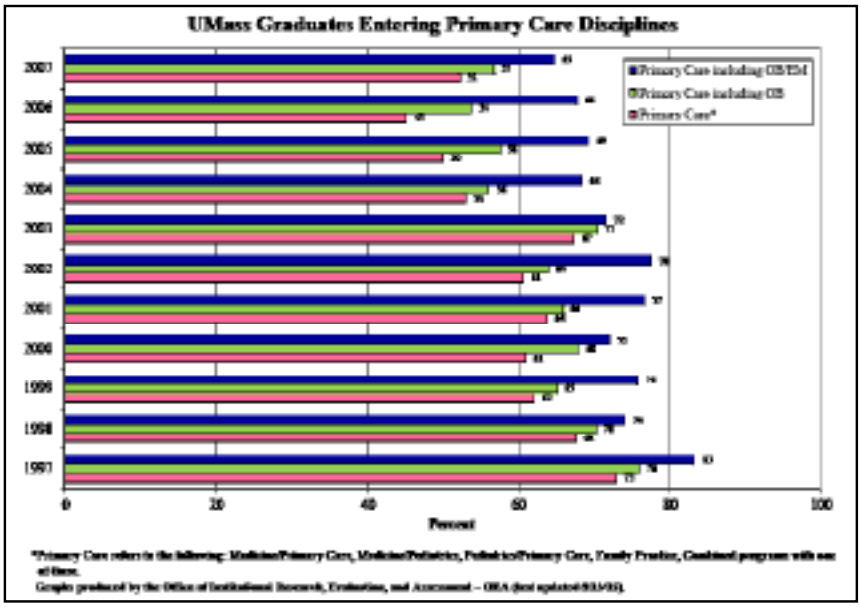
interdepartmental teaching.[91]

Slowly, additional innovations appeared in the curriculum in an effort to further integrate basic science and clinical education. In 1982, Paula Stillman, M.D., a leader in the use of standardized patients in medical education, was hired as Associate Dean for Curriculum. A modicum of problem-based learning was introduced in 1987. Once in the fall semester and once in the spring, second year students were divided into small groups and presented with a patient's name, age, gender, and case description. They researched the case over a two-day span, ultimately meeting either the patient or someone with a similar diagnosis.[92] With so much preclinical coursework on the books—not to mention the faculty members who had been honing it for almost 20 years—curricular change moved slowly.

Pressure to introduce clinical medicine and, it was thought, encourage an interest in primary care, continued. Given the pressures being brought to bear by the state legislature as well as the genuine shortage of primary care physicians in rural and urban underserved communities, UMMS paid attention to its students' specialty choices and whether they chose to practice in Massachusetts. One effort to encourage UMass Med alumni to practice in Massachusetts, a "learning contract," added a financial incentive to practice in the Commonwealth. In the state budget for fiscal year (FY) 1977, the legislature included an optional learning contract; in return for practicing in Massachusetts for one year, students were forgiven 2/3 of total tuition costs. But the bill did not specify what type of practice would qualify for tuition forgiveness. In 1978, the learning contract was made a requirement. In 1990, the state's learning contract required service of at least two years and specified that such service must be "in the areas of primary care, public or community service, or underserved areas…" The state's 1995 iteration of the learning contract required payback of this service over four years in return for

forgiveness of 2/3 of total tuition costs.[93]

The relationship between tuition incentives and rates of primary care practice is not easy to track. Nationally, lower tuition costs have not been demonstrated to outweigh other influences such as personal interest, practice hours, lower rates of reimbursement for primary care and, therefore, lower projected lifetime earnings in a student's choice of specialty. Over the years the proportion of UMass graduates practicing in primary care residencies did exceed the national average. From 1974 through 1978, 78% of UMMS graduates entered primary care residencies defined as internal medicine, pediatrics and family practice. From 1978 through 1984, UMMS graduates entered primary care residencies at a rate that averaged 72% (and was never lower than 66%), compared to an approximate national average of 67%.[94] Indeed, UMass has largely outperformed other schools in its record of graduates who enter the traditional primary care residencies. Moreover UMMS records show that during the decade from 1997 to 2007, an average of 32% of UMMS alumni entering these primary care fields chose to stay in Massachusetts. The graph below [95], which records the results for recent years, indicates an overall trend of decreasing numbers of UMass Med graduates entering primary care disciplines:



However, no medical school offering the full spectrum of educational opportunities, as UMMS has always been committed to doing, can guarantee that its graduates will not move into subspecialty practices during or after residency. Thus, by 1999, out of 2347 medical graduates from UMass, a total of 857, or 36.5%, ultimately became primary care doctors defined as a practice in the following specialties: family medicine, general medicine/primary care, geriatrics, internal medicine, and pediatrics.[96] That compares favorably to the national profile according to a study published by the Association of American Medical Colleges (AAMC). The AAMC data show that between 1980 and 2007, only 31.2% of physicians in active practice specialized in one of the primary care fields.[97] UMMS exceeds these national percentages, but would like to further increase its proportion of graduates who enter primary care practices. In 2015, the school established a new program in collaboration with UMass-Amherst and Baystate Health in Springfield to further increase the UMMS contribution to the primary care physician workforce. It was intended for medical students committed either to pursuing primary care practice in rural or urban/underserved settings, or to population health and integrated health management.[98]

Thoroughgoing curriculum reform, 1990-2005

Nationally, the 1990s and especially the period between 1993 and 2000, coincided with an uncharacteristic jump in the proportion of primary care practitioners. Those were years of intensifying enrollment in HMOs as well as the attempted implementation of the Clinton administration's proposed health insurance plan, potentially a mechanism that would increase demand for primary care. More directly relevant to UMass Medical School, these were the years

during which this school's participation in the Generalist Physician Initiative (GPI), underwritten by a grant from the Robert Wood Johnson Foundation, gave a strong boost to curricular reforms emphasizing primary care. The campus' GPI initiative was the result of more than a decade of small steps taken by the EPC, the Admissions Committee, and the Associate Dean of Students' office. Slowly they began to break open the traditional 2 x 2 basic science/clinical medicine curriculum structure.

Medical school educational leaders generally respond more rapidly to external stimuli than to internal prodding. Accreditation reviews by the LCME or other agencies such as the New England Association of Schools and Colleges (NEASC), rankings by national magazines such as *U.S. News and World Report,* or a growing consensus among medical school deans about an educational approach—any of these stimuli might motivate a school to undertake a concerted effort to reform its curriculum. Student opinion as expressed in the AAMC graduation questionnaires may also motivate change. At UMMS, all these forces, plus the accession of Aaron Lazare as dean in 1990, militated toward an active period of curricular transformation during the 1990s and on into the first decade of the 21st century when they were carried forward under Dean Terry Flotte.[99]

In the preceding chapter I described the challenge faced by Chancellor/ Dean Lazare, in sustaining the momentum of a reenergized research community on campus. To his credit, Lazare, in his capacity as the dean—i.e. as chief academic officer of the school—was also determined to reinvigorate the curriculum. An LCME site review in 1989 had recommended, that, "(1) a major curriculum review be undertaken dealing less with content than with developing a stronger emphasis on independent thinking and problem solving, and (2) efforts be directed toward achieving greater…consensus on educational philosophy."[100] Some faculty members were already trying to prepare the

ground for such change. In 1990, basic and clinical science faculty reached an agreement that, "more integration and problem solving should occur within the curriculum; some courses have made some changes to include these activities where appropriate."[101] Also in 1990, a longitudinal course supported by the dean and directed by Sarah Stone, M.D., "Medical Interviewing and Clinical Problem Solving" (described in Chapter 7, and later renamed "Physician, Patient and Society," or PPS), was introduced. With Dr. Lazare in place and a limited LCME re-survey scheduled for 1991, significant change began to take shape.

The LCME surveyors in 1991 expressed concern that the EPC had become "disempowered" over the years. This was effectively remedied. Whereas the EPC was previously a standing committee of the faculty and merely advisory to the Faculty Council and Executive Council of deans and chairs, starting in 1991 it was granted the power to both plan and execute educational policy. It was also given the budget and personnel to carry out curriculum assessments and teaching faculty development under the aegis of a new Office of Medical Education. Additionally it was now composed of representatives from each department. The following year, the position of Vice Dean of Medical Education, reporting directly to the dean, was created to oversee and coordinate the activities of the EPC.[102]

More profoundly, in 1992 a full educational retreat was organized by Paula Stillman and colleagues which was attended by a sizeable number of faculty members. Some of the faculty still were not convinced of the need to reconfigure the curriculum at all. A bit of tinkering would suffice. But, as the EPC reminded them,

> ...there is considerable concern among the faculty regarding student attitudes towards basic science. A growing gap between basic science and clinical education leads students to see these as two unrelated areas. These attitudes are strongly reflected in surveys of our matriculating and graduating students conducted by the [AAMC]...[T]hey demonstrate that while our students consistently

> rate 'intellectual challenge' among the most important factors in their choice of medicine as a career, many find that basic science information is overemphasized in our curriculum...[103]

New advances in molecular biology, molecular genetics, and neurobiology, the committee continued, "require a new interdepartmental approach to the teaching of basic science." Moreover, changing patient demographics, new financial mechanisms for health care delivery, the need for more primary care physicians and improvement of health care access, all "compel a reassessment of undergraduate medical education." A warning signal, continued the EPC brief to the faculty, was the declining number of UMMS graduates seeking careers in primary care. Because medical students' experiences in courses and clerkships are among "the most important factors influencing career choices," it was incumbent upon UMass Med to redesign its curriculum in a way that would better integrate basic and clinical science while also demonstrating the value of a career in primary care. (It was in consideration of these matters that the medical school had applied for the Generalist Physician Initiative grant.) The retreat, focusing on the question, "Is there a disparity between what we teach and what our students need to know?" would thus try to find "common ground" among disparate faculty stakeholders. The discussion topics summarize the dilemmas UMMS (and others) faced:

- Curriculum alternatives: basic science/clinical medicine integration
- The new science and the impact of molecular biology
- How much basic science need we teach? Where in the curriculum should basic science be taught?
- Who should teach basic science? Are whole-organ system experts a dying breed?
- Ambulatory teaching. Is there a need for an 'ambulatory block'?
- Longitudinal courses and longitudinal topics: Clinical interviewing, behavioral medicine, preventive medicine, biomedical ethics, medical informatics
- Review of the existing curriculum…What resources are necessary?

- Teaching and evaluation methods: where do we fall short?
- The training of generalists. What will be the impact of the Robert Wood Johnson 'Generalist Initiative'? [104]

About six weeks after the retreat, the EPC, chaired by Andrew Cohen, M.D., working in association with Paula Stillman, M.D., Associate Dean for Curriculum, issued a strategic plan. It opened with a clarion call (in boldface type) for collaboration and curricular balance: "In defining our educational mission," it insisted, "**we need not choose between developing an emphasis in primary care or continuing to support careers in biomedical research and academic medicine. These are not mutually exclusive goals but instead share similar educational needs.**"[105]

The 1992 retreat resulted in many changes. The campus acknowledged publicly that, "Since the demands of research and clinical service and their revenue-generating capacity often place education at a disadvantage, the Medical Center's leadership must insure the centrality of the educational mission and allocate resources to accomplish this."[106] In 1994, an Office of Medical Education was established. According to the prevailing consensus, "departmental sovereignty no longer dictate[d] the curriculum." Rather, it became an "integrated, coordinated, school-wide effort."[107] Such coordination, in fact, was driven by the goals of the GPI grant which was awarded to UMMS in 1994 after a two-year planning grant that began in 1992. Curriculum revision thus converged with planning for the GPI and a concerted effort was made to enhance student exposure to the core elements of primary care. The main features of the new curriculum, which was implemented in 1996, were a sizeable increase in hours devoted to "active learning," such as labs or small group sessions; an emphasis on problem-solving, though "problem-based learning" did not structure the curriculum as a whole; an effort to insure that the subject matter of the basic

science courses was linked meaningfully to that of the clinical problem-solving components of the PPS course; emphasis on ambulatory care; and the inclusion in regular coursework of interdisciplinary subjects such as bioethics, preventive medicine, and medical communication. An Office of Ethics directed by Marjorie Clay, Ph.D., was first started in 1992 and became a part of the Office of Medical Education in 1994, facilitating the inclusion of bioethics across multiple courses and all four years. Building on the standardized patient program already in use, objective structured clinical examinations, or OSCEs, were incorporated into the curriculum in 1993 to test clinical skills, communication skills, and diagnostic reasoning. In 1995, a multi-station OSCE exercise was implemented as an "End-of-Third-Year" assessment tool.[108] So-called "orphan" topics such as managed care, communication skills, domestic violence, human sexuality, women's health, multiculturalism, professionalism and geriatrics were introduced to the curriculum through interstitial courses (originally known as interclerkships), as well as through electives.[109]

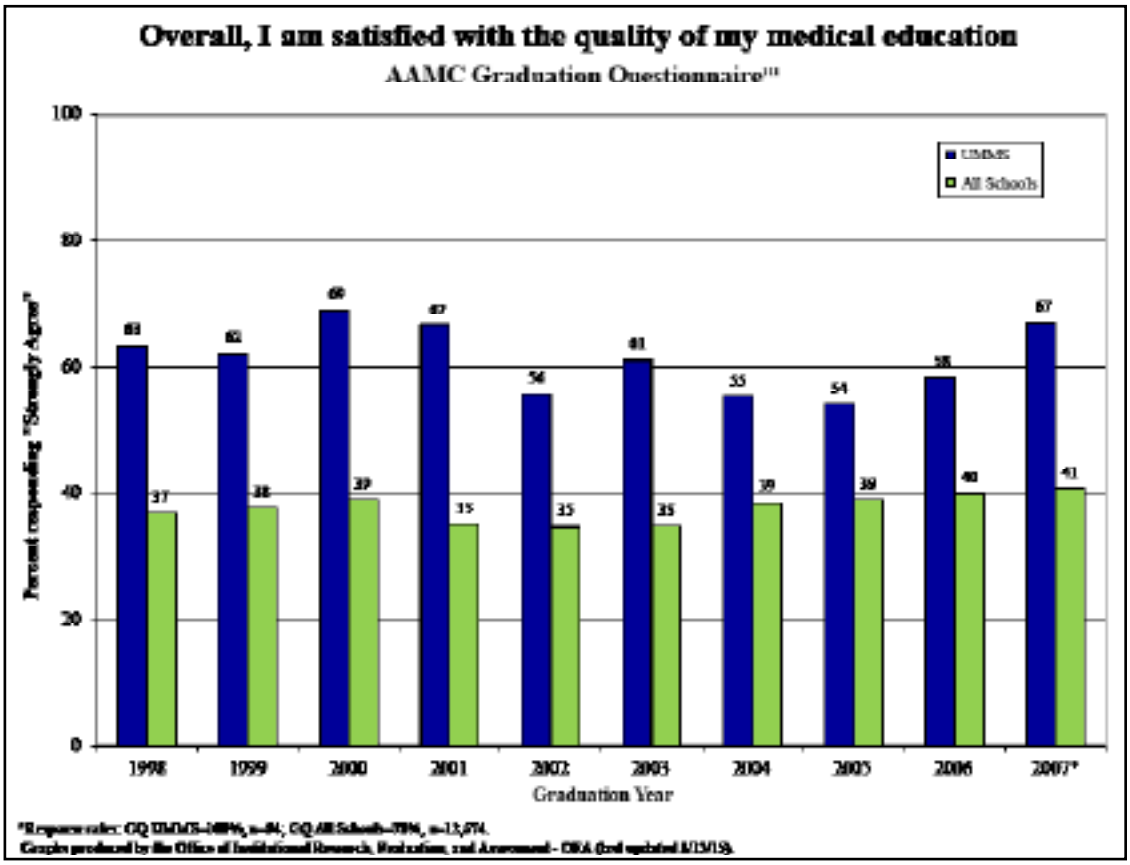
One interesting innovation, designed to convey the nature of continuity of care, especially care of the whole family, was the development in 1995 of a new curricular module known as the "Standardized Family." The hypothetical "McQ" family was developed by Michele Pugnaire, M.D., and colleagues to teach principles of ambulatory care in a non-clinical, standardized setting. Emphasizing clinical problem-solving, the module employed a hypothetical "genogram" specifying basic clinical and psychosocial elements of each member of the "McQ" family. A sample "genogram" looked like this:

<u>Genogram</u>:

Ed—died age 50, CAD, alcoholism
<u>Esther—80, mild CHF</u>
Mary—55 (daughter of E & E), part-time nurse's aide, post-menopausal, abnormal mammogram

Mike—55, brake press operator, smoker, hypertension, hypercholesterolemia
John—35 (son of M & M), Supervisor, alcoholism, low back pain
Jane—35, part time keyboard entry, unplanned pregnancy, Rh negative
Karen—15, UTI, contraception
Kevin—10, Asthma
Keith—infant, breast feeding

Other aspects of the module included "specific managed care insurance plans for each family member; a set of office records for each member for the preceding five years; student interviews with standardized patients representing a family member; multiple 'encounters' with each family member; an end-of-clerkship OSCE with one family member." The standardized family was one of the outgrowths of the GPI that had a broad impact on the curriculum. Although it was initiated as part of the required family medicine clerkship, after a few years it was also introduced into the pediatrics and general internal medicine clerkships.[110]



Student satisfaction was generally high. By 2005, Chancellor Lazare could proudly report that, "During the past 11 years, UMass Medical School has enjoyed an average ranking of 5th in the nation in primary care education according to *U.S. News and World Report.*"[112]

Medical Education since 2005: LInC, Global Health, and Learning Communities

Medical school curricula are rarely static documents. Changes occur constantly, even if they are modest enough to be absorbed into an ongoing educational structure. For example, around the turn of the 21st century, improving the clinical competency of medical graduates and residents became one of the more pressing concerns of American medical educators. Reports such as the Institute of Medicine's *To Err is Human* (2000) and *Crossing the Quality Chasm* (2001) sparked an interest in competency-based education for residents and medical students.[113] At UMass, a new curriculum framework, approved in 2004 and implemented over the next seven years, stressed six competencies: the physician as "Professional, Scientist, Communicator, Clinical Problem Solver, Patient and Community Advocate, and Person."[114] According to the school's self-study for the LCME review in 2004, "by the end of Year 4, students have received 195 hours of instruction specifically addressing the medical consequences of many societal problems that students will confront as practitioners: domestic violence (child, partner, elder abuse); underserved populations; disability (mental or physical); medical ethics; child abuse; HIV/AIDS; medical economics; sexual violence; substance abuse; and violence."[115]

Yet gaps in educational coverage remained. Nor had the problem of excessive lecture hours been resolved. A student satisfaction survey from

2002-2003 revealed a fair degree of frustration. With 58% of the student body responding, a "representative sample" described the school's positive characteristics as "collegial," "friendly," "nurturing," "warm." One student wrote, "The faculty is so warm. A LOT of the students here are very kind, down-to-earth people." The quality of teaching received highly positive responses. Yet, when asked what required improvement (in addition to the food at the hospital cafeteria), one respondent summed up the students' overall criticisms by writing, "Less lecture time, and more clinical correlation or integrating basic science with clinical situations." Or, as another exasperated student wrote (this was only a fraction of the entire comment):

> Spend a week at the beginning of each block teaching us the basics in all the areas that we'll be covering. I guarantee it will pay off. Also, TEACH LESS. I know it sounds absurd, but realize that medical students have a finite amount that they can learn. I have no idea what the really important information is from any of my courses. Every time a physician stands up in front of the classroom he/she should ask, 'What are the three things that medical students should know, so that when I see them on the wards next year, they are easy to teach, and they won't put my patients in danger?'[116]

In 2005-2006, a full restructuring of the curriculum was begun. In principle, the goals of the new framework resembled those of the curriculum implemented a decade earlier, in 1996: "a comprehensive basic and clinical science integration with shared course leadership representing basic and clinical sciences and multiple specialties." What was ultimately called the "Learner-centered Integrated Curriculum" (LInC), made a number of far-reaching changes. For one, heavy emphasis was placed on peer mentoring and teaching, on enhanced student responsibility for learning through "directed preparatory exercises," capstone projects to promote scholarship and "lifelong learning," "learning communities" to nurture communication and mentoring among the

different classes and between students and faculty, and, finally, community engagement. By "community," it should be emphasized, UMass students and faculty focused their attention on underserved communities in Worcester itself; they also generated equally vibrant enthusiasm for global health projects.[117]

Of these many initiatives, two, the burgeoning of community and global health programs and the creation of "learning communities" (LCs), seem to exemplify the culture of UMass Med in the early 21st century. From 1996 to 2000 UMMS piloted a multiculturalism two-year track for preclinical medical students, the "Global Longitudinal Pathway," with both domestic and international "immersion experiences with multicultural populations." Students who elected the program were assigned to a local family who spoke the language the student was trying to master, took a six-week language immersion program in another country, and in their second year, participated in a community project such as school-based HIV education, free clinics, flu shot programs, mentoring programs, soup kitchens, family mental health support, or advocacy for abused children. This global health track augmented the students' understanding of the challenges faced by non-English speaking newcomers.[118]

The Global Longitudinal Pathway evolved in surprising ways into a global health project undertaken initially by Michele Pugnaire, M.D., in 2003. Pugnaire, a family physician who was at that time the Vice Dean for Undergraduate Medical Education and is currently Senior Associate Dean for Educational Affairs, decided to join a weeklong medical mission organized through a church in her town of Sterling, Massachusetts. The Good Samaritan Hospital Mission in La Romana, Dominican Republic (DR) collaborated with the

Michele Pugnaire, M.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

Haitian Baptist Church to provide Haitian migrant workers on DR sugar cane plantations and their families living in plantation settlements known as "bateyes" (pronounced "bat-ays"—the singular form is "batey") access to medical care. Bateyes, in Pugnaire's words, are "makeshift communities and villages on sugar plantations...and the people who live there are Haitian migrant workers [with] a lot of profound poverty, poor access to care, and poor health literacy." Some of the bateyes are geographically isolated, exacerbating these conditions.[119]

Pugnaire's work with the bateyes in the Dominican Republic intersected with the interests of some UMMS medical students. Olga Valdman, M.D., personifies the evolution of the program. Currently a family physician working at the Family Health Center of Worcester and director of a global health fellowship there, Valdman was a first-year student in 2004. She and her family had emigrated from Russia when she was a teenager in 1996. While at UMass Med, she became deeply interested in global health. Valdman remembered that, as a new student, the community health clerkship, which became the population health clerkship and was part of year 1 (now it is in year 2), "defined my time in medical school." She spent those weeks focused on refugee health, working for Catholic Charities to help resettle Hmong and Liberian refugees in Worcester. Valdman "got really connected with a family and started helping the children with schoolwork..." She spent the rest of her first year tutoring that one family. Valdman traveled to Nicaragua during the summer between her first and second years to learn Spanish and to learn about "providing medical services in an international setting." When she returned, she and other students resurrected UMMS' international health student interest group. They were trying to figure out where they could travel and actually "do something."[120]

At that point, Valdman attended Pugnaire's lecture on her experiences in the Dominican Republic. Valdman thought this could be the right model for

the students. “We didn’t want to drop into the middle of nowhere. We wanted to be part of an organization.” Equally important, it seemed like a project that was managed by a local organization, “which was really important to us…because of sustainability and ownership on the ground.” Dr. Pugnaire invited them to join her group. Unfortunately the students could only travel together during their one-week spring break and the group from Sterling had already arranged for different travel dates. Valdman and her classmates then contacted the Good Samaritan hospital director in La Romana. He recognized the potential of having medical students working with his staff. With his assistance as well as help from UMMS faculty such as Drs. Godkin and Pugnaire, Valdman and her fellow students successfully raised the funds, organized the medical shipments, and coordinated travel plans for eight medical students (4 first-year and 4 second-year students) and two spouses to travel to the Dominican Republic for a one-week “immersion experience” on the bateyes. Initially they had no on-site faculty advisors either from UMMS or from the physicians in the Dominican Republic. Their ministrations were limited to dispensing vitamins, Tylenol, Advil, creams for skin rashes, or the significant decision to drive a patient from a batey to the hospital. They made a good start, did no harm, and were in fact welcomed back the next year. By then, the group included 25 students and several faculty members. As Valdman recalled, “From there on, the program kind of exploded.”[121]

By 2006, Pugnaire decided that the UMass contingent should travel under the sponsorship of the school rather than through the Baptist church mission. Under school sponsorship and with Pugnaire as the faculty leader, students from all four years may now be found participating in the Dominican Republic initiative.[122] By 2014, they had moved away from what Pugnaire characterized as an:

> in-and-out, rapid fire, clinic model, where we may or may not be

> making long-term change, to adopting several of these bateyes, these villages, and going to the same ones time and time again, and doing capacity-building and community engagement. Because most of the problems that we address medically could be prevented with better social support, clean water, education, that sort of stuff.[123]

A second and more thoroughgoing innovation, establishing "learning communities" (LC) at UMMS, developed out of a desire to improve the mentoring available to students. By 2009, when learning communities first began at UMass, 18 medical schools out of 124 in North America had established such a program. The University of Missouri-Kansas City College of Medicine was the first to do so in the early 1970s; in New England, Harvard was the first, in the late 1980s. The majority of programs, however, began after 1995. Among the schools surveyed in 2009, developing academic and social "support networks" for medical students were primary goals of the majority. And so it was at UMass. In 2002, Michael Ennis, M.D., a family physician at the medical school with a long history of involvement in undergraduate medical education and medical advising, was named Assistant Dean for Student Affairs/Advising. Ennis was raised in the South Bronx before a scholarship to boarding school propelled him toward higher education. A tall, rangy man with close-cropped hair and an indelible Bronx accent who often bikes to work, Ennis is renowned among students for a lecture to the incoming classes titled, "Worcester: Paris of the Millennium," featuring restaurants, beer joints, and other, useful local lore. A respected colleague and teacher, he found he could use his own life experience effectively to help students who were struggling.[124]

Michael Ennis, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts)*

Ennis discovered LCs while he was trying to improve the student advising

program at UMMS. "I learned that part of the model of learning communities was a very sort of robust, in-depth mentoring system. And then as I looked into it more, and looked into other schools that had learning communities, this seemed to be a recurrent feature. So I thought to myself, 'If we're going to get a better advising program, maybe getting learning communities is the way to do this.'" Michele Pugnaire's office funded his attending a national "Learning Communities Institute" along with two students who became strong advocates of the program. In Ennis's words, "they were like zealots about this, and did an amazing job talking about it at key committees...And this dovetailed with what was called the CIP, Competency Implementation Project, which was the precursor to the LInC..." As Ennis explained, learning communities have, "three legs. We think of it as a tricycle...curriculum and mentoring and student community." [125]

Directed by Ennis and David Hatem, M.D., a general internist with longstanding interests in literature and medicine as a component of medical humanities, at UMMS the LC structure carries a lot of the weight of the preclinical course work through the "Doctoring and Clinical Skills" course (formerly known as "Physician, Patient and Society"). As Dean Terry Flotte stressed, "we put together a learning community program that was very robust... there's significant curriculum in our learning communities, appropriate and attuned to the things that can best be done in that setting." The curriculum component of the LCs incorporates physical diagnosis, professionalism, communication, and ethics. In addition, as Dean Flotte noted, "it's had a strong service learning [component]."[126] This curriculum is taught not only by the 20 mentors chosen to oversee the learning communities, but by other faculty who are brought in to teach. Each LC is assigned a librarian who works closely with the students. A key element of the program's success, however, is development of the mentors to be effective as both teachers and mentors. While there are no

quotas, LC mentors tend to divide evenly between generalists and specialists. The LC directors share the duties of curriculum planning and training of the 20 mentors, as well as arranging for guest speakers for the mentors' classes, such as the head of the Center for Academic Achievement or of the Student Mental Health Service. The learning communities, in Dr. Ennis's view, are a logical outgrowth of a competency-based curriculum. They provide "a setting in which competencies, like professionalism and the physician as person, could be assessed and measured by LC mentors where under the previous advising system, the mentors couldn't possibly attest to a student's competence in that way..."[127]

At UMMS, the students chose to name their learning communities "houses." As Mike Ennis explained, "I think it had to do with *Harry Potter,* like they're all of that generation, they all read *Harry Potter*...rather than like at a lot of other schools, [where] they're called 'colleges' or 'societies.' But we're UMass, so we're less formal. They call them 'houses' here. And then they named them after local Worcester neighborhoods and landmarks, and I thought that was really nice. And they began to draft their own constitution."[128] The five houses, Blackstone, Burncoat, Kelley, Quinsigamond, and Tatnuck, are recognizable sections of Worcester. The houses, individually and together, undertake social events, career-development events, community service projects, and publish occasional newsletters about their doings. Inter-house competitions have not been uncommon. Building on the opportunity provided by the learning communities and by the deliberate decision to co-locate the LCs and the interprofessional Center for Experiential Learning and Simulation (iCELS) in the new Albert Sherman Center in 2013, interprofessional learning experiences linking medical students to nursing students, especially those in the Graduate Entry Pathway (to be described below) also have become a feature of the new curriculum.[129]

From Affirmative Action to Diversity and Equal Opportunity

Underrepresented Minorities

In spite of its public-spirited mission, UMass-Worcester made only halting progress toward gender, racial, and ethnic diversity in its first few years of existence. To put the matter in a national perspective, it is helpful to note that a dearth of minority medical students nationwide had been the unfortunate norm since the 19th century. In 1847, David J. Peck, M.D. became the first African American to graduate from a U.S. medical school, Rush Medical College in Chicago. The first African American woman medical graduate, Rebecca Lee, M.D., received her degree from the New England Female Medical College in 1864. According to historian Darlene Clark Hine, by the end of the 19th century, 909 African Americans, of whom 115 were women, had received medical degrees from U.S. medical colleges. By 1920, approximately 3950 African Americans were listed as physicians by the U.S. census, less than 1% of American physicians.[130] Despite the advent of the civil rights movement in the 1950s and the passage of civil rights legislation in the mid-sixties, the percentage of African American medical graduates in the U.S. continues to be low.

Underrepresented Minorities as a Percentage of U.S. Medical Graduates

	'71-72	'81-82	'91-92	'01-02	'11-12
African American	2.4%	4.8%	5.3%	6.9%	6.7%
Other Underrepresented Minorities	.3%	4.1%	5.9%	7.3%	10.6%

The largest gains were made by students of Hispanic ethnicity, who alone

comprised 7.4% of U.S. medical graduates in 2011-12.[131]

UMass Medical School was thus not exceptional in its low enrollment figures for students from demographically diverse backgrounds. As mentioned toward the beginning of this chapter, UMMS' first entering class contained neither students of color nor women. In response to a sharp inquiry from the NAACP, Dean Soutter told the university Trustees that, "it had been discovered last year that there were no black applicants for the medical school. The Student AMA had been contacted and asked to provide names of possible applicants for admission. Only 10 students were listed for Massachusetts; all of these were contacted and, of these, one applied but did not meet admissions standards." Soutter hoped for "improvement in the situation in the future."[132] When the medical school's minority recruitment yield did not improve, the Dean received a rebuke from the state Secretary of Educational Affairs, Joseph Cronin. Cronin wrote, "My office is disappointed with the UMass Medical School record in recruiting and attracting minority students. I urge you to take action on a series of recommendations initiated in discussions with you this summer by Janice Reynolds, equal opportunity officer, on behalf of the Governor [Francis Sargent] and myself."[133]

The University's president finally intervened directly, recommending that the Trustees approve a policy that supports explicit procedures and instructional programs that would make possible the admission and, ultimately, the successful graduation, of minority or economically deprived applicants. The Trustees agreed on the grounds of not only current U.S. federal guidelines, but, "simple justice based upon an intelligent and imaginative grasp of the very real needs of minority and other people to have their own doctors and of young people to seek medicine as a natural and normal choice of a career…" They added that this would "enhance the professional quality and distinction" of the medical school.

In a progress report, Dean of Students Richard Saunders explained that although the school had accepted a "small number of minority students," all had chosen to attend "more prestigious" schools. He noted that the pool of minority medical school applicants in Massachusetts was small and that the medical school's lack of robust financial aid made matters even more difficult. He added that the faculty had affirmed their support for the Board of Trustees' affirmative action policy, namely, "That the Trustees approve the admission of a group of applicants who, because of reasons of economic status or minority group status, have been educationally deprived and who, therefore, appear to be less well-qualified academically than some other applicants. It is presumed that most, but not necessarily all, of this group will be members of racial minority groups."[134] By the following year, 1974-1975, a faculty-run Affirmative Action committee had been established. By then, a total of nine minority students were enrolled (out of a total of 268), six in the current first-year class. Eight out of the nine were receiving substantial financial aid.[135]

With the formation of a medical school Committee on Academic Support Services in September 1975, an organized effort was begun not only to recruit promising minority and economically disadvantaged students but to begin cultivating such students while they were still in high school and college. The committee also provided faculty and peer tutorials for students facing academic difficulties in the preclinical courses. Sometimes, all that was needed was a change of study habits or locale, sometimes a change of living arrangements. In "extreme cases," a student might be advised to decelerate his or her program to graduate in five or six years instead of the typical four.[136] Since 1976, an Assistant Dean for Minority Affairs was assigned to work on recruitment of "groups under-represented in medicine," which by that time, according to the AAMC, no longer included "Asian Americans" or "Cuban Americans." It's also worth noting that in

1978 the UMass Board of Trustees amended the system's affirmative action policy to include those they classified as "the handicapped." (Non-minority women students, though still considered underrepresented, did not receive "any special consideration on scholastic grounds [because] their membership in a minority group has not usually produced any scholastic deficiency.") By 1977-78, minority students accounted for 8% of 367 students in all four classes; by 1981, however, minority enrollment at the school for all four classes had dropped to 2.66%, well below the 6% minority population for the state, and well below the national average.[137]

Organized mentoring of matriculated students from minority groups was one approach to increasing graduation rates. For example, Danna Peterson, M.D., who was recruited in 1978 and became the residency director for the department of Anesthesiology in 1979, played a leading role for many years in the Committee on Equal Opportunity and Diversity (CEOD) and from 1997 through 2011 served as Assistant Dean for Student Affairs/Diversity Support. In the latter role, Dr. Peterson was the faculty advisor to the Student National Medical Association, originated Careers in Medicine workshops, and co-chaired the Minority Academic Advancement Committee of the CEOD. After 2011, Peterson's activities on behalf of diversity and inclusion were folded into the portfolio of the Associate Vice Chancellor for Diversity and Equal Opportunity, Deborah Plummer, Ph.D.[138]

But recruitment demanded a special focus. In 1987, the campus director of Affirmative Action, Rawle Garner, reported on ways that a newly approved, comprehensive plan would address the matter of racial and ethnic underrepresentation in "health and science" professions. Beyond programs conducted by the Office of Minority Affairs to assist potential applicants and matriculated students, the plan would attempt to enlarge and strengthen the applicant pool through a Summer Enrichment

Program on campus for college students and a High School Health Careers program that would offer summer courses in "mathematics, biology, chemistry and laboratory procedures, verbal skills, reading, writing, and test taking." By this time, too, campuses including UMass-Worcester had begun to contend with issues of inclusiveness and fairness for disabled and for "older" employees. By 1990, James Wells, the UMMC Associate Vice Chancellor for Equal Opportunity, could report, "the representation [of minority students] at the Worcester Campus is at 9%. The black representation of medical students is 5%." The problem area with respect to both minorities and women, he continued, is in the "upper level positions," that is, faculty, staff, and administration.[139]

In an effort to focus attention on recruitment of minority students while maintaining current efforts to address the concerns of women and other underrepresented faculty (of which, more below), in 1989 UMass Medical Center hired Deborah Harmon Hines, Ph.D., an assistant professor of anatomy at Meharry Medical College, as an associate professor of cell biology and the Associate Dean for Minority Affairs. (In 2008, Hines was named Vice Provost for School Services.) Dr. Hines understood the problem to be well beyond successful recruitment of medical school applicants, something her predecessors also recognized but did not have the resources to address. As she explained,

> We only accept Massachusetts residents. African Americans [were] only 6% of the population. Latinos, at the time, were less than 3% of the population. Massachusetts boasts the highest high school graduation rate in the country...I tracked these data. The high school graduation rate for African Americans has gone between 60 and 65%. For Latinos, it was between 50 and 55%. So if they don't graduate from high school, they certainly can't come to this medical school![140]

Hines also recognized that relatively few economically

disadvantaged students of any ethnicity or race were attending UMass-Worcester in *any* of its three schools. More fundamentally, opportunities existed to develop much greater collaboration and trust between the medical school and the Worcester community, especially with its school system. She established the Worcester Pipeline Collaborative (WPC) for the elementary schools, middle schools, and high schools in the north quadrant of Worcester, "to encourage the kids, first of all, to stay in school, graduate from high school, go to college, and then either apply to the medical school, the graduate school, or the nursing school, or come here to work." UMass scientists go into the schools and do experiments and give talks about the "excitement of why they chose careers in science." And often the high schools' AP biology and chemistry labs are held at the medical school. "So," in Hines' words, "it was taking the institution outside of its walls, and also then bringing people in, so that there was a two-way street."[141] Since 1996, Hines' Department of School Services has included an Office of Outreach Programs directed by Robert Layne, which oversees the WPC as well as the Summer Enrichment program and the High School Health Careers program. Of the 1443 students who participated in these programs between 1990 and 2011, 317, or 22%, completed a four-year college degree.[142] With respect to minority recruitment to the Graduate School of Biomedical Sciences, in 1993 Hines, as co-Principal Investigator with Janet Stein, Ph.D., a professor of cell biology, initiated an NIH-funded Summer Undergraduate Research program to bring in undergraduates from underrepresented

Deborah Harmon Hines, Ph.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

minorities and underserved communities from across the U.S. Students were offered a structured research experience with a scientific mentor for 10 weeks during the summer. (More recently, Brian Lewis, Ph.D., associate professor of gene function and expression has co-directed the program with Hines.)[143]

Recruitment of underrepresented minority students to UMass Medical School remains a challenge. In recent years, UMMS received about 80 applications from underrepresented groups per year. Of those, according to Hines, about "half have GPA and MCAT scores that merit reading the application...And only half of those have MCAT scores and GPAs that are at the mean of the students that we normally accept. So [we're] going from 80, to 40, to 20." UMMS will accept all 20 but, "We'll be lucky if we get 10 of them to come here."[144] Figures in the table of student characteristics cited earlier in this chapter reveal that the average number of students of underrepresented minorities remained low between 2001 and 2007, averaging five to six per year.[145] In 2012, UMMS launched the BaccMD medical school prep program. Its purpose is to identify "talented students who are considering careers in medicine" from the undergraduates attending any of the four undergraduate campuses of the University of Massachusetts. Students apply during their sophomore year of college for a three-year program, including summers, to prepare them to "apply and succeed at UMMS." In the process, these prospective students meet many members of the UMMS faculty, thus developing a support network for their years as med students. In 2015, the first three BaccMD students began medical school at UMMS.[146]

With respect to minority faculty recruitment, as of March 1976, total faculty from underrepresented groups (including Asian Americans and women),

numbered 26 out of 131, or about 20%. Of these, 18 were women faculty, or 14% of the total faculty; the remainder consisted of six Asian American faculty and two faculty of either Hispanic or African American origin. One professor in the Physiology department, the late John Fray, Ph.D., who was born in Jamaica, received a Ph.D. from Harvard in 1975, and was recruited to UMass Medical School in 1978, remembered that, "It was not easy for a black man in those days to thrive at UMass." He gratefully acknowledged his colleagues, Sandy Marks and Maurice Goodman, for making things "bearable." In 1994, Professor Fray founded the Thoth Program for Science Education Training in Jamaica to promote education in science and technology in Jamaica, continuing that work after his retirement from UMMS in 2003.[147] Since 1996, a Faculty Diversity Scholars Program award, administered by the Vice Provost for Faculty Administration, has been a part of UMMS's efforts to promote the recruitment of faculty from underrepresented groups for the School of Medicine, the Graduate School of Biomedical Sciences and the Graduate School of Nursing. In addition, in 2003, Marian Wilson, Ph.D. became the first Associate Vice Chancellor for Equal Opportunity. She was succeeded by Deborah Plummer, Ph.D., Associate Vice Chancellor for Diversity and Equal Opportunity in 2009.

John Fray, Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Gender Equity

From 1849, when Elizabeth Blackwell became the first woman in the

Anglo-American world to receive a medical degree, women have campaigned for equality of opportunity in the medical profession—for the opportunity to attend medical school, to practice medicine, and to become members of medical school faculties. UMass Medical School opened just at the time that the numbers of women medical students in the U.S. began to rise, an increase that started in the late 1960s and accelerated from the 1970s through the 1990s. In 2014, women comprised 47% of all medical students in the United States according to the AAMC. The proportion of women in practice has also steadily increased, but does not yet approach parity with men. Currently, women comprise about 33% of practicing physicians, according to the Kaiser Family Foundation. In 2014, 38% of full time faculty in academic medicine (whether physicians or otherwise) were women. They comprised, however, only 22% of tenured faculty. Twenty-one percent of women faculty members were full professors. Sixteen percent of deans and 15% of department chairs in the U.S. in 2014 were women. The AAMC began to note the increasing presence of women in the mid-1970s and by 1978, the majority of AAMC-member schools had appointed Women's Liaison Officers (WLOs) in conjunction with the AAMC's new Women in Medicine program. By 1993, nearly half of all medical schools in North America had created programs, offices, or at least a committee on women in medicine.[148]

At UMass Medical School, women were to be found in the upper levels of the faculty early on. Helen Padykula, Ph.D. was hired as the chair of the Department of Anatomy as early as 1976. That same year two other women joined the school as the first women full professors: Ruth Bulger, Ph.D. (in Pathology) and Barbara Waud, M.D. (in Anesthesiology and Pharmacology). Lynn Eckhert, M.D. became the first chair of a clinical department, Family and Community Medicine, in 1984. Yet over the next decade, women faculty began to suspect that, generally speaking, they were moving on a slower track than their male

colleagues. As Isabelle Joris, Ph.D., who arrived in 1973 from Switzerland as an instructor in Pathology and became an associate professor, observed, "In the U.S., over time, I noticed that the notion that men were able to 'go up the ladder' faster than women became common and discussed more widely everywhere." In response to this (justified) sense of inequitable treatment, UMMC women faculty in 1992 created the "Women's Issues Committee" (WIC). The committee's first co-chairs were Diana DeCosimo, M.D., associate professor of medicine, and Karen Reuter, M.D., associate professor of radiology and obstetrics-gynecology. In 1994, Linda Pape, M.D., a cardiologist and associate professor of medicine and Mary Costanza, M.D., an oncologist and the first woman division chief, became the school's WIC chairs and worked long and hard over the next few years to make substantive changes in the climate for women at the medical center.[149] In 1994, too, Dr. Pape was named the first Women's Liaison Officer to the AAMC Women in Medicine program.[150] According to its bylaws, the committee's purpose was "to serve in an advisory capacity to the Chancellor/Dean regarding issues and activities relevant to women and families and to have direct input in the following four areas: "Institutional planning...affecting hiring...; search committee representation; compensation; promotion and tenure; maternity, paternity, adoption, and family leave; and publications review." Specifically, WIC subcommittees addressed salary equity, tenure and promotion, sexual harassment, and women's health.[151]

Dr. Joris recalled that, "One of the first topics [WIC] looked into was possible disparities in the pay of women faculty vs. men faculty." In fact, several months after the committee's formation—with behind-the-scenes prodding by senior women faculty—Provost Michael Bratt, Ph.D. sent a memo to all department chairs and upper level administrators. It began as follows: "As I mentioned at the last two Chancellor's Advisory Council Meetings, there has been

an increasing rumbling below the surface about perceived gender and minority salary inequities." The Lazare administration had agreed to form a "Gender and Minority faculty Salary Equity Task Force," which in its initial, pilot phase was chaired by Lynn Eckhert.[152] As gently as possible, Bratt now exhorted the medical center's department heads to:

> carefully reevaluate the criteria you use in establishing these salary levels, carefully scrutinize these data in the context of that reevaluation, and then make your FY94 salary recommendations in the context of that reevaluation...I am confident that the combination of these convergent processes and the good will you have displayed in the past will allow all concerned to have renewed confidence not only in the appropriateness of our processes, but also in the fairness of their outcomes.[153]

The salary survey yielded disturbing results. As Bratt reported,

> Based on its analysis of the data provided in March of 1993 the Task Force questioned the salaries of 49% of all women on the faculty as possibly low relative to those of their male colleagues. Although some of these were found to be appropriate, and were appropriately raised when the faculty member took on additional responsibilities or received a grant, <u>a large fraction of salaries the Task Force identified as apparently low, were determined to be inappropriately and inequitably low, and were subsequently corrected</u> [emphasis in original].[154]

Almost half of the women whose salaries were flagged as potentially low received "Task Force Identified/Generated Equity" increases, or about 25% of all women then on the faculty. Just as important, measures were taken to institutionalize mechanisms for "continual monitoring" of salary equity for the future. By the time a second salary survey was completed in 1997, only 12 salary "adjustments" were deemed appropriate and necessary.[155]

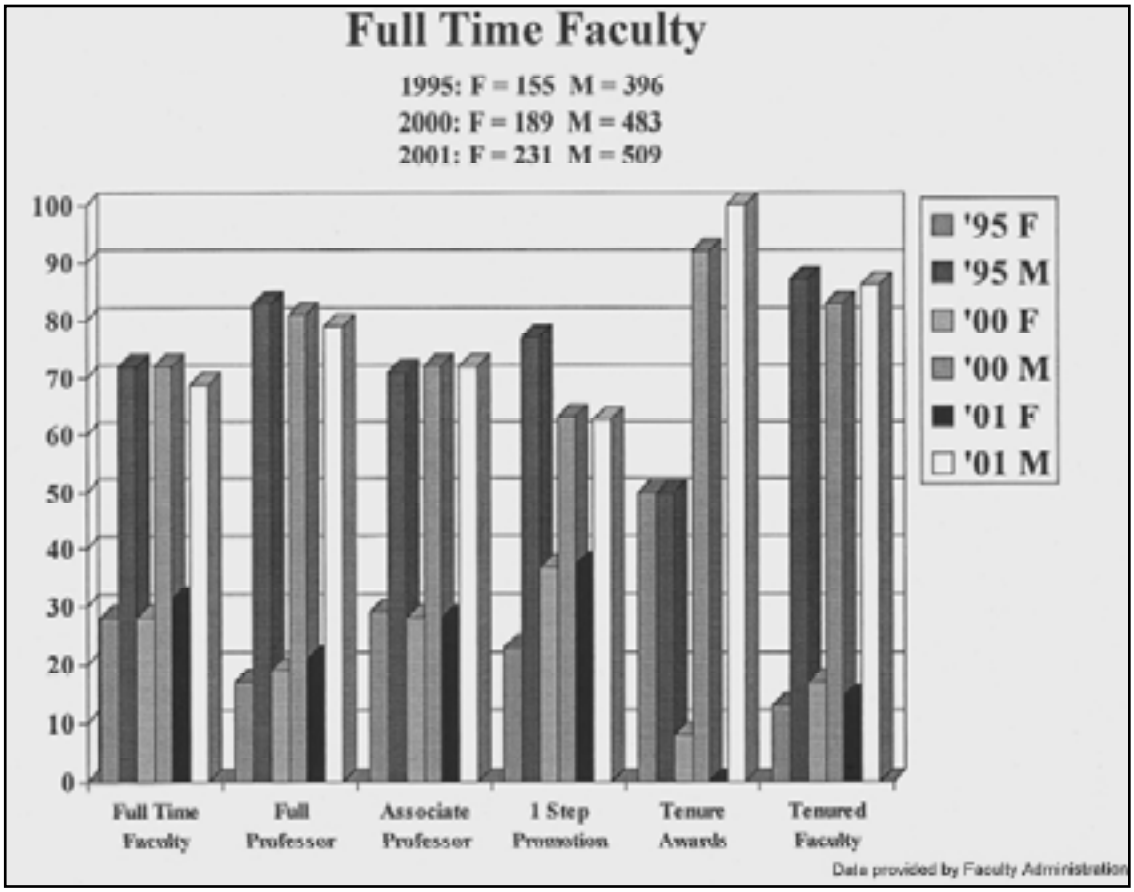
As the most egregious issue—salary inequities—was addressed, the subtler and less tractable issues of the institutional climate towards women

(and minorities) came under closer scrutiny. A second major undertaking led by the Equal Opportunity Office and the WIC, a "Gender Equity Survey" that was begun in 1994, was intended to assess the gender climate at UMMC beyond the single issue of equitable compensation. Bratt observed that "...the overall poor representation of women in leadership roles clearly contributes to a lower average compensation level for women." Thus, the Board of Trustees agreed to a medical school-generated proposal to revise the campus' academic promotion policy to enable promotion on a non-tenure track for faculty who contribute significantly in teaching, clinical service, and other activities that fall outside the well-defined advancement pathway for researchers. (Indeed, the slower rate of advancement by women compared to men faculty at UMMC documented by the report was more pronounced among the clinical departments.) Finally, a "special effort" was begun to appoint more women faculty to UMMC standing committees and other leadership positions. Not coincidentally, in 1996 Cheryl Scheid, Ph.D., a professor of physiology, was designated the first Vice Chancellor for Faculty Administration. Over the next decade, Scheid and her office, with active collaboration from the WIC, developed many of the mechanisms that have continued to guide policy regarding the issues of promotion, tenure and, more generally, equitable treatment of faculty.[156]

WIC also sponsored speakers to address issues of professional development, leadership, and the role of women in medicine, inviting, for example, Janet Bickel, head of the AAMC's Women in Medicine program, in 2001. Another of the WIC's initiatives, establishing a robust place for education about women's health in the curriculum, was spearheaded by Judith Ockene, Ph.D. Throughout 1995 and 1996, Ockene chaired a women's health task force that worked to establish a presence in the curriculum for the study of women's health, whether in the first and second year "doctoring" courses, or in electives

and interclerkships. Ultimately, one of the task force members, Julie Jonassen, Ph.D. of the physiology department, did establish women's health courses as part of the interclerkship program described earlier in this chapter.[157]

By the late 1990s, the core members of the WIC concluded that the committee would profit from a modest restructuring. Indeed, the progress of women faculty appeared to have stalled, as the following table shows:



In 2000, with Phyllis Pollack, M.D., a pediatric cardiologist, and Julie Jonassen as co-chairs, the renamed "Women's Faculty Committee" added several programs to its portfolio—with support from the Office of Faculty Administration and the Equal Opportunity Office—such as a program for mentoring junior faculty, an awards luncheon, and a successful application to the Joy McCann Foundation to establish a Joy McCann Professorship for Women in Medicine. Funds from the McCann professorship support both the recipient of the two-year endowed

professorship, who undertakes a project in support of women faculty at UMMS, but also the mentoring program, something with which Judy Ockene became closely identified.[159] (Linda Weinreb, M.D., professor of family medicine, held the first Joy McCann professorship.) The group also sponsors a Women's History Month lecture and a Women's Health lecture. Finally, in collaboration with Luanne Thorndyke, M.D., Vice Provost for Faculty Affairs, and the Women's Leadership Group, the Women's Faculty Committee developed a Faculty Scholars award to fund a portion of a junior faculty member's research at a point when she (or he) has encountered a time-limited but conflicting responsibility due to a family-related illness or other urgent concern.[160]

Between 2000 and 2012, the status of women faculty at the medical school assumed a distinctly upward trajectory. The Medical School began supporting the selection of a competitively chosen cadre of women faculty to participate in the AAMC's professional development workshops and the Hedwig van Ameringen Executive Leadership in Academic Medicine (ELAM) program run by Drexel University College of Medicine. Three department chairs out of 18, or 17%, were women, compared to a national benchmark of 13%. Thirty-eight percent of program directors were women; 23 women were division chiefs. One of the three deans was a woman (the Deans of the Graduate School of Nursing thus far have always been women), and two-thirds of both the Senior Associate Deans and Vice Provosts were women. Cheryl Scheid, Ph.D., Vice Chancellor for Faculty Administration from 1996 to 2006, was succeeded in that role by Luanne Thorndyke, M.D. in 2010; Judith Ockene, Ph.D. became Associate Vice Provost

Cheryl Scheid, Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

for Faculty Affairs in 1999, served as interim Vice Provost for Faculty Affairs from 2006 to 2010, and then resumed her earlier role under the new title of Associate Vice Provost for Gender and Equity. In 2012, 25% of the faculty at the rank of tenured full professor were women compared to the national benchmark of 20%. UMMS slightly exceeded the national benchmark in 2012 for full-time associate professors as well.[161]

None of this occurred by chance. Women faculty at UMMS have benefited from strong leadership and mentoring from Scheid, Ockene and Thorndyke, as well as the indispensable strong commitment to equity by the school's academic leaders. Even after Cheryl Scheid left UMMS for a position elsewhere, Judith Ockene and Luanne Thorndyke continued her initiatives by normalizing close examination of all faculty members' readiness for promotion through mentoring and regular discussion of potential candidates for advancement with department chairs. As a result, Ockene noted, "In one year, we got 10 women promoted to full professor and associate professor. And some of the chairs who I worked with said, 'I don't understand how I didn't focus on these particular individuals to be promoted'...So it worked very well."[162]

Nevertheless, much work remains to make the academic workplace attractive and equitable for young women (and young men) who are trying to balance their responsibilities to their families and to their profession. In 2014, a Diversity Engagement Survey sent to employees and students of the medical school by Deborah Plummer, Ph.D., Vice Chancellor for Diversity and Inclusion, revealed the persistence of perceived inequities. Statistically significant numbers of women faculty responded less favorably than their male peers to questions about fairness in compensation, in recognition for excellence, and in their sense of worth to the institution.[163] In 2015, Ockene sent out an email query to members of the Women's Faculty Committee, asking for their thoughts on the current and

future situation of women in academic medicine. One response typified several. Mary Costanza, M.D., professor of medicine emeritus and, previously, chief of the division of oncology, wrote:

> Put bluntly, it's time for culture change and culture change now and the Women's Faculty Committee needs to make this their priority. This is about creating a truly family friendly workplace/ community...do it for your daughters (and sons). You deserve a place to work where a parent can leave a child in safe day care, where you can nurse without searching for a private place. You deserve to work where leaving at 5 or 6 pm is the rule, where morning meetings don't begin before school starts. You deserve a place to work where life starts at home, not at the lab or the office. And your male colleagues deserve it as well...[164]

As Judith Ockene observed, "Today...we must figure out how to help families be flexible...This is about families, and family health, however you want to configure it."[165]

Perhaps surprisingly, the issue of day care at the UMass-Worcester campus was taken up as early as 1978—and not only by women faculty. The first iteration of a campus day care center was established at the Irving A. Glavin Regional Center, a facility owned by the Massachusetts Department of Mental Health that was located a few minutes from the campus by car. During the discussions prior to Board approval of the day care center for children of students, medical residents, faculty, and staff, Massachusetts Secretary of Education Paul Parks told the Board that he favored the provision of child care facilities as "essential to the opening of opportunities for women in all the professions." In 1991 the Center moved to larger quarters in Shrewsbury, and then to a house on Plantation Street that abutted the main campus. When that facility closed, several years passed before a group of faculty and students, men and women, worked successfully with the campus administration to remodel parts of the Shaw Building into a modern child care facility. The issue of child

care truly does transcend the concerns of women in the workforce; men, too, feel they have a stake in the issue, and they are correct.[166]

The Graduate School of Nursing

Founding the Graduate School of Nursing, 1965-1985

Although a school of nursing was envisioned by the school's founders, the Graduate School of Nursing was established at the University of Massachusetts-Worcester only in 1985. The first class matriculated in September 1986. The idea for a nursing program was first mentioned in 1965 by UMass Medical School Lamar Soutter, whose vision of a multi-disciplinary health sciences campus included schools of nursing, dentistry, and even veterinary medicine. But in 1965 the professional climate for nursing differed greatly from what emerged in the decades since then. For example, Dean Soutter anticipated only a four-year *undergraduate* program for nurses.

From the earliest days of professional nursing in U.S. hospitals in the late 19th century, nursing was structured mainly to support hospital administrators' and physicians' needs, with little of the professional autonomy or diagnostic skill we associate with nursing today. Although the professional identity of nursing steadily consolidated over the course of the 20th century, even in the 1960s there was no national consensus among nurses about the educational requirements for entry into practice. But, the need to advance nursing professionalism through collegiate, not diploma school, education was beginning to be acknowledged, for example in the influential Lysaught Commission Report of 1970.[167] Leaders in academic nursing, such as Dean Loretta Ford at the University of Rochester also began advocating for a new model of advanced practice nursing, specifically the "nurse practitioner." Initially this meant that many—but not all—diploma-school

educated nurses would find it necessary (and desirable) to earn a bachelor's degree in nursing. Beyond that, new master's programs for nurses would be necessary to effectuate the nursing profession's goals for advanced practice nursing, including nurse practitioners. Following national trends, doctoral programs for nurses also became available. By the time UMass opened its University Hospital in 1976, these educational trends had become compelling although, as noted in Chapter 5, Worcester itself maintained numerous hospital diploma schools well into the 1970s and 80s.[168]

The direct impetus for a graduate school of nursing at UMass, however, came from within University Hospital a few years after its opening in 1976. Locally, Worcester State College (now, University) had a successful undergraduate degree program in nursing that reduced the need for such a program at the Medical Center. Gail Frieswick, Ed.D. (UMMC Nursing Administrator, later the hospital's CEO), and Anne Bourgeois, Ed.D. (Associate Administrator, later the hospital's CNO and President) realized that patient care would benefit from encouraging nurses in central Massachusetts, and especially those already working at UMass, to pursue an advanced nursing practice degree. As the patient census and acuity of conditions increased at the hospital, it required nurses who were familiar with the latest technologies and with the sickest of patients. As Gail Frieswick recalled, "We needed nurses that had more depth than what we had from diploma programs."[169] Indeed, after the UMass hospital opened in 1976, it made its desire for baccalaureate-level nurses very clear in its hiring preferences, as Chapter 5 has already noted. It was hoped, too, that Master's degree-prepared nurses could bring the latest skills in community nursing out to regional population centers. This view was shared by the UMass-Worcester Health Sciences Task Force, which issued a report in 1980 that cited graduate nursing education as a high priority for new programs on the campus.

Working with consultants such as Lillian Goodman, Ed.D., founding chair of the Department of Nursing at Worcester State College, and nursing leaders from Yale, Case Western, UMass-Amherst and other institutions, Frieswick worked assiduously to persuade a hesitant UMMC leadership and UMass Board of Trustees to establish the school. Bourgeois concentrated on easing the doubts of the hospital's own nurses by explaining the potential benefits of moving beyond a diploma-school or even a bachelor's degree preparation. Physicians, too, had to be reassured that advanced practice nursing would be beneficial to the overall system of care. In working to reduce the animosity of the local diploma schools, another crucial issue, "Lillian [Goodman] was a major support," according to Frieswick.[170] Finally in 1983 the Board voted to establish a Master's program for nurses at UMass-Worcester, and (just in time) amended their vote on July 16, 1986 to substitute the word "School" for "program."[171]

Two additional years passed between the 1983 vote and the actual commitment of funds for space, equipment, and recruitment of faculty, students, and staff. After a national search, in which Chancellor Robert Tranquada, Frieswick, Bourgeois, Goodman, and chairs of the major clinical departments participated, Kathleen J. Dirschel, Ph.D. was named the first Dean of the GSN. Dr. Dirschel, the Dean of Nursing at Seton Hall University, had recently completed a program in Academic Administration at Harvard. Dirschel was appointed Dean in June 1985, and the planning process began in earnest.[172]

Growing the GSN—1985-2010

Founding Dean Kathy Dirschel learned quickly that there are two sides to the coin of a brand new school. On the one hand, she found a deep reservoir of good will and pride that UMass would be starting a *graduate* school of nursing,

the first in the UMass system. On the other hand, "When I got to UMass, the tiny little space they carved out [for the GSN] was kind of like a locker room; it had no furniture. We had to rent furniture!" But, the opportunities seemed endless, in Dean Dirschel's words, "to enhance professional practice so that it had a very strong scientific basis, and to strongly develop the advanced practice role...called the 'nurse practitioner' role at that time..."[173] Soon the first new faculty member, Dr. Susan Roberts, was hired and they began planning the curriculum. As Roberts commented, "We had a blank slate—what do you want to do and how do you want to do it?" Fortuitously for the UMass GSN, Boston University had recently closed its highly respected school of nursing. As a result, Dean Dirschel could hire a number of the excellent faculty who were just then looking to relocate.[174] With the first faculty, including Drs. Susan Chase, Glenys Hamilton, Carolyn Lawless, Diane Skiba, and Susan Roberts, Bourgeois and Dirschel developed a Master's in Nursing Science curriculum for advanced practice nurses. Major concentrations included Acute Care Nurse Clinical Specialist, Nurse Administrator (a joint MSN/MBA with Clark University), and Ambulatory Clinical Nurse Specialist. The school went on to introduce a track for the HIV/AIDS nurse practitioner. Dirschel herself began to practice in the HIV clinic, learning how to interview for sexual histories and practices. Carol Bova, who later became a member of the faculty and one of the first to be an NIH-funded researcher at the GSN, was also at this time beginning to develop her expertise in advanced practice HIV/AIDS nursing.[175]

Kathleen Dirschel, Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

In 1986, the first class of 30 students matriculated. At first, they could

barely find classroom space since most classrooms had been reserved long in advance by the medical school. The first graduation, which was held for the 13 students in the accelerated, one-year program, took place in the Lamar Soutter Library in the spring of 1987. In the fall of 1987, the entering class reached its full complement of 10 full-time and 35 part-time students.[176] One year later, the National League for Nursing awarded the GSN full accreditation for eight years.[177]

When Dirschel took another position in 1991, Lillian Goodman, who was on the verge of retiring from Worcester State, was invited by Chancellor Lazare to become the interim dean; in 1995 she was made permanent dean of the school, continuing in that role until her retirement in 2000. Many new programs were developed during the nine years of her deanship. Professor emeritus and associate dean Mary K. Alexander, Ed.D. emphasized that, with a small faculty during its first few years, the GSN could react quickly to changing needs; it could "turn on a dime!" For example, the Acute Care Clinical Specialist track was revised as a major in Acute Care Nurse Practitioner. Alexander remembered, "We

Lillian Goodman, Ed.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Mary K. Alexander, Ed. D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

created a program for acute care nurse practitioners in 3 months!" Subspecialties in HIV/AIDs, Cardiac Nursing, Geriatric Nursing, and Cancer Prevention were

also initiated during Lillian Goodman's deanship. In keeping with the GSN's ambitions to develop a program of nursing research, the school also launched the university's first doctoral program in nursing in collaboration with the nursing school at UMass-Amherst. (Among its earliest students was the future dean of the GSN, Paulette Seymour-Route, Ph.D.) On the occasion of the school's 20th anniversary in 2005, Dean Emeritus Lillian Goodman noted that, "The practice of nursing has changed. The advanced practice nurses, teachers and researchers who will guide these changes must be rigorously prepared in nursing programs of high academic quality...Our programs of study are designed to sharpen analytic skills, stimulate scientific inquiry and develop effective practice methods through which compassion and caring will flourish."[178]

When Dean Doreen (Dodie) Harper, Ph.D. succeeded Goodman in 2000, she was fortunate to find that both the master's and doctoral programs were well under way at the GSN. But, additional pathways remained to be cultivated. Two of these, the Worcester Nursing Pipeline Consortium and the Graduate Entry Pathway (begun in 2004), responded to an acute shortage of nurses during the 1990s. The GEP accepted individuals with bachelor's degrees (or higher) in a field other than nursing into graduate nursing degree programs. As Harper commented, "Anne Bourgeois helped me understand how we could be more in sync with the clinical system...at the bedside. We *had* to have a pre-licensure program...We were in a nursing shortage. We needed to ramp up the production of nurses [yet] we didn't produce what most hospitals wanted—RNs."[179] The GSN also created a track for Advanced Practice Nurse Education. Today, she continued, programs like the Graduate Entry Pathway

Doreen Harper, Ph.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, Universary of Massachusetts Medical School)

(GEP) are the "fastest growing cohort" in the profession. A Ph.D. program independent of the UMass-Amherst campus was approved during her deanship. It began in 2005.[180]

In 2006 Seymour-Route became the Dean of the GSN after having served as interim dean for the previous year. Under her leadership (she retired in 2015), the GSN again responded to changing health care needs by establishing a Doctorate of Nursing Practice (D.N.P.) in 2008. The school also moved far ahead in research activity and funding. Today, in Seymour-Route's words, the GSN has "numerous faculty who are continuing the model first started well before us of working on the clinical side and the academic side. Out of 25 full time faculty, we have three who have federally funded grants." Interestingly, Seymour-Route's own career path recapitulated the evolution of nursing professionalism in Massachusetts. Many of her most important professional relationships were generated during her years as a student and, later, as a faculty member at the Worcester City Hospital diploma nursing program, learning about direct care at the bedside. Yet she knew that baccalaureate training was becoming essential for nurses, and soon began work on bachelor's degree (B.S.N.) at Worcester State. In 1987 she received her M.S.N. from Boston College. At the opening of the UMass-Worcester/UMass-Amherst doctoral program in 1994, she pursued her Ph.D., graduating in 2001. From early in her career, she also held part time teaching positions at the GSN.

Paulette Seymour-Route, Ph.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

Significantly, however, all the while she pursued her interests in academic nursing, Seymour-Route held increasingly responsible and prominent

positions in successive clinical systems, and ultimately at the UMass hospital. Her experience moving from bedside nursing to the Chief Nursing Officer and Senior Vice President at University hospital helped bring the GSN full circle. The original vision of Gail Frieswick and Anne Bourgeois, namely, to establish a well-integrated clinical and academic system, thus was facilitated by Seymour-Route's own career trajectory. And this in spite of the organizational separation between the two systems in 1998, described in Chapter 5. Dean Seymour-Route in fact served on the Board of Directors for UMass Memorial Health Care.[181]

At the GSN, this vision has been allied to another imperative, interprofessional learning. In 2010 the World Health Organization published a "framework for interprofessional education." At about the same time, the Interprofessional Education Collaborative (IPEC), a non-profit consortium created in 2009 issued a set of suggested competencies for interprofessional education. The consortium represented a variety of U.S. health professions educational organizations such as the American Association of Colleges of Nursing and the Association of American Medical Colleges.[182] At UMMS and the GSN, those involved with curriculum design have acknowledged that health care professionals must work "to value, to understand, to educate and to practice in interprofessional teams while maintaining [their] own identity as a nurse, as a physician, as a pharmacist, as a social worker, but all intently focused" on the patient.[183] As Michele Pugnaire, Senior Associate Dean for Educational Affairs, observed, the GEP students "came with a bachelor's degree and they were going to get an advanced practice [nursing] degree, either a master's or, now, a doctor of nursing practice." Pugnaire added that the students—medical and nursing students—"love it. I think the reason they love it is because they, first of all, learn so much more from each other than they ever do from us. And secondly… they start out early establishing [interprofessional] relationships of trust and

respect that, hopefully, will withstand the test of time." Beyond maintaining good coordination between academic and clinical settings, this is also being realized through interprofessional coursework for medical and nursing students, especially utilizing the Simulation Center to learn clinical skills and in global health projects in the Dominican Republic.[184] Reciprocally, GSN faculty such as Seymour-Route and Associate Dean for Academic Affairs, Janet Hale, Ph.D., R.N., teach in the medical school curriculum in segments of the "Doctoring and Clinical Skills" course.

In recent years, the GSN made the decision to redirect its master's-degree programs into a track for nurse educators and a new track in population health. This decision responded to the increasing need for advanced practice nurses who will work in practice settings that incorporate community health outreach into their core mission. Primarily the GSN will focus on its doctoral programs. Even the GEP students will enter the GSN as doctoral candidates in the D.N.P. program to become nurse practitioners. In October 2015, Joan M. Vitello-Cicciu, Ph.D., R.N., previously the associate chief nurse of cardiovascular, thoracic, and surgical acute care at Brigham and Women's Hospital, was named as the new dean of the Worcester campus' Graduate School of Nursing.[185]

The Graduate School of Biomedical Sciences

Graduate education is an essential component of any campus with a serious commitment to research. Although the Graduate School of Biomedical Sciences (GSBS) came to fruition during the Tranquada years, the process began much earlier. On April 10, 1978, approximately six months before moving to the University of Texas Health Science Center-Houston, Chancellor Roger J. Bulger, M.D. wrote an emphatic letter to UMass President Franklin Patterson,

urging him to support a proposal for a "Ph.D. Program in Medical Sciences" at the medical center in Worcester. As he noted, "This proposal has received the unanimous approval of the Faculty Council and Executive Council of the Medical School." Bulger made sure to emphasize that the faculty came here,

> ...expecting to be able to teach in a graduate program and eagerly await its arrival. It will not only contribute further to the intellectual enrichment of the campus, but this enrichment itself becomes an invaluable attraction in our efforts to recruit first-rate clinical faculty...To put it another way, it is doubtful that high quality faculty would be attracted to an institution which does not have the intellectual ferment and excitement generated by the kinds of scholarly activities which characterize graduate education.[186]

Faculty researchers were beginning to lose patience. The presence of graduate students for their labs, no less than in their classes, was sorely missed and anxiously awaited. On June 7, 1978 President Patterson and the Board of Trustees, gave the new program their full support.[187] What was needed was a full-fledged graduate *school* but until 1986, a "doctoral program" had to suffice.

Why did UMass-Worcester have to fight so hard even to get that much? First, at the time, research was being downplayed as part of the central mission of the medical school. Nor did the University's flagship campus, UMass-Amherst, welcome UMass-Worcester's ambitions to become a Ph.D.-granting institution. Just as the Medical School began to plan a graduate program in the biomedical sciences, doctoral education in Massachusetts, and in the U.S. generally, suffered a serious demographic setback. In the mid-1970s, the UMass system cut back many of its doctoral programs in the face of population shifts and waning demand for new Ph.D.s in academia. As a report by the UMass Vice President for University Policy concluded, "At present trends, we may turn out 100,000 to 200,000 more Ph.D.s during the rest of this decade than can be absorbed in academia, industry, and government..." As a result, the University administration

and Board of Trustees emphasized consolidation, streamlining, and avoidance of duplication of graduate programs during most of the 1970s.[188] The Worcester campus was hardly in evidence during discussions over the future of graduate programs at the University in this period, with the focus entirely on the UMass-Amherst and Boston campuses. The dean of the Graduate School at UMass-Amherst, moreover, viewed the Worcester campus as a potential competitor.

As early as 1972, members of the UMMS basic science faculty, through their representatives on the Scientific Council, formed a committee to begin planning a graduate program. In this they were fully supported by Dean Lamar Soutter, as they were by his successors, Acting Dean Butcher and Chancellor/ Dean Bulger. Indeed, an early accreditation visit from the LCME noted that UMMS was *required* to develop graduate programs. As an initial step, in December 1972, guidelines were drawn up for a "Five College Program" to permit a student enrolled in a graduate program at UMass-Amherst to take courses leading to a doctorate at either the Worcester campus, WPI, Clark, or the Worcester Foundation for Experimental Biology (later, the Worcester Foundation for Biomedical Research). Similarly, in 1977 the Medical campus was invited to become part of a joint Ph.D. "Program in Biomedical Sciences" with Clark, WPI and the Worcester Foundation. The obvious drawbacks to either program was the inability of students to receive degrees from UMass-Worcester or to take any but lab courses at the Medical Center.[189]

An independent program based at the medical campus, however, had been envisioned by the 1972 agreement with Amherst, and faculty here began the planning process even while participating in those precursor programs. Dean Soutter appointed a formal planning committee of faculty from both the basic and clinical sciences early in 1975, chaired by George Wright, associate professor of pharmacology and eventually director of the initial Doctoral Program

in Medical Sciences. Its members understood the political facts of life: to win approval for a freestanding degree program, such a program must not cost much (costing *nothing* was preferred); it must offer a course of study unique to the Worcester campus; it must, if possible, incorporate collaboration with UMass-Amherst and local higher education entities; and finally, it must fill a niche in the potential job market for Ph.D.s. The committee worked for two years to devise an acceptable proposal. Wright explained, "We wrote [the proposal] as a program in the *medical* sciences so that it could not be easily duplicated by any other school in the state..."[190]

George Wright, Ph. D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

As faculty insistence on a free-standing doctoral program began to mount, external support arrived in the form of a Visiting Committee Report of February 1976 and the LCME's second accreditation visit in April 1976. Both urged the Medical School to establish a graduate program of its own, "without further delay...Any long delay...will lower the morale of the basic sciences faculty and decrease the quality of the basic science educational and research programs." This is the climate in which Chancellor Bulger wrote his unusually blunt letter of support. He concluded, "It is difficult to overemphasize the importance of this program to our faculty, and to the overall educational milieu experienced by our medical students."[191] With this background, we are better able to understand the program that was approved by the University Board of Trustees on June 7, 1978.[192]

Regarding the original curriculum, Wright remembered, "The biggest problem was trying to match the particular scientific rigor that each department would want to offer with the political realities of the times...to prove that we were

not duplicating other existing programs."[193] A catalogue from 1980-1981 states that,

> The program of study leading to the Ph.D. in Medical Sciences consists of a core curriculum to be taken by all students and a specialization and research phase to be selected by the individual student...The core curriculum will provide all students with an integrated foundation...emphasizing coursework in at least four of the seven basic medical sciences at the Medical School, interdisciplinary courses in Molecular Biology and Cellular Biology and a Seminar in the Medical Sciences.[194]

The core curriculum was to be completed in 18, or at most, 24 months. Students were also required to participate in at least two lab rotations during their first year.[195] Initially, the areas of specialization included anatomy, biochemistry, microbiology, pathology, pharmacology, physiology. In addition, an interdisciplinary course of study, possibly working with one of the Worcester Consortium institutions, could be arranged. By 1981, an interdepartmental faculty group in immunology had been added to the list of possible concentrations. Eventually, it was anticipated, "clinical medical science departments in which faculty members will teach and direct research of graduate students would include the Departments of Pulmonary, Renal, and Cardiovascular Medicine, and the Departments of Infectious Diseases, Hematology, Endocrinology and Immunology-Rheumatology." Others would be added in the future.[196]

Only seven students were accepted for the first class, beginning in 1979, the numbers a reflection of the school's newness and its financial state in those early years. As Maurice Goodman, recalled, "there was no money [in the budget] to cover stipends for first-year graduate students, so we devoted money [from the Scientific Council's overhead reserve fund] for that." Students could expect a stipend of $4000 during their first two years, but $4500 in grant-

funded assistantships after they were accepted into an advisor's laboratory for dissertation research. By 1986, the number of matriculants had grown to 20-25, including M.D.-Ph.D. students, with an optimum total number of students projected at 100. Indeed, during the 1984-1985 academic year, more than 130 applications were received for the available slots.[197]

Dr. Wright was appointed Acting Associate Dean from 1978-1980. But from 1980, the Program was sufficiently mature for his appointment to be changed to Dean of Graduate Studies, a position he retained until 1984 when he decided to return to full-time research and teaching. Oversight of the program, as with the GSBS after 1987, was placed in the hands of a Graduate Council. The Council consisted of "one representative from each of the [basic] medical science departments...two representatives of the clinical science departments, and a representative of the graduate student body."[198]

On April 2, 1986, nine years after the founding of a Graduate *Program* in Medical Sciences, the University Board of Trustees approved a significant change of status for UMass-Worcester, granting it the right to form a Graduate *School* of Biomedical Sciences (GSBS). The graduate program had been a "grass-roots program."[199] Just as the faculty drove the push for the Graduate Program, so they fueled the drive to become a full-fledged school at the Worcester campus. The force behind this transformation, in similar fashion to George Wright a decade earlier, was Thomas Miller, at the time of this writing a professor emeritus in the department of Biochemistry, Molecular Biology, and Pharmacology. Miller became Wright's successor as Acting Dean of the Program in 1984 and founding dean of the GSBS. Miller believed that, "It was

Thomas Miller, Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

becoming a trend for Ph.D. programs that were attached to medical schools to seek out their own identity by becoming a school...So I started a crusade [with] the Graduate Council to change the Graduate Program into the Graduate School of Biomedical Sciences..."[200] Miller saw the issue as one of identity—or the lack of it—in the eyes of the doctoral students themselves. Once the Graduate School of Nursing had been established in 1985, a concern to be on "an equal footing" with the other two schools intensified. The draft proposal for the GSBS explained that:

> Another compelling reason for this change in status is to give the Ph.D. students themselves an independent identity...Without this [new] organizational structure, Ph.D. candidates tend to view themselves as second-class citizens vis-à-vis medical or other health science students on campus. In the words of our Dean for Graduate Studies [Miller], the 'identity problem for graduate students in a Medical School, although anecdotal, is real...'[201]

Perhaps more germane, the growth of research activity at the Worcester campus argued for the Program's designation as a Graduate School. By 1986 more than 130 faculty members participated in the Program; an M.D.-Ph.D. program had been initiated in 1983, evidence of the GSBS' growing importance and the wide involvement of faculty across the basic/clinical research spectrum. Chancellor Tranquada was happy to encourage development of a proposal that cost relatively little and which heightened the profile of, and added value to, research and education on campus. The faculty, department chairs, and administration worked together to move the plan forward.

Certain key differences distinguished the GSBS from the Medical School and the Graduate School of Nursing, the result of its utilizing only full-time faculty with Medical School appointments. Hence, the GSBS proposal of 1986 stated that the "status and powers of the Graduate School will differ from those of the two professional schools at UMass-Worcester as follows:

--A direct reporting line to the Provost on academic matters, rather than the Chancellor, because of the dependence of Graduate School programs on the Medical School faculty and the strong interrelationships between these schools.

--No authority to develop an independent faculty. The Graduate School's authority in academic personnel matters will be limited to the appointment of qualified Medical School and Graduate School of Nursing faculty...

--No authority to establish academic departments within the [Graduate] School."[202]

The GSBS faculty, however, were empowered to form interdepartmental or interdisciplinary programs, and in fact the Immunology and Virology program, created in 1986, was an outgrowth of the immunology program that had been in existence for several years already. Such curricular decisions and most other matters of oversight were the responsibility of both the Graduate Dean and the Graduate Council.

Programs in the Graduate School of Biomedical Sciences, c. 2010*

Biochemistry & Molecular Pharmacology

Bioinformatics & Computational Biology

Biomedical Engineering & Biotechnology

Cancer Biology

Cell Biology

Clinical & Population Health Research

Immunology & Microbiology

Interdisciplinary

Neuroscience

Translational Sciences

* List of programs from Graduate School of Biomedical Sciences website accessed online at. [illegible] on April 31, 2016.

In typical UMass-Worcester fashion, the GSBS started on a shoestring. Tom Miller remembered,

> We were in a small little area down in the student wing of the medical school. There hadn't actually been an office of Graduate Studies when I started. George Wright hadn't had an office; he had run it out of his faculty office in the department of Pharmacology. We were allowed to start an office...By that time there were, I think, 35-40 graduate students...By the time I left [2002], we had a couple of hundred, 150-200 students.[203]

Miller understood that faculty wanted students in the labs and, "there weren't that many to go around. Everyone in the basic sciences and a few in the clinical sciences wanted students in their labs. So I started an active recruitment program."[204] In 2011 the GSBS boasted an enrollment of nearly 450 students. Four years later, as federal research funding contracted, the number of new GSBS students was reduced accordingly. As in the 1970s, the robustness of graduate education in the biomedical sciences responded to the external economic climate for such research.

Anthony Carruthers, Ph.D.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

In 2002 Miller retired and in 2003 was succeeded by Anthony Carruthers, Ph.D., the GSBS's current dean. Carruthers first came to UMMS from King's College, University of London, in 1982 as a research associate. Now a professor of biochemistry and molecular Pharmacology, his research focuses on glucose transport structure. He emphasized the wisdom of the GSBS's interdisciplinary curriculum, saying in 2004, "Our faculty determined it's not enough for our students just to do neuroscience or biochemistry or cell biology. They must have a core

understanding of the principles involved in all these areas."[205] Indeed, although a number of the graduate school faculty had lobbied hard to give degrees in specific disciplines such as immunology or microbiology, by the late 1990s many, if not all, had begun to see the virtue of the less specific designation of a doctorate in "biomedical sciences" with a concentration in a specialized area.[206] As Carruthers explained:

> ...the type of research we now do is rather different. When I first came here, you could work on an isolated molecule and secure extramural support from in the NIH very easily. But now you have to be able to work on the isolated molecule, then work on it in a cell, then work on that cell in an organ, and that organ within an organism, and I suspect as we branch into more extensive clinical research, those organisms within a population. And so now in NIH applications, we have to be able to talk about individual molecules and how they do what they do, but we need to be able to explain their role within the context of a whole organism, and the advantages of the roles that they bring to the organism.[207]

The GSBS core curriculum—originally the product of political expediency, that is, the need not to be duplicative—became one of its signature features. Newer initiatives are reflected in the two divisions that currently structure GSBS coursework, "Basic and Integrative Biology" and "Clinical and Translational Sciences," a structure that incorporates new specialty tracks such as the programs in Clinical and Population Health Research or Bioinformatics and Computational Biology.

Lamar Soutter Library

An excellent library was integral to Lamar Soutter's vision for UMass Medical School. As early as 1965—months before the university's trustees decided on a location for the new medical school—an editorial in the *New England Journal of Medicine* praised a proposed federal law that would provide funding for medical library construction or renovation. The editorial was emphatic

that, "New medical schools, such as that at the University of Massachusetts, regardless of where it will be located, must have strong working libraries."[208] New medical schools, continued the editorial, can expect to accumulate some 100,000 volumes and to take regularly some 1600 journals. A decade later, when Soutter unexpectedly resigned as Chancellor/Dean of UMass Medical School, Acting Dean Bill Butcher wrote to President Robert Wood, "I am aware that the Trustees are not enthusiastic about using the names of living persons, but this seems a special case. I should add that Dr. Soutter has always had a particular fondness and concern for the Library." The trustees agreed. In 1975 they named the medical library after him: the Lamar Soutter Library (LSL).[209]

Soutter's vision for the library was captured by one of its early librarians. She wrote that, based on his own experience as a medical student, Dean Soutter "emphasizes the importance of providing the medical students with study facilities other than those that may be available in the dormitory complexes. [To assure] the greatest possible acceptance of the Library as a study-and-reading adjunct of student life, the types of seating must be as varied as the needs and the work habits of the persons who will use them." Michael Foley's recollection, described earlier in this chapter, of a student regimen of working late into the night in the library, punctuated either by naps on the couches or a bit of touch football, seems to have reflected the dean's designs. (Given the early interior decoration—vintage 1970s with bright orange carpeting and blue upholstery—it's hard to imagine students ever falling asleep there. Yet they surely did.) Nor were food and drink forbidden in spite of the early decision to build completely open stacks. From the outset, the library was envisioned as a haven for students and faculty, a place to study, to think, to work individually or in groups.[210]

Initially the library's collections were shipped to the UMass-Amherst

campus, but after the Shaw Building's purchase they were sent directly to Worcester. Because of the delay in opening the campus's permanent buildings, the first of the library's directors, Cynthia Philpott, worked with Soutter and the UMass-Amherst librarian to purchase and organize the library's holdings. By 1967, these included 30,000 books. Philpott was followed by Cynthia Robin Brown, whose efforts alongside Soutter's to win support for the library from the Worcester medical community resulted in several meetings with the officers and board of the Worcester District Medical Society prior to the actual opening of the school.[211] One focus of mutual interest for the two organizations was the amalgamation of the rare book holdings of the WDMS's Worcester Medical Library with the UMMS library's rare book collection. In 1974 an agreement was made to this effect with the WDMS's collection being intershelved with the volumes of rare books already acquired by Dr. Soutter from the Pittsburgh Academy of Medicine for the UMass rare book room.[212]

Following Cynthia Brown's retirement in 1970, Donald Morton, Ph.D., D.L.S., became the LSL's director for the next 25 years. Morton, a plant pathologist who later earned a doctorate in library sciences from Simmons, initially presided over modest quarters in the Shaw building. But within three years he was able to oversee the library's move into its new building nestled between the basic and clinical science wings of the medical school and, once the hospital was completed, just around a corner from the first floor corridor to the hospital. Like so many facets of the school's first two decades, however, the library's robust "physical facilities" belied the fragility of its financial support. As the Physiology Department's Visiting Committee report detailed in 1978, "it is unfortunate that book acquisitions and periodicals are apparently limited due to inadequate finances. A comparison of the University of Massachusetts medical library with those of other schools in the northeast ...indicates that [UMMS] is the

lowest in terms of total library expenditures." Although an LCME accreditation report from 1984 found that the LSL was "a valuable resource which serves the entire medical community effectively," the view of more research-oriented outsiders, such as those assessing the Physiology Department in 1978, noted the library's inability to keep up with the needs of at least some researchers. (The Physiology Department, it must be noted, adopted a common practice of funding a departmental library for the use of its own faculty and graduate students.)[213] As long as the library kept abreast of students' curricular needs, and as long as the medical center did not centralize and ramp up its research activities, the library was able to maintain its reputation through sympathetic staff and accessible resources.

By the 1990s, however, much had changed. As Chapters 8 and 9 have illustrated, UMass Med had emerged from a long period of legislative indifference or even hostility; its research activities and graduate education likewise were benefiting from careful and concerted attention. In addition, the medical school's Educational Policy Committee and Office of Medical Education, in alliance with the Generalist Physician Initiative and other outside funding sources also were experiencing a new sense of empowerment. Yet the institution's relevant infrastructure had not yet been brought up to date. This applied to the LSL, but the library was not alone. In 1994, a petition signed by faculty, fellows, and graduate students was delivered to Provost Michael Bratt. It read, "We... strongly urge you—the members of the Administration and the Computing Center—of the urgent need to improve upon the piecemeal computing facilities currently provided to our research, teaching, and student communities."[214] The LSL's situation was no better and possibly worse than the Computing Center. The imminent retirement of its well-liked director, Don Morton, left him in no position to negotiate for increased funding. His immediate successor, Annanaomi

Sams, had been the associate director and became interim director after Morton's retirement. She was appointed his permanent successor in 1995. But, amid library staff dissension and a lack of resources to hire additional staff or equipment, she left the institution in 1997.[215]

By that time, an LCME accreditation visit had cited deficiencies in library resources and facilities. Even students were complaining about slowness of service.[216] The administration was put on notice and reacted promptly. As a first step, Frank Chlapowski, Ph.D., assistant vice chancellor of research, was appointed interim director of the LSL. He, in turn, worked with an outside consultant and the library staff to begin the process of rebuilding the library's importance to, and high regard among, the institution's educational and research constituencies. As Chlapowski observed, the library has always been, "loved by the students and faculty, the physicians, scientists, and so forth, and even the public comes in to use it."[217] It was neither easy nor inexpensive to return the library to its previous place in the lives of faculty and, especially, students. As a first step, a new library director was hired. Elaine Martin, D.A., became LSL director in 1998 after having been director of the University of Illinois-Chicago College of Medicine library.

Elaine R. Martin, D.A.
(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)

She found a library in urgent need of professional staff, renovations (that orange carpeting had not aged well), and a thoroughgoing technological upgrade: "They did not have internet access. They did not have desktop… computers with mice—nothing like that. They had a stand-alone CD-ROM MEDLINE system that you had to come in to use for searching. They still had the card catalogue…They didn't have [electronic] card access [for the photocopy machines]. Very basic things…" But with administration support and a special

contribution by Mary Soutter, Lamar Soutter's widow, library renovations were completed in 2003. One by one, a long check-list of other needed resources was completed.[218]

Perhaps the first sign that the library was assuming a new, nationally recognized stature, arrived with a $5 million, 5-year grant from the National Library of Medicine in 2001 to become a Regional Medical Library (RML) for the New England Region (NER). At the time of the application, the UConn School of Medicine was the site of the NER-RML. No one expected that UMass would successfully wrest the contract away from the current grant recipient. When the LSL succeeded (it has competed successfully for renewals of the grant a total of three times, and will hold the contract at least through 2021), LSL staff knew they had successfully emerged from the doldrums. Numerous other initiatives in clinical service, education, research, and archival stewardship reinforced this impression of a rejuvenated library. For example, recognizing that many clinicians at UMass Memorial hospital also held faculty appointments at the medical school, the LSL established a clinical librarian program in which librarians served as liaisons to clinical departments. Working particularly with the departments of Family Medicine and Community Health, Pediatrics, Emergency Medicine, Obstetrics-Gynecology, and Surgery, librarians attend morning report, grand rounds, and other activities where they participate in clinical problem-solving and evidence-based medicine using remote-access search techniques to find the best and most relevant journal articles for cases under discussion at that moment. At the invitation of the then chair of Pediatrics, Marianne Felice, M.D., the library also created a pediatrics library in the waiting area of the Children's Medical Center designed for patients and their families.[219]

With regard to education, the library's role has also increased. LSL

librarians act as research advisors to all GSN doctoral candidates and any Ph.D. students from the GSBS who request their assistance. Whereas in the past, the LSL taught classes in a variety of research tools such as expert searching, reference management, or use of PowerPoint and Excel, now the librarians teach evidence-based research skills during clerkships. They also work as the assigned liaison to each of the medical student learning communities. In research, the situation is more complex. One of the library's most valuable—and invisible—services to researchers has been the access it provides to journals—at first mainly in print, now almost entirely online—through institutional subscriptions. Researchers rarely need to ever visit the library itself, sometimes even forgetting that the library has paid for the access they enjoy. Like medical libraries everywhere, rising journal subscription costs and stable or even declining library budgets may threaten these services.

LSL has begun new initiatives to support wider access for UMMS researchers' output, such as through the Institutional Repository, by supporting an open access initiative, and by developing expertise in data management/curation, known among librarians as "e-Science." Under Elaine Martin's initiative, the library created a new journal, the *Journal of eScience Librarianship*, with Martin as editor-in-chief. The LSL also developed "Science Boot Camp," which is designed for librarians who want to learn more about the natural, environmental, and statistical sciences with which they need expanded familiarity to fulfill their growing responsibilities on research teams or as liaisons to graduate students. Finally, the LSL developed a fellowship for recent library graduates who want to become health sciences librarians. It is a two-year or, optionally, a three-year program that provides needed postgraduate training in the specialized skills of health sciences librarianship. The fellowship program also continually rejuvenates its host library by bringing in recent graduates. In 2006,

the LSL was asked by the medical school administration to create a new service to sustain the historical traditions, cultural heritage, and documentary record of UMass Medical School by starting an Office of Medical History and Archives (OMHA). In addition to establishing the institution's archives, OMHA created a large collection of oral histories, a historical timeline, a robust online presence, and organized events to highlight significant historical developments in the life of UMass-Worcester.[220]

Global health librarianship at the LSL evolved as a result of UMass-Worcester's long involvement with overseas initiatives to treat and prevent dissemination of HIV/AIDS in Africa. A 14-year long civil war in Liberia led to the destruction of most of the nation's educational and other civil infrastructure. UMass Medical School and others were invited to assist in the resurrection of the University of Liberia's A.M. Dogliotti College of Medicine in Monrovia. Katherine Luzuriaga, M.D., whose work in Liberia led to her leadership of the UMass involvement, immediately recognized that the Liberian medical school's library also was in disarray. Medical students need a library, even if, in this case, lack of electricity and even sometimes of running water created enormous challenges. Elaine Martin and James Comes, Ph.D., the retired head of public service librarianship at the LSL, made numerous visits to Liberia. As of this writing, even after the major setback of an Ebola outbreak, a modest medical library of about 7000 donated books and other paper-based supplies have been imported to Liberia, catalogued, and organized for medical student and faculty use.[221]

Today's Lamar Soutter Library faces many challenges. In Elaine Martin's words, these challenges begin with "peoples' perceptions of libraries, [namely] 'That it's all online. It's on your desktop. What do you need the library for?' And, 'Why do you need all that money for these resources…isn't it free online?'" Moreover, the LCME standards for medical school libraries are eroding from a

separate requirement for libraries, including a requirement for a physical library, a collection, and professional librarians, to simply a requirement "that students need access to information to support the curriculum." Nevertheless, students seem no less inclined to gravitate to the library as their locus of study, research (and relaxation) than when Lamar Soutter was first planning the library's mission and design. This seems unlikely to change—at least not in the near future.[222]

NOTES

CHAPTER TEN

1 Lamar Soutter, "Welcoming Address to the first Class at the University of Massachusetts Medical School," typescript, p. 2, Box A-D, fol. "Lamar Soutter Welcoming Address," Record Group 55-2 "Other Campuses," UM/A.

2 Molly Cooke. David M. Irby, and Bridget C. O'Brien, *Educating Physicians: A Call for Reform of Medical School and Residency*. A Report of the Carnegie Foundation for the Advancement of Teaching (San Francisco: Jossey-Bass, 2010), pp. 77-78. My thanks to Stephen J. Peitzman for suggesting I consult this work.

3 Kenneth M. Ludmerer, *Learning to Heal: Modern Medical Education in the United States* (New York: Basic Books, 1985), p. 262; Frank J. Papa and Peter H. Harasym, "Medical Curriculum Reform in North America, 1765 to the Present: A Cognitive Science Perspective," *Academic Medicine,* 1999, *74*:2 (Feb.); 154-164, quotation pp. 156; Cooke. Irby, and O'Brien, *Educating Physicians*, pp. 16, 78.

4 Cooke, Irby, and O'Brien, *Educating Physicians*, p. 15.

5 *Physicians for the Twenty-First Century: The GPEP Report* (Washington, D.C.: AAMC, 1984), quotation pp. xv, and pp. 1-19.

6 "The recent reductions in federal support for medical education were a part of the Omnibus Reconciliation Act of 1981." John K. Iglehart, "Shrinking Federal Support Brings New Era in the Health Professions," *NEJM*, 1981, *305*: 17; 1027-1032, quotation pp. 1027-28; American Hospital Association, "Fact Sheet," March 11, 2015, accessed at https://web.archive.org/web/20160324190807/http://www.aha.org/content/13/fs-gme.pdf.

7 Renee C. Fox, "Time to Heal Medical Education?" in "The Future of U.S. Medical Education: Essays Prompted by Kenneth Ludmerer's *Time to Heal: American Medical Education from the Turn of the Century to the Era of Managed Care*," *Academic Medicine*, 1999, *74*:10, pp. 1072-1075, quotations p. 1073, 1075. Fox quoted the phrase "reform without change" from Samuel W. Bloom, "Structure and ideology in medical education: An analysis of resistance to change," *J. Health and Social Behavior*, 1988, *29*, pp. 294-306, p. 295 ff; Nicholas Christakos, "The Similarity and Frequency of Proposals to Reform US Medical Education: Constant Concerns," *JAMA*, 1995, *274*: 9, pp. 706-711.

8 Cooke, Irby, and O'Brien, *Educating Physicians*, pp. 16, 17. 77-80; Jason R. Frank, Linda S. Snell, Olle Ten Cate et al., "Competency-based medical education: theory to practice," *Medical Teacher,* 2010, *32*; 638-645. Cf. Institute of Medicine, *To Err is Human* (Washington, D.C.: National Academies Press,

2000); Institute of Medicine Committee on Quality of Health Care in America, "Crossing the Quality Chasm: A New Health System for the 21st Century (Washington, D.C.: National Academies Press, 2001); Accreditation Council for Graduate Medical Education, *Outcome Project* (Chicago, IL: ACGME, 2001).

9 Frank, Snell, Ten Cate et al., "Competency-based medical education," quotation, p. 639.

10 Rebecca Greenberg, "AAMC Report Outlines Core Entrustable Activities for Entering Residency," *AAMC Reporter*, May, 2014, accessed at https://web.archive.org/web/20160324192327/https://www.aamc.org/newsroom/reporter/may2014/380388/entrustable-activities.html on May 4, 2015; Frank, Snell, Ten Cate et al., p. 643.

11 "University of Massachusetts Medical School, Teaching Hospital, Application for a Joint Construction Grant," June 14, 1968, pp. 111-119, Box 45, fol. 559a, Lederle Papers, UM/A.

12 H. Brownell Wheeler, Oral History Interview transcript, Part 1, pp. 9-10, interviewed by Ellen More, Aug. 21, 2006, South Portland, ME, Oral History Collection, UM/W. Cf. "University of Massachusetts Medical School, Teaching Hospital, Application for a Joint Construction Grant," June 14, 1968, pp. 112, 113, Box 45, fol. 559a, Lederle Papers, UM/A.

13 Board of Trustees Committee on Faculty and Educational Policy, "Minutes," July 9, 1970, p. 5, Box "Board of Trustees Minutes of Meetings of Full Board and Committees," July-Sept., 1970, fol. "Board of Trustees, Faculty and Educational Policy Committee, July, 1970," Trustees, UM/A.

14 Wheeler, Oral History Interview transcript, Part 1, pp. 27-28.

15 Wheeler, Oral History Interview transcript, Part 1, pp. 27-28.

16 Leonard Finn, Oral History Interview transcript, Part 1, p. 6, interviewed by Ellen More, June, 24, 2006, Worcester, MA, Oral History Collection, UM/W.

17 University of Massachusetts at Worcester, "Medical School Catalogue, 1972-73," p. 21, Publications collection, UM/W.

18 University of Massachusetts at Worcester, "Medical School Catalogue, 1970-1971," pp. 17-19; University of Massachusetts at Worcester, "Medical School Catalogue, 1972-1973," pp. 21-23, both in Publications Collection, UM/W.

19 Donald Abbott, Oral History Interview (by telephone) transcript, p. 24, interviewed by Ellen More, Feb. 25, 2014, Oral History Collection, UM/W.

20 Roger J. Bulger, "The Medical Center, University of Massachusetts," in John Z. Bowers and Elizabeth F. Purcell, eds., *New Medical Schools at Home and Abroad* (New York: Josiah Macy, Jr. Foundation, 1978), pp. 125-146, quotation, p. 136.

21 Wheeler, Oral History Interview transcript, Part 1, pp. 27-28.

22 Paul Schwartz, M.D., Oral History Interview transcript, pp. 1, 5, interviewed by Ellen More, Feb. 27, 2013, Holden, MA, Oral History Collection, UM/W.

23 University of Massachusetts Medical School Catalogue, 1975-1976, pp. 79-84, Publications Collection, UM/W.

24 In the fall of 2007, the medical school administration hoped to increase the medical school class size as of 2008 to 125 but was uncertain about whether this would violate Massachusetts law. Examination of the early records of the establishment of the Worcester campus determined that the enrollment "limit" of 100 students was based on a determination of best practices among medical schools and the AAMC at the time of UMMS's founding. No state law prohibited the school's expansion. See Ellen More, "Summary of Documentary Evidence Pertaining to the Class Size of UMMS," Dec. 6, 2007, fol. "UMMS Admissions Cap," unprocessed, Ellen More papers, UM/W.

25 Lamar Soutter, "University of Massachusetts 1975 Budget for the Medical School," Feb. 19, 1974, 2 pp., Box Robert C. Wood, Series 5: Worcester, Box 36, fol. Worcester, Chancellor/Dean, 1974, Wood, UM/A; Michael F. Collins and Terence R. Flotte to UMMS Faculty, Memo: "Increases in Class Size for the School of Medicine," June 3, 2008; Michael F. Collins and Terence R. Flotte to UMMS Faculty and Department Heads, Memo: "Enrollment initiative," Aug. 4, 2015. In the fall of 2016, according to the latter announcement, UMMS will begin admitting a "modest number" of out-of-state students. Previously, only MD/Ph.D. students from outside of Massachusetts had been admitted.

26 Abbott, Oral History Interview transcript, p. 12.

27 Affirmative action and diversity programs at UMMS are discussed later in this chapter. "Minutes," Board of Trustees Executive Committee, Nov. 20, 1970, Box "Board of Trustees Minutes of Meetings of Full Board and Committees, Oct.-Dec., 1970," fol. "Board of Trustees Executive Committee, Nov. 1970," Trustees, UM/A; Muriel S. and Otto P. Snowden papers, "Finding Aid," Northeast University Archives, accessed at https://web.archive.org/web/20160324192657/http://www.library.neu.edu/archives/collect/findaids/m17findprint.htm on Sept. 27, 2015.

28 The typical private school tuition cost in the early 1970s was $2500; in 1981, for Massachusetts, the range extended from $8900 for Tufts to $12,125 for Harvard Medical School. Also see Richard H. Jaskoviak, "Medical School to Graduate 16 at First Commencement," *Evening Gazette*, May 26, 1974; Jon A. Towne, "Soutter Says 16 had Grit to Sign Up," *Worcester Telegram*, May 26, 1974, both in Publications collection, UM/W. Cf. Kristen O'Reilly, "First graduating class at UMMS led by pioneers and risk takers," *UMass Med Now*, 2014, *4*:21 (May 27, 2014), accessed online at https://web.archive.org/web/20160324202937/http://www.umassmed.edu/news/news-archives/2014/05/First-graduating-class-at-UMMS-led-by-pioneers-and-risk-takers/ on Aug. 30, 2015. Tuition for 1994-95 was derived from "University of Massachusetts Medical School, Institutional Self-Study Summary Report for the 1996 LCME Accreditation Review," Nov. 18-21, 1996, p. 19, Worcester, MA, Box 5, fol. 31, "LCME Study, 1995-1996," unprocessed, MAPS, UM/W.

29 Statistical Profile: University of Massachusetts Medical School, pp. 10, 12, 15, 16, prepared by Richard M. Sundstrom for the House Post Audit and Oversight Committee, Oct., 1982, Robert E. Tranquada Collection, unprocessed, UM/W.

30 Bulger, "The Medical Center, University of Massachusetts," p. 140; Towne, "Soutter Says 16 had Grit;" Untitled Report, 15 pp., esp. p. 2, Public Affairs collection, unprocessed, UM/W; Susan Schooley, Oral History Interview transcript, pp. 4-5, interviewed by Ellen More (by telephone), Oct. 15, 2008, Oral History Collection, UM/W.

31 Quotation from Robin Davidson, M.D., Oral History Interview transcript, pp. 8-9, interviewed by Ellen More, April 14, 2009, Worcester, MA, Oral History Collection, UM/W; Robin I. Davidson, M.D. to Edgar E. Smith, Ph.D., Provost and Associate Dean for Academic Affairs, March 21, 1975, Box 1, fol. "Student Affairs," Robin Davidson Collection, unprocessed, UM/W.

32 Jeffrey Bernhard, M.D., Oral History Interview Part 2, transcript, pp. 10, 12, interviewed by Ellen More, Dec. 5, 2007, Worcester, MA, Oral History Collection, UM/W.

33 Robert Schell, Oral History Interview transcript, pp. 38-39, interviewed by Ellen More (by telephone), April 15, 2014, Oral History Collection, UM/W; Cf. interviews with Sandy Marks, Ph.D. and Maurice Goodman, Ph.D., in Peter Castaldi, M.D., UMMS '02, "A History of the University of Massachusetts Medical School," DVD, Barry L. Davis, videographer, 2002, Peter Castaldi Collection, UM/W.

34 Dr. McGuire became "a tremendous booster" of the medical school. Goodman, in Castaldi, "A History."

35 Schell, Oral History Interview transcript, pp. 8-9

36 Richard Aghababian, Oral History Interview transcript, Part 1, p. 2, interviewed by Ellen More, Oct. 27, 2006, Worcester, MA, Oral History Collection, UM/W.

37 Donald Abbott, Oral History Interview (by telephone), transcript, p. 7, interviewed by Ellen More, Feb. 25, 2014, Oral History Collection, UM/W.

38 Leonard Finn, Oral History Interview transcript, Part 2, pp. 3-4, interviewed by Ellen More (by telephone), April 24, 2014, Oral History Collection, UM/W.

39 Finn, Oral History Interview transcript, Part 2, pp. 3-4.

40 Dean Soutter almost always referred to medical students as "men." An analysis of his usage, I believe, would find it difficult to distinguish when he was simply employing traditional linguistic usage for his era and when his usage reflected his own traditional universe of gender norms. Each contributed to the other. Richard H. Jaskoviak, "Medical School to Graduate 16 at First Commencement," *Evening Gazette*, May 26, 1974, Publications collection, UM/W; Aghababian Oral History interview, Part 1, p. 32; Dean Lamar Soutter to Mr. Avram R. Schell, March 6, 1970, Schell collection, unprocessed, UM/W.

41 Schell, Oral History Interview transcript, p. 20; Foley, Oral History Interview transcript, pp. 12-13.

42 Schell, Oral History Interview transcript, pp. 10-11; Foley, Oral History Interview transcript, p. 17; *Iatros*, University of Massachusetts Medical School Yearbook, 1974-1978, pp. 3, 12, 17, UMMS Yearbook collection, UM/W.

43 Frank Chlapowski interview, in Castaldi, "A History." See n. 30 above.

44 Lamar Soutter, "Orientation Schedule," Sept. 15 and 16, Schell collection, unprocessed, UM/W.

45 Muriel Sawyer Harrington, Oral History Interview transcript, p. 17, interviewed by Ellen More, Aug. 31, 2011, Worcester, MA, Oral History Collection, UM/W.

46 They also put dry ice into the punch. Not only did it bubble and look like a witch's cauldron, but as the evening went on, the dry ice would evaporate the water so the punch became stronger. Frank Chlapowski interview, in Castaldi, "A History." See n. 30 above.

47 Diane DeBenedetto, Oral History Interview, handwritten notes, interviewed

by Ellen More, Sept. 13, 2010, Northampton, MA, original handwritten notes by Theresa Glenn, M.P.H.; quotations from augmented and edited typescript of notes by Ellen More, 4 pp., Sept. 15, 2010, Oral History Collection, UM/A. My sincere thanks to June Turcotte and Theresa Glenn, whose parents were patients of Dr. DeBenedetto in Easthampton, MA, for facilitating my interview with the Dr. DeBenedetto (d. Sept. 23, 2010). Cf. Frank Chlapowski, n. 25 above, who recalled that Dean Soutter's punch was always made with Irish whiskey.

48 Lamar Soutter, "Welcoming Address to the First Class at the University of Massachusetts Medical School," Sept. 15, 1970, typescript, 9 pp., in Schell collection, unprocessed, UM/W.

49 Aghababian, Oral History Interview transcript, Part 1, pp. 7, 10-12; Finn, Oral History Interview transcript, Part 2, pp. 4, 8-9.

50 Abbott, Oral History Interview transcript, p. 12.

51 Abbott, Oral History Interview transcript, pp. 8-9. This was not a new idea. Yale, for example, abolished grades for medical students in 1925. Toby Appel, Ph.D., personal communication, Jan. 25, 2016.

52 Jon A. Towne, "Soutter Says 16 had Grit to Sign Up," *Worcester Telegram*, May 26, 1974.

53 Stephen R. Gorfine, class of 1978 to UMMS Alumni, May 19, 1978, in Schell collection, unprocessed, UM/W. Schell's notes for a reply are written on the verso of this letter.

54 Schell, Oral History Interview transcript, p. 16; "UMMS Student Handbook," Sept. 1, 1979, pp. 41-43, H. Maurice Goodman collection, unprocessed, UM/W. Over time, these classifications were further elaborated by adding "Near Honors," University of Massachusetts Medical School Catalogue 1988-1990, p. 32, Publications, UM/W. From July 1992, preclinical grades were listed as Honors-Credit-No Credit Received- In Progress, and for Optional Enrichment Electives, a listing of "No Grade." My sincere thanks to Registrar Michael Baker for supplying the data for grading post-1992.

55 Jon A. Towne, "Soutter Says 16 had Grit to Sign Up," *Worcester Telegram*, May 26, 1974; Anthony J. Simollardes, "Med School Class Joins an 'Honored Profession'," *Worcester Telegram*, May 26, 1974, both in Newsclippings, Publications collection, UM/W; Abbott, Oral History Interview transcript, p. 42.

56 Mayre Coulter received a silver necklace from the class and Richard Saunders, a meerschaum pipe. At graduation, faculty members Sandy Marks, Jr., Richard Saunders, and Richard Walton, were chosen by the graduating class to hood

the graduates. UMMS "Newsletter," 1974, 1: 1 (June), p. 4, Schell collection, unprocessed, UM/W; Abbott, Oral History Interview transcript, p. 30; Schell, Oral History Interview transcript, p. 19.

57 Aghababian, Oral History Interview transcript, p. 19.

58 Quotation from Bernhard, Oral History Interview transcript, p. 10. At a retreat for the Educational Policy Committee in 1978, it was also agreed that education for primary care was a goal of our school, but only one of several educational goals; we should not fail to provide opportunities for students with other interests..." in "Recommendations of the EPC," pp. 3-4.

59 Aghababian, Oral History Interview transcript, Part 1, p. 19; Schell, Oral History Interview transcript, pp. 34, 36; Abbott, Oral History Interview transcript, p. 41.

60 Ellen S. More, *Restoring the Balance: Women Physicians and the Profession of Medicine, 1850-1995* (Cambridge, MA: Harvard University Press, 1999), Table 8.2, p. 221; *AAMC Data Book: April 2015* (Washington, D.C.: AAMC, 2015), Table B13, p. 43; Untitled Report, 15 pp., esp. p. 2, Public Affairs collection, unprocessed, UM/W; Robert Tranquada, [Convocation Address], Sept. 27, 1985, 13 pp. typescript, fol. 6, Box 1, Robert Tranquada Collection, UM/W; "Minutes," Board of Trustees Committee on Faculty and Student Affairs, Dec. 4, 1991, Section "1991," Trustees online, UM/A.

61 Table courtesy of An Dinh of the UMMS Office of Institutional Research, Evaluation, and Assessment. My thanks to Ms. Dinh and to Mary Zanetti, Senior Director of the Office.

62 *Ibid.*; *UMMS Alumni Directory*, 2001 (Purchase, N.Y.: Bernard C. Harris Publishing, 2001), pp. 154-159, author's hand count.

63 DeBenedetto, Oral History Interview, edited notes, see n. 43 above."

64 Foley, Oral History Interview transcript, pp. 13, 17; Bruce Karlin, Oral History Interview, interviewed by Ellen More, June 24, 2015, Worcester, MA; Evelyn Love, Oral History Interview, interviewed by Ellen More, June 30, 2015, Worcester, MA, all in Oral History Collection, UM/W.

65 Christine Cassell, Oral History Interview transcript, interviewed by Ellen More (by telephone), Nov. 13, 2007, pp. 2, 3, 5, 10-11, Oral History Interview Collection, UM/W. Dr. Cassell was an author of both Institute of Medicine Reports, *To Err is Human* (2000) and *Crossing the Quality Chasm* (2001). See n. 7 above.

66 Cassell, Oral History Interview transcript, pp. 6, 14.

67 Cf. Samuel Shem [Stephen J. Bergman], *The House of God* (New York: Dell), 1979).

68 Foley, Oral History Interview transcript, p. 21; Cassell, Oral History Interview transcript, pp. 7, 9-10, 16-17. Dr. Cassell also remembered Sam Clark and Sandy Marks. "They...did this wonderful sort of ceremony...recognizing the gift of the body and the dignity of this person...bringing you into it in a way that was very humanizing."

69 Donald Tipper, Ph.D., Oral History Interview transcript, p. 8, interviewed by Ellen More, Nov. 10, 2009, Worcester, MA, Oral History collection, UM/W.

70 Board of Trustees, "Minutes," June 30. 1969, Box "Board of Trustees Minutes of Meetings of Full Board and Committees, Jan.-July, 1969," fol. "Trustees (Full Board), Minutes, Agenda, etc., June, 1969;" Board of Trustees, "Minutes," April 26, 1971, Box, "Board of Trustees Minutes of Meetings of Full Board and Committees, April-June, 1971," fol. "Board of Trustees General Meeting, April, 1971," both in Trustees, UM/A. Faculty listed in the catalogues for the first three years included: **Sam Clark**, Frank Chlapowski, Sandy Marks, Merrill K. Wolf, W. John Cooke III (Anatomy); **R. William Butcher**, Ian Halkerston, Karl J. Hittelman, (Biochemistry); **H. Maurice Goodman**, Fredric S. Fay, Joel D. Feinblatt, Joshua J. Singer, and John V. Walsh, Thomas B. Miller (Physiology); **Hugh S. Fulmer**, William M. Burke, Richard F. Walton (Community Medicine); **Roger B. Hickler**, Liberto Pechet, Richard H. Saunders (Medicine); **Donald J. Tipper** (Microbiology); **Richard A. MacDonald**, Giselle S. Pechet, (Pathology); **H. Brownell Wheeler**, Wallace Chang (Surgery); **Richard Hunter** (Obstetrics-Gynecology). **Guido Majno** became the chair of Pathology in 1973, a post he held until 1995. Chairs are in bold. From the University of Massachusetts Medical School, *Catalogue* 1970-1971; *idem.*, 1971-1972, *idem.*, 1972-1973, Publications Collection, UM/W; Guido Majno, "*Curriculum Vitae*," Guido Majno and Isabelle Joris Papers, UM/W. Edward Mason, M.D. and John Duggan, M.D. were appointed acting chairs of Psychiatry (1972-1977) and Pediatrics (1972-1975), respectively, until permanent chairs could be hired. Mason, who was chief of psychiatry at St. Vincent Hospital, actively participated in the behavioral medicine teaching for the first and second year students. Edward Mason, Oral History Interview transcript, pp. 3-4, interviewed by Ellen More, Sept. 25, 2009, Worcester, MA, Oral History Collection; Paul Appelbaum, "Grand Rounds" (DVD), n.d., Psychiatry Collection, both UM/W.

71 Foley, Oral History Interview transcript, p. 23; Schooley, Oral History Interview transcript, p. 6 (n. 30 above).

72 Merrill Kenneth Wolf, Oral History Interview transcript, pp. 3-5, interviewed

by Ellen More, Oct. 23, 2008, Worcester, MA, Oral History Collection, UM/W.

73 Schooley, Oral History Interview transcript, p. 8.

74 Quotation from Majno interview in Castaldi, "A History." See n. 30 above; Guido Majno, *Curriculum Vitae*, Guido Majno collection, unprocessed, UM/W; Isabelle Joris, Ph.D., personal communication (email), March 19, 2013, Isabelle Joris collection, unprocessed, UM/W. My sincere thanks to Isabelle Joris, wife of the late Guido Majno, for providing me with recollections of their experiences at UMMS as well as Dr. Majno's CV and other helpful suggestions. Majno's *The Healing Hand: Man and Wound in the Ancient World* (Cambridge, MA: Harvard University Press), 1975, won the Phi Beta Kappa Award for Science, while *Cells, Tissues, and Disease: Principles of General Pathology* (Cambridge, MA: Blackwell Science, Inc.), 1996, co-authored by Isabelle Joris, Ph. D., also a professor at UMMS and Dr. Majno's wife, received the American Medical Writer's Association book award for physicians.

75 Joris, personal communication (email), March 19, 2013; Karlin, Oral History Interview, June 24, 2015.

76 Joris, personal communication (email), March 19, 2013.

77 Schooley, Oral History Interview transcript, p. 7.

78 Joris, personal communication (email), March 19, 2013. Dr. Joris wrote that Highwater's book acknowledged his debt to "'the rousing debates and conversations of students and faculty members at Worcester.'" Cf. Jamake Highwater, *The Primal Mind*: *Vision and Reality in Indian America* (New York: Harper & Row, 1981).

79 Paul Odgren, "Remembering Sandy Marks, Jr., D.D.S., Ph.D., Professor of Cell Biology, Radiology, and Surgery," in *Sandy C. Marks, Jr., D.D.S., Ph.D., Nov. 16, 1937-Nov. 27, 2002: Collected Memories from Friends, Students and Colleagues*, Paul Odgren, Ph.D., ed., quotations, p. 2, accessed at https://web.archive.org/web/20160324193149/http://www.umassmed.edu/uploadedFiles/marksbook.pdf on Aug. 6, 2015. My sincere thanks to Paul Odgren, Ph.D. for providing me with this memorial book as well as other memorabilia and stories about Dr. Marks. The "Celebration of the Life of Sandy C. Marks, Jr." was held at UMMS on Dec. 17, 2002, not quite three weeks after his death. Cf. Sandy Marks interview in Castaldi, "A History." See n. 30 above.

80 Chester R. Burns, *Saving Lives, Training Caregivers, Making Discoveries* (Austin, TX: Texas State Historical Association, 2003), pp. 233-234.

81 Perhaps the best study of this phenomenon was by Frederic W. Hafferty, *Into*

the Valley: Death and the Socialization of Medical Students (New Haven, CT: Yale University Press, 1991). Cf. George S.M. Dyer and M. E. Thorndike, "*Quidne Mortui Vivos Docent?* The Evolving Purpose of Human Dissection in Medical Education, *Academic Medicine*, 2000, *75*: 10, pp. 969-979.

82 Dyer and Thorndike, "*Quidne Mortui Vivos Docent?*" p. 977.

83 Steven N. Popoff and Paul R. Odgren, "In Memoriam: Tribute to Sandy C. Marks Jr, D.D.S., Ph.D.: 1937–2002," *J. Bone and Mineral Research*, 2004, *19*:12, pp. 2093-2094. PDF courtesy of Paul Odgren. Marks, however, first published on the topic, with Sandra Bertman, in 1980: Sandy C. Marks, D.D.S., Ph.D., and Sandra Bertman, "Experiences with Learning About Death and Dying in the Undergraduate Medical Curriculum," *Journal of Medical Education*, 1980, *55* (Jan.), pp. 48-52. Also see Sandy C. Marks, Jr., Sandra L. Bertman, and June C. Penney, "Human Anatomy: A Foundation for Education about Death and Dying in Medicine," *Clinical Anatomy*, 1997, 10; pp. 118-122.

84 The palliative care service included a home care component that was crucial to its effectiveness, a precursor to hospice programs today. The coordinator of the home care volunteers was Marjorie Purves. "Palliative Care Service: Hospice Care for the Greater Worcester Community," brochure; John Dignam, "Palliative Care: The terminally ill receive compassion, comfort," *Evening Gazette*, March 23, 1979, both in Box 1, fol. 1, Roger Bulger Collection, unprocessed, UM/W; Sandra Gray, "Unmentionable, immeasurable," Vitae, 1999, 21: 2 (Spring/Summer), pp. 4-7, Publications collection, UM/W.

85 Sandra L. Bertman, ed., One Breath Apart: Facing Dissection (Newton, MA: Ward St. Studio, 2007). Cf. Sandra L. Bertman ed., Facing Death: Images, Insights and Interventions, a Handbook for Educators, Health Care Professionals and Counselors (New York: Taylor and Francis, 1991); idem., Grief and the Healing Arts: Creativity as Therapy (New York: Baywood, 1999). Cf. Sandra Bertman, "Abbreviated CV," Sandra L. Bertman collection, unprocessed, UM/W.

86 Sandy C. Marks, D.D.S., Ph.D., and Sandra Bertman, "Experiences with Learning About Death and Dying in the Undergraduate Medical Curriculum," *Journal of Medical Education*, 1980, 55 (January), pp. 48-52; Dolores Coutemanche, "...and Coping with the end," *Sunday Telegram*, March 2, 1980; "Medical Students Learn Humanities," *(Springfield) Morning Union*, April 24, 1986; reprinted from the *New York Times*, pp. 37, 40, all in Roger Bulger Collection, unprocessed, UM/W. Cf. Gray, "Unmentionable, immeasurable."

87 Nancy Long, "One Breath Apart," in Bertman, *One Breath Apart*, p. 25.

88 Matthew Logalbo, quoted in Odgren, "Remembering Sandy Marks," p. 16. See n. 63 above.

89 "Minutes," Subcommittee on Curriculum of the Educational Policy Committee," May 4, 1978, Box 7, fol. 20, "Educational Policy Committee," 1976-1983, MAPS, UM/W.

90 "Recommendations of the Educational Policy Committee," n. d. (c. late summer, 1978), pp. 1, 2-4, Box 7, fol. 20, Educational Policy Committee, 1976-1983, MAPS, UM/W.

91 Report of the Institutional Self-Study Task Force, University of Massachusetts Medical School, Submitted to the Liaison Committee of the AMA and the AAMC," Sept. 11, 1978, p. 34, Box 1, fol. "University of Massachusetts," Roger Bulger Collection, unprocessed, UM/W.

92 Board of Trustees, "Minutes," Dec. 8, 1982, p. 3, Section "1982," Trustees online, UM/A; Gail Ciampa, "Med School Curriculum Offers Reward, Stimulus," *Worcester Telegram*, April 30, 1987, p. 12A. Cf. Mary E. Costanza, M.D. and Victoria P. Gaw, R.N., MA, "Design, Implementation and evaluation of a Longitudinal Cancer Curriculum," *Journal of Cancer Education*, 1987, *2*: 4, pp. 217-223. This oncology curriculum resulted in higher enrollment in oncology electives, but ultimately was too greatly diffused throughout the preclinical years to be an effective pedagogical instrument.

93 Roger J. Bulger, "The Medical Center, University of Massachusetts," in John Z. Bowers and Elizabeth F. Purcell, eds., New Medical Schools at Home and Abroad (New York: Josiah Macy, Jr. Foundation, 1978), pp. 125-146, esp. p. 140; "Report of the Institutional Self-Study Task Force, University of Massachusetts Medical School, Submitted to the Liaison Committee of the AMA and the AAMC," Sept. 11, 1978, Box 1, fol. "University of Massachusetts," Roger Bulger Collection, unprocessed, UM/W. Deborah Harmon Hines, Associate Vice Chancellor et al, "University of Massachusetts Medical School Learning Contract, 1995 Annual Report, 8pp. plus appendices," quotation, p. 1, Box 1, fol. 3; "University of Massachusetts Medical School, Institutional Self-Study Summary Report for the 1996 LCME Accreditation Review," Nov. 18-21, 1996, Worcester, MA, pp. 19-20, Box 5, fol. 31, "LCME Study, 1995-1996," both in MAPS, unprocessed, UM/W.

94 "Recommendations of the Educational Policy Committee," n. d. (c. fall, 1978), Box 7, fol. 20, Educational Policy Committee, 1976-1983, MAPS, UM/W; "UMass Medical Center: a local, regional and statewide resource," p. 2, booklet, 15 pp., n. d. (c. 1984), Publications collection, UM/W.

95 Data for Massachusetts primary care physician graduates from UMMS are based on a table provided by Michele Carlin, "UMass Graduates Entering Primary Care Disciplines in Massachusetts," personal communication (email) Aug. 13, 2015. Many thanks to Mary Zanetti, Ph.D., An Dinh, and Michele Carlin

of the UMMS Office of Institutional Research, Evaluation, and Assessment for providing this and other graphs of UMMS graduate data.

96 Since these data (and the specialty classifications) are derived from the UMMS Alumni Directory of 2001, the figures are an over count since graduates of the class of 1999 would not have completed their residencies by the time the directory was published. Figures derived from a hand count of specialty listing in *University of Massachusetts Medical School Alumni Directory, 2001* (Purchase, NY: Bernard C. Harris Publishing, 2001). Many thanks to Susan Ahearn, MS, Director, Alumni and Parent Relations, UMMS, for providing me with copies of the 1995-96 and 2001 alumni directories.

97 One caveat: this study did not include graduates of foreign medical schools. Thus it is a valuable indicator of career choices of U.S. medical graduates, but not of the overall supply of primary care doctors in the U.S. Kehua Zhang, Imam Xierali, Laura Castillo-Page, and Marc Nivet, "Primary Care Physicians Who Graduated from U.S. Medical Schools: Trends in Specialty, Gender, and Race and Ethnicity," *Analysis in Brief: AAMC*, 2015, *15*: 9 (Oct.), n. p. Accessed online at https://web.archive.org/web/20160324193608/https://www.aamc.org/download/446464/data/october2015primarycarephysicianswhograduatedfromusmedicalschools.pdf on Oct. 22, 2015. My thanks to Mary Zanetti, Ph.D. of the UMMS Office of Institutional Research, Evaluation, and Assessment for alerting me to this article.

98 Michael F. Collins and Terence C. Flotte to UMMS Faculty, "Springfield campus to open in partnership with Baystate Health and UMass Amherst," June 22, 2015, email memo, Public Affairs, unprocessed, UM/W.

99 See Michele Pugnaire, Oral History Interview transcript, p. 20, interviewed by Ellen More, March 9, 2015, Worcester, MA, Oral History collection, UM/W.

100 "Self-Study Task Force 14: Basic Science Departments" [1996], Box 5, fol. "LCME Study, 1995-1996," unprocessed, MAPS, UM/W.

101 Educational Policy Committee, "Minutes," Oct. 6, 1992, Box 4, fol. "Correspondence: Miscellaneous, Internal, 1992-2000," unprocessed, MAPS, UM/W.

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The new program's objectives were:
1. To train biomedical scientists/educators who will possess, in addition to specialized training, a broad background in the medical sciences;
2. To equip graduates of this program to conduct research with direct relevance to human disease and to prepare them to interact and collaborate with scientists and physicians involved in clinical investigations;
3. To prepare graduates for careers as educators in schools of the health professions;
4. To take advantage of the unique educational potential provided by the University of Massachusetts Medical School in collaboration with Clark University, the Worcester Foundation for Experimental Biology, and Worcester Polytechnic Institute

193 Wright, Oral History Interview.

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Chapter 11

Conclusion
An Academic Health Science Center, Honoring the Past, Looking to the Future

In 1978, UMass Medical Center Chancellor Roger Bulger concisely articulated the challenge that would face campus leaders for decades to come. He wrote that, "The faculty and the administration believe that the appropriate future of the Medical Center will be to serve as an academic health center. Whether that vision will be fully embraced by the university's trustees and the public officials of the commonwealth is a key question for the future."[1] This concluding chapter, an overview of the past decade, will describe UMass Medical School in the years since it began its gradual reconfiguration as an academic health science center.

Supporting a robust research environment while maintaining the school's commitment to primary care education and service was clearly a challenge, but it was essential to UMMS's identity in the 21st century. As this book has shown, the school's early history was a struggle to overcome the explicitly modest expectations of some (though not all) of its earliest legislative supporters. From Lamar Soutter to Chancellor Michael Collins and Dean Terry Flotte, successive leaders of UMass Med sought to assure its standing as more than a "community" medical school. That assumption lay behind Dean Soutter's insistence on building a teaching hospital. Yet, investing in both primary care education and world class research seemed barely possible for many years. Legislative challenges drained energy and attention from adopting a comprehensive strategy for institutional excellence. Scarce resources made such a strategy difficult even

to envision. Indeed the school faced multiple threats to its very existence—first in 1969, then in 1975, in 1981, and in 1990. By the late 1980s, however, a newly determined President and Board of the University of Massachusetts, bolstered by an outsider's perspective, made possible the reevaluation of the school's potential for research significance, a commitment briefly begun under Chancellor Leonard Laster and continued under Chancellors Lazare and Collins and Dean Flotte.

Paradoxically, the privatization of University hospital in 1998—despite the distress it entailed to many of the clinical faculty—freed the school to focus on research and its embrace of a new identity: academic health science center. Simultaneously, Aaron Lazare's interest in medical education, coinciding with renewed national concern over a shortage of primary care providers, insured a parallel recommitment to educational vitality. The Generalist Physician Initiative focused campus educators' attention on primary care curricular innovation at the same time as leaders in the basic sciences were working to insure the success of the campus' research enterprise. With the divestiture of the hospital, the success of Commonwealth Medicine and the school's increased prestige, state political leaders no longer saw the medical school as a financial liability The UMMS Graduate School of Nursing and Graduate School of Biomedical Sciences, too, were developing well. After a period of stasis in the 1980s and early '90s—with a 3-week furlough of state employees as the nadir, the 1990s, as the previous chapters have shown, became years of significant advances on all fronts.

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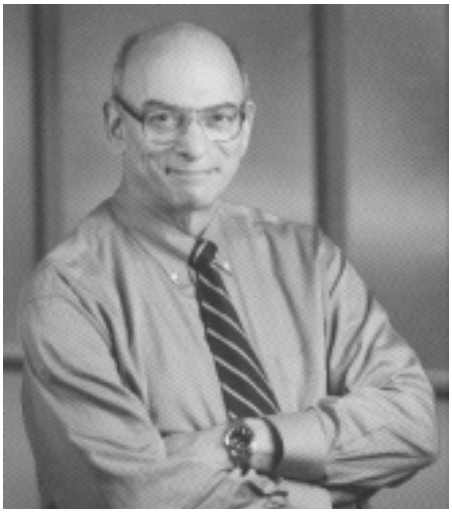
By the turn of the 21st century, the medical school was fully invested in becoming a research-intensive health science center while also capitalizing on its growing reputation for primary care education. As UMMS Chancellor Michael Collins, Chancellor Lazare's successor, wrote in 2009, "Over the course of the last two decades, [UMMS] experienced a period of sustained and substantial growth in its research enterprise. From FY'94 to FY'09, NIH funding of UMMS

investigators has more than tripled ($35 million to $125 million) and from FY'02 to FY'09, total research and development expenditures at UMMS have increased 53% ($134 million to $204 million)."[2] Resources made available through Commonwealth Medicine's consulting activities on behalf of the state of Massachusetts gave essential support to the school's intensified commitment to research.

Managing the tensions that arise between the domains of medical education and basic research, is never easy. Nor, as described in Chapter 9, was it always possible to erase the resentments among more successful and less successful basic science departments. Strains also were evident along another plane, between the clinical system and the medical school, an unfortunate reminder of the university hospital's difficult privatization process, described in Chapter 5.[3] Dr. Lazare, whose interpersonal skills had helped lead the campus back from a period of intense perturbation in 1989-1990, became one of the longest-serving medical school heads in the U.S. Along with Lazare's strong leadership, the creativity and intelligence of his two chief aids, Rick Stanton and Tom Manning, made possible much of the school's growth during the previous 15 years, first through adroit negotiation with state officials and second, through the creation of Commonwealth Medicine. But after so many years, the decision-making powers accrued to the Lazare leadership team became a source of frustration, particularly to the chairs of powerful departments who felt that their own influence had thus been diminished. The fact that neither Stanton nor Manning was a physician or a scientist seems to have exacerbated the irritation of the school's academic leaders. One retired department chair put it this way: "I think one of Aaron's great skills has been to disseminate responsibility while centralizing authority."[4]



Aaron Lazare, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

In 2005, Chancellor Lazare prepared a self-study of his administration as part of a scheduled review of UMass chancellors, which in this case included the heads of the Worcester and the Lowell campuses. His analysis of the currents of dissatisfaction then circulating around the medical school succinctly (and frankly) identified the main sources of tension:

> Current challenges facing the Worcester campus include: problems related to the medical school faculty working for two employers; a lack of understanding/acceptance by some academic leaders over fiscal limitations of the medical school; dissatisfaction on the part of some academic leaders over their perceived lack of input regarding allocations of finances and space; dissatisfaction of some educators and clinicians over the perceived imbalance of school resources dedicated to the research mission; a lack of understanding and/ or commitment of many faculty over the public service mission of the school and the operations of Commonwealth Medicine; dissatisfaction of some of the chairs over the authority delegated to the two deputy chancellors who are not faculty.[5]

At the UMass Trustees' meeting in August 2005, President Jack Wilson announced that Chancellor Lazare's review showed him to be doing "an outstanding job."[6] But the outside reviewers also suggested that Dr. Lazare consider making some changes. They particularly highlighted a need for someone in the top leadership to represent faculty interests and, if possible, clinical faculty in particular. They commented that, "'there needs to be special attention paid to the clinical faculty including reemphasis on the capacity of clinicians to do research and teaching in addition to their clinical work.'" The reviewers also suggested that separating the dean's and chancellor's positions might make this possible.[7]

Over the succeeding year, tensions began to build, exacerbated by external developments. For example, soon after his election in the fall of 2006, Massachusetts Governor Deval Patrick began discussing ways to propel the state forward as "a global leader in the life sciences." Even before his formal proposal, a 10-year, $1 billion Life Sciences Initiative (LSI), was announced in May 2007, informal discussions galvanized president Jack Wilson, the Trustees, and, of

course, the leaders and individual researchers at the Worcester and Amherst campuses. Since 2004, President Wilson and the Board had been looking for ways to increase non-state revenues, especially through science and technology initiatives. Even before Governor Patrick's election, an ad hoc Trustees' task force on Science and Technology began considering the role of stem cell research across the UMass system. Craig Mello's award of a Nobel Prize in the fall of 2006 focused attention on the Worcester campus. With Governor Patrick's declared intention on the table, UMass was put on notice. Solid proposals to attract state funding for the life sciences became an urgent priority.

Governor Deval Patrick *(Public domain photo courtesy of blackpast.org)*

By the time the governor's initiative was formally announced, Chancellor/Dean Lazare had resigned as the medical school's dean and chancellor. The decision was a two-stage process. In the fall of 2005, Dr. Lazare informed the campus that he was undergoing surgery for renal cancer. In February 2006, as a result of the outside reviewers' suggestions noted above, possibly because of pressure to attract research funding, and certainly as a result of the effects of illness, Dr. Lazare agreed to relinquish his duties as Dean but to retain his role as Chancellor.[8]

The appointment of Terence R. (Terry) Flotte, M.D., a pediatric pulmonologist, as Provost, Executive Deputy Chancellor and Dean, was announced on April 2, 2007. Flotte, who was previously the chair of the pediatrics department at the University of Florida College of Medicine and director of the University of Florida Genetics Institute, is an internationally known researcher in the field of gene therapy. In 2005 he received the E. Mead Johnson award from the Society for Pediatric Research, a measure of his standing.[9] As both a clinician and scientist, the new dean was strongly encouraged to focus on "bridging

between the clinical and the research side of things" at UMMS. But, as he soon became aware, other fracture lines could not be ignored. And, just after Dr. Flotte's appointment, Dr. Lazare also resigned as Chancellor, in part due to illness.[10] With clinicians and researchers expressing a sense of exclusion from, or at least frustration with, decision-making at the medical school, Flotte rapidly became convinced that the leadership wasn't "doing enough…to help people see a common vision." From his perspective, the campus had entered a highly promising period, as the new dean told a campus gathering, "poised to bridge the gap between science and the bedside, a goal that entails not only training the right individuals but putting the right systems in place."[11]

Terence Flotte, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

Believing that the campus couldn't "afford to wait a long time" to replace Dr. Lazare, on May 15, 2007 President Wilson appointed Michael F. Collins, M.D. to be acting chancellor of the Worcester campus and Senior Vice President for Health Sciences for the university system. The appointment coincided with Dean Flotte's arrival on campus. (The Board's official vote for Chancellor Collins occurred on June 23, 2007. He was made the permanent chancellor for UMMS in September, 2008.) Dr. Collins, an internist who had attended the College of the Holy Cross in Worcester as an undergraduate and Tufts University as a medical

Michael Collins, M.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

student, had been the president and CEO of the Caritas Christi Health Care System followed by two years as chancellor of UMass-Boston. Now, Drs. Flotte and Collins, with their complementary backgrounds as a clinician-researcher and department chair, and as a clinician-senior health care executive, undertook a partnership to "align education, research and public service as one synchronous unit." Just as in the 1990s, the years from 2007-2015 became pivotal in the medical campus' history.[12]

During their first year at UMMS, the Chancellor and the Dean worked to understand the campus' needs. Dr. Collins conducted a campus-wide strategic planning process that encompassed all constituencies and included input from UMass Memorial Health Care. As he had done at UMass-Boston, he also met at length with every department chair soon after his arrival. Additionally, Dr. Flotte met with John Sullivan, M.D., Vice Chancellor (later, Vice Provost) for Research, and with the Scientific Council. Very quickly, lack of flexible research space headed a list of major unmet needs, but a close second was the need to reconnect clinical and basic science faculty. Dr. Flotte thought this could best be accomplished through a focus on clinical and translational research. As he later emphasized, much of the important work in the basic science departments at that time really dealt with human diseases such as AIDS or diabetes. In other words, it was anything but a fantasy to envision the next step in UMMS' evolution as a much larger investment in research that would ultimately move, as was often said, "from the bench to the bedside." Reflecting on that first year on campus, Dean Flotte recalled,

> ...the piece that I thought was very important was to have people understand the connection between clinical research and basic science research, and how we could align those things...The Chancellor committed the resources, got a lot more resources from the state and from donors, then we put those into creating more numerous and better examples of people who were superb in both clinical and in research—that was an important part of changing the mindset.[13]

To underscore the point, in 2006, the NIH began calling explicitly for closer links

between basic research and applications to human disease, launching the Clinical and Translational Science Award (CTSA) program.[14] With UMass President Wilson and many campus scientists anxious to increase research activity on campus, with the Governor's Life Science Initiative and the NIH's CTSA in the background, the campus was ready to entertain a more deliberate commitment to translational research. The hospital, while no longer part of the UMass system, still was a highly valued clinical partner, an essential collaborator in clinical and translational research as well as in medical education.

Drs. Collins and Flotte thus focused on drafting a proposal for support from the not-yet-formalized Life Sciences Initiative of Governor Patrick and the Legislature. The Life Sciences Initiative was signed into law in 2008 and on September 23, 2009, the medical school was awarded $90 million and permission to borrow another $235 million for what Dr. Collins had termed an "Advanced Therapeutics Cluster" (ATC) to be located in the soon-to-be-built Albert Sherman Center. As originally envisioned, the ATC comprised the RNA Therapeutics Institute, a Center for Stem Cell Biology and Regenerative Medicine, and a Gene Therapy Center.[15] Looked at from the perspective of UMMS' long-gestating desire for prominence in research (in 2013 it was ranked 36th in NIH funding among the 141 U.S. medical schools—reaching the top quartile for the first time),[16] the ATC could be viewed as a fulfillment of intentions dating back at least to the mid-1980s. But, looked at from the perspective of the mid-2000s, especially in light of the events of 2006-2007, the ATC can and should also be seen as auguring a new phase in the history of research at UMass-Worcester—an emphasis on translational and population health research that would elaborate on the accomplishments of world class molecular biologists but link that work to clinical applications.

Such work was not new to the campus. As described in Chapter 9, pediatric virologist John Sullivan and his lab had been working with patients and pharmaceutical companies in clinical trials of Nevirapine since the 1990s. The work of Aldo Rossini, Mike Czech, and others on diabetes was never divorced from development of therapeutic applications. From 2007, Robert Finberg, M.D.,

chair of the department of Medicine since 2000, John Sullivan, M.D., and Gary Stein, Ph.D., were part of the University's Research and Technology Task Force working group (along with Robert Jenal, UMMS Executive Vice Chancellor for Administration and Finance, and research leaders from UMass Amherst) on the development of stem cell research.[17] But, the anticipated trajectory of the campus' research program from 2008 onward called for new initiatives to fully take advantage of the state's investment in UMass-Worcester. In Chancellor Collins' words, "We wanted to catch the wave of greater investments in translational research."[18]

A key component of their strategy was a successful application for a Clinical and Translational Science Award from NIH. Campus leaders proceeded along several fronts in preparation for a CTSA award. Possibly the first step was the re-purposing of a new building being erected next to the hospital visitors' lot, turning it—in collaboration with UMass Memorial Health Care—into a site for specialized ambulatory care and management of clinical trials. The Ambulatory Care Center (ACC) opened in 2010. Second, additional senior faculty were recruited for their dual excellence in clinical and basic research, such as David Harlan, M.D., formerly Chief, Diabetes Research, National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), NIH, who was hired to lead the Diabetes Center of Excellence, and Robert Brown, M.D., recruited from Harvard to continue his work on ALS as chair of the department of Neurology and head of the Neurotherapeutics Institute. In 2015, a reorganized Department of Molecular, Cell, and Cancer Biology was created with Michael Green, M.D. as chair; he was also named the director of the Cancer Center. Catarina Kiefe, M.D., Ph.D., renowned in quantitative health sciences, was recruited to create the Department of Quantitative Health Sciences,

Catarina Kiefe, M.D., Ph.D. *(Photo courtesy of the University of Massachusetts Medical School Archives, Lamar Soutter Library, University of Massachusetts Medical School)*

including divisions focused on biostatistics, population health, health services research, health informatics, outcomes research, and epidemiology of chronic diseases and vulnerable populations. Finally, of course, success in winning state officials' approval for the construction of the new research building, designated the Albert T. Sherman Center (ASC) in honor of the campus' longtime state legislative liaison, "Albie" Sherman, actualized the school's vision for the basic and translational science. In 2010 the school received a 5-year CTSA grant (renewed in 2015). John Sullivan, the CTSA principal investigator, became the director of the Center for Clinical and Translational Research; Katherine Luzuriaga, M.D., succeeded Sullivan in that role in 2012.[19]

Clinical, translational, and basic research may have occupied the center of attention during the new administration's first years, but research was not its only concern. Curriculum reform (the LInC curriculum, described in Chapter 10) also received close attention, emphasizing professional competencies and interprofessional learning. As Chancellor Collins recalled, they aimed at revamping the curriculum and creating a better learning environment at the same time. The ASC, which opened in 2012, was intended to be a genuine campus center. It houses a large cafeteria that can be converted to a meeting space, a café,

The Albert Sherman Center *(Photo courtesy of the Office of Communications, University of Massachusetts Medical School)*

an auditorium, a fitness center, the simulation center, and the learning centers and classrooms for medical and nursing students. Students in all three schools are always a big presence in the ASC. Responding to national trends in health professions education, the school began to cultivate interprofessional learning. Now, as Dr. Collins noted,

> the nursing students actually teach the medical students how to put in an intravenous line, or they work on these inter-clerkship experiences together...
> Our grad students, who study the genetic component of a disease, wanted to see patients with the disease, and so they are now interacting with the medical students.[20]

Greater ethnic, racial, and socioeconomic diversity of the student body continues to be a pressing concern. Several programs mentioned in Chapter 10 have brought students of diverse backgrounds to campus including the UMMS BaccMD program which has the additional benefit of linking the medical school with its sister UMass campuses.[21] Additionally, a new initiative to expand the medical school's class size, which reached 125 in 2009-2010, will bring 25 additional students from outside Massachusetts, 20% of whom will be supported by scholarships. The total medical school entering class will reach 150 starting in the fall of 2016.[22] To accommodate the increased number of students, two new affiliations have been negotiated to provide resources for clinical clerkships, one with Cape Cod Healthcare in Hyannis and another with Baystate Health in Springfield. The latter affiliation also will involve the creation of a regional campus in Springfield, to be called the University of Massachusetts Medical School-Baystate Health, or UMMS-Baystate. The UMMS-Baystate campus will emphasize the teaching of rural and urban primary care, population health, and integrated health delivery. Twenty-five incoming students will be directly admitted to UMMS-Baystate for the fall of 2016, although they will not be in residence at Springfield until their clinical years.[23]

Community and global engagement have also emerged as strong interests of the Worcester campus, an outgrowth of longstanding work by medical and

nursing faculty both in Massachusetts and globally. In 2015, the Paul G. Allen Family Foundation provided a $7.5 million award for UMass faculty to expand their work combatting the Ebola epidemic in Liberia, a nation where UMMS has devoted significant efforts to assisting in the restoration of the health care delivery and medical education infrastructure.[24] For that work and for work by medical students who for many years have volunteered at the St. Anne's free clinic (as well as other sites), the Carnegie Foundation named UMMS the first medical school to receive its Community-Engaged Campus award. The medical school has also begun to collaborate with the U.S. Veterans Administration by creating an ambulatory care clinic for Worcester-area veterans that offers podiatry, optometry, and audiology services.[25]

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The history of the University of Massachusetts Medical School, from its legislative enactment in 1962 to 2015, is a story of remarkable expansion and maturation. A glance at its most recent statistical profile reveals the breadth of this accomplishment. In fiscal year 2014, the state appropriation to the school's budget was $44.6 million, only 4.8% of UMass Med's total funding and revenues. The school's research funding from all sources totaled $215.1 million, up from $61 million 20 years earlier. From 1974, when its first class of 16 students graduated, through 2014, the medical school has graduated 3781 physicians, 1081 graduate-level nurses, and 663 scientists.[26] Envisioned by the Commonwealth's leaders in the 1960s as a medical school for the state's own students, intended to turn out medical practitioners for the state's own citizens, UMMS has definitively reshaped and expanded its original blueprint.

From his first year as founding dean of UMass Medical School, Lamar Soutter refused the legislature's attempts to type-cast the new school as a "community" medical school. For Dr. Soutter, it was unthinkable that UMMS would be any less excellent than the other—the *Boston*—medical schools. This meant that UMMS graduates should have the option to pursue any branch of

medicine they desired to follow, not just primary care. And that, in turn, required building an academic teaching hospital, provoking a drawn-out battle to pay for it after the Nixon administration reneged on its share of the funding. Indeed, successive Massachusetts governors, from Governor Sargent in the early 1970s to Governor Weld 20 years later, eventually gave way against the determination of the medical school (and the University). Along the way, however, the school did accede to the legislature's correct insistence that primary care—family medicine, general internal medicine, general pediatrics—become a central pillar of its educational programs. UMMS has reconfigured its blueprint, but has made sure to retain that important original feature—a dedication to providing doctors for the care of Massachusetts families.

Once the hospital reached a point of modest stability in the mid-1980s, however, another school constituency was ready to make a case for increased attention and resources, namely, the basic researchers. Some of the school's prominent, early basic scientists, such as Maurice ("Moe") Goodman, Ph.D., and William ("Bill") Butcher, Ph.D., chairs of the departments of Physiology and Biochemistry, respectively, persuaded Lamar Soutter to set aside 50% of research overhead funding to subsidize research cores, individual laboratory needs, and the like. By the late-1980s, a considerable sum was available to help underwrite a realignment of research infrastructure that resulted in the creation of the Program in Molecular Medicine, the recruitment of a new generation of molecular biologists and biochemists, and, ultimately, the emergence of UMMS as an internationally known center for molecular medicine.

With the turn of the 21st century, UMMS could be said to have come into its own. UMass Medical School's three mission areas of education, service and research all were flourishing. Primary care education received renewed attention. Curricular initiatives such as the Generalist Physician Initiative and the LInC/ competencies curriculum emphasized clinical skills early in the educational cycle, weaving basic science material into clinical cases more fully than before, and increasingly emphasizing global and community health competency. For the past 20 years, the school has ranked in the top 10% for primary care education.

Whereas its founders defined the school's service mission principally as clinical care for the people of the state, after the hospital's privatization the school redefined "service" instead as public sector activities on behalf of the citizens of the state. Commonwealth Medicine's consulting services and Mass Biologics' not-for-profit vaccine and orphan drug manufacturing became significant components of the school's profile and vital components of its financial base. Not unrelated, from the 1990s forward, UMass Medical School experienced startling success in achieving its aspiration to excel as a research institution. The award of a Nobel Prize, a Lasker Award, a Breakthrough Prize, the presence of many Howard Hughes Medical Institute Investigators and members of the National Academies—described in Chapters 8 and 9—surely surpassed the expectations of the school's founding generation of faculty and its original legislative sponsors. Finally, with the CTSA and other investments in clinical and translational research, the school's accomplishments are encompassing all dimensions of its original mission of education, research, and service.

UMass Medical School undeniably became an academic health science center. A typewritten telephone directory from 1971 lists 110 employees of the medical school, of whom 11 were volunteer clinical faculty. In 2013, UMass Medical School employed about 6800 people, a nearly sixty-fold increase.[27] Yet it has not changed in one crucial respect. As Chancellor Collins pointed out, and as many of those who were interviewed for this book also insisted, despite the campus' growth in ambition and size, it has not lost the collaborative culture so valued by its first generation of students and faculty. In Dr. Collins' words, "what's so unique about the Worcester campus is its collaborative nature... in Boston, that wasn't always the case. But here, there's a collaborative gene, and it's dominant and fully expressed."[28] Nevertheless, it was not easy for UMMS to transcend the limits of its origin story: a school to provide doctors for Massachusetts families. Nor is it inevitable that the school will continue to transcend the boundaries of that vision as it has done during the past two decades by acquiring a national reputation for excellence in primary care education and cutting edge research. Balancing these two domains has never been for the

faint-hearted. But it is a worthy vision, one that twenty-first century citizens of Massachusetts, in the spirit of the school's founders, have come to expect. That alone is testament to UMMS's success.

NOTES

CHAPTER ELEVEN

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8 Aaron Lazare to Members of the University of Massachusetts Worcester Community" (email), Sept. 15, 2005; Aaron Lazare, "President Wilson and Chancellor Lazare initiate changes."

9 Jack M. Wilson to Members of the UMMS Community, "Appointment of Terence R. Flotte, M.D., as Dean/Executive Deputy Chancellor" (email), April 2, 2007.

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11 Terence R. Flotte, "Curriculum Vitae, July 24, 2014, Terence R. Flotte Papers, unprocessed, UM/W; Terence Flotte, Oral History Interview transcript,

pp. 23, 24; Terry Flotte to School of Medicine Faculty and Staff, "Transition Overview" (email), May 16, 2007; Public Affairs and Publications to UMMS Faculty and Department Heads, "Important Message to the UMMS community from University President Jack M. Wilson," May 15, 2007; Public Affairs and Publications, "Message from Dean/Executive Deputy Chancellor Terry Flotte, M.D. (email)," May 16, 2007; Public Affairs and Publications, "Minutes from 'Dialogue and Dessert' with Dean/Executive Deputy Chancellor Terry Flotte, M.D. and Chancellor ad interim Michael Collins, M.D. (email), May 30, 2007, all in PA, unprocessed, UM/W.

12 Public Affairs and Publications, "Minutes from 'Dialogue and Dessert'"; Michael F. Collins, Oral History Interview transcript, pp. 34-38, 42-45, interviewed by Ellen More, April 22, 2015, Worcester, MA, Oral History Collection, UM/W.

13 Flotte, Oral History Interview transcript, pp. 23-24, 26.

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16 Jim Fessenden, "UMass Ranks Highly Among NIH-Funded Medical Schools," *UMassMed Now*, Jan. 22, 2014 (online), accessed at https://web.archive.org/web/20160325161805/http://www.umassmed.edu/news/news-archives/2014/01/umms-ranks-highly-among-nih-funded-medical-schools/ on Feb. 4, 2016.

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18 Collins, Oral History Interview transcript, pp. 43-44 (n. 1 above).

19 Grant Application: University of Massachusetts Center for Clinical and Translational Science, p. 319; Michael F. Collins, "Our Primary Care is the Commonwealth (Convocation Address)," Sept. 10, 2015.

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26 UMass Medical School, "Annual Report," 1998, p. 20, accessed at https://web.archive.org/web/20160325160633/http://www.umassmed.edu/globalassets/office-of-communications/documents/1998.pdf on Feb. 18, 2016; "About UMass Medical School: 2014 Facts and Figures," accessed at https://web.archive.org/web/20160325160753/http://umassmed.edu/about/facts/ on Feb. 18, 2016.

27 University of Massachusetts Medical School, "Employee Directory," April 30, 1971, typescript, 5 pp., Lamar Soutter Collection, UM/W; Mark Shelton, Associate Vice Chancellor, Communications, personal communication, April 20, 2016.

28 Collins, Oral History Interview transcript, p. 38.

Appendix A.

Oral History Interviewees

Abbott, Donald

Aghababian, Richard

Alexander, Mary K.

Anderson, Frederick

Bartke, Andre

Bernhard, Jeffrey

Bertman, Sandra

Bourgeois, Anne

Bova, Carol

Brown, Neal

Bruner-Canhoto, Laney

Bukowski, Jack

Bulger, Roger

Bulger, Ruth Ellen

Butcher, R. William

Candib, Lucy

Carruthers, Anthony

Cassell, Christine

Cheeseman, Sarah H.

Chlapowski, Francis

Cohen, Carole

Collins, Michael

Conte, John

Costanza Mary

Coteleso, Karen

Cutler, Bruce

Czech, Michael

Dalen, James

Davidson, Robin

Davis, Roger

Debenedetto, Diane

Dimitri, Dennis

Dirschel, Kathleen

Dobson, James

Doyle, Dan

Drachman, David

Dukakis, Michael S.

Eckhert, Lynn

Ennis, Michael

Felice, Marianne

Finn, Leonard

Flotte, Terence

Foley, Michael

Frey, John

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Miller, Thomas Bryan

Murphy, Joyce

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Appendix B.

Chancellors and Deans

UMass Medical School and UMass Medical Center

- Lamar Soutter, M.D. – Dean: 1964-1975; Chancellor: 1974-1975
- R. W. Butcher, Ph.D. – Acting Dean: 1975-1976
- Roger J. Bulger, M.D. – Chancellor/Dean: 1976-1978
- H. Maurice Goodman, Ph.D. – Acting Chancellor/Dean: 1978-1979
- Robert E. Tranquada, M.D. – Chancellor/Dean: 1979-1986
- James E. Dalen, M.D. – Acting Chancellor: 1986-1987
- J. Barry Hanshaw, M.D. – Dean/Provost: 1986-1989; Acting Chancellor: 1987
- Leonard Laster, M.D. – Chancellor: 1987-1990
- Aaron Lazare, M.D. – Dean *ad interim*: 1989; Dean: 1990-2007; Chancellor *ad interim*: 1990; Chancellor: 1991-2007
- Michael F. Collins, M.D., FACP – Chancellor *ad interim*: 2007-2008; Chancellor: 2008-present
- Terence R. Flotte, M.D. – Dean: 2007-present

Graduate School of Nursing

- Kathleen M. Dirschel, RN, Ph.D. – Dean: 1985-1991
- Lillian R. Goodman, Ed.D. – Dean: 1991-1999
- Doreen Harper, Ph.D., CS, ANP, FAAN – Dean: 2000-2005
- Paulette Seymour Route, Ph.D. – Interim Dean: 2005-2006; Dean: 2006-2015
- Joan Vitello, Ph.D., RN – Dean: 2015-present

Program in Biomedical Sciences

- George E. Wright, Ph.D. – Acting Dean: 1979-1980
- Trudy G. Morrison, Ph.D. – Acting Dean: 1980-1981
- George E. Wright, Ph.D. – Dean: 1981-1984

Graduate School of Biomedical Sciences

- Thomas B. Miller, Jr., Ph.D. – Dean: 1984-2002
- Anthony Carruthers, Ph.D. – Dean: 2002-present

Acknowledgments

Writing the history of one's own institution might put one in mind of the *New Yorker* cartoon in which a medieval king tells one of his knights, "I'm concerned about my legacy. Kill the historians." On the contrary, my colleagues at UMass Med have been welcoming and genuinely collaborative. In light of the paucity of records available when I first began this project (the school's archives did not yet exist), my work depended on the graciousness of dozens, perhaps hundreds, of current and former UMass employees who spent hours of their time participating in oral histories that provided enormous insight into the evolution of the institution. With the exception of the late Lamar Soutter, M.D., every UMass-Worcester dean and chancellor agreed to be interviewed, adding greatly to my understanding of the challenges facing this institution. Other important figures in its history, notably H. Brownell (Brownie) Wheeler, M.D., founding chair of the department of Surgery, and H. Maurice (Moe) Goodman, Ph.D., founding chair of the department of Physiology, not only devoted hours to successive oral history interviews, but also donated extensive collections of documents that proved invaluable. The (at last count) 137 individuals who agreed to undertake an oral history interview for this book have contributed a measure of depth and immediacy to my understanding of UMMS history for which I am grateful. A complete list of their names appears in Appendix A.

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