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Teaching Evidence-Based Literature  
Retrieval to Medical Students and  
Residents

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# Teaching Evidence-Based Literature Retrieval to Medical Students and Residents

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## University of Massachusetts Medical School

Evidence-Based Medicine is formally introduced to students in the 3rd year. The library has assumed the role of coordinating the instruction of EBM longitudinally throughout the year to assure that core concepts are reinforced and other central issues are not missed. Library educators provide an overview of EBM concepts, terminology and resources in the 3rd year orientation and then co-teach specific components of EBM within the Family Medicine, Psychiatry and Pediatric Clerkships. Through a series of handouts, students are exposed to issues relating to best resources, tools for using the resources, therapy, diagnosis, bias, basic statistics and harm.



## University of Medicine and Dentistry of New Jersey Robert Wood Johnson Medical School

In collaboration with faculty in the Department of Medicine at UMDNJ -Robert Wood Johnson Medical School, UMDNJ librarians investigated the impact of an EBM curriculum on resident use of EBM resources in simulated clinical experiences.

**Methods:** Fifty medicine residents were randomized to an EBM teaching group or control group. Residents assigned to the EBM teaching group participated in six 2-hour workshop sessions that focused on critical appraisal skills and using primary and filtered EBM resources. Control group participants were exposed to some EBM principles through weekly journal club. The Fresno Test, a validated EBM knowledge test, was administered pre- and post intervention for both groups. To simulate clinical encounters, an online instrument comprised of clinical vignettes, was developed.

**Conclusion:** The teaching of EBM skills and exposure to EBM resources led to increased use of primary or pre-appraised evidence-based resources, but did not improve performance on web-based clinical vignettes. Use of non-medical search engines was surprisingly high in both groups. Future studies are necessary to examine the impact of EBM teaching on clinical outcomes.

## Introduction & Purpose

As the emphasis on Evidence-Based Practice in the 1980's and 90's increased, the need for clinicians to be able to locate the "best available clinical evidence" grew proportionately. Responding to this need, academic medical librarians have continually created and implemented educational opportunities designed to instruct clinicians on effective searching of biomedical databases to find "the best evidence needles" in what is often a very-large haystack. Many of these educational opportunities are directed at medical students and residents with the goal of providing skills, strategies and tools that will assist them in locating the best evidence throughout their careers. This poster provides a sample of the evidence-based searching programs offered at NEGEA-affiliated medical libraries.



Print Resources [E-Textbooks] [Databases] [E-Journals] [Web Resources]

**Evidence-Based Medicine (EBM)**  
See also: Clinical Practice Guidelines: Health Technology Assessment

**Print Resources**  
WB 102 [Evidence-Based Medicine]

**E-Textbooks** [Top]

- ACP Medicine (Scientific American Medicine)
- ACP's PIER: Physicians' Information and Education Resource
- BMJ Clinical Evidence
- Current Practice Guidelines in Primary Care 2006
- Expert on Health Technology Assessment (HTA) Information Resources
- Evidence Base for Diabetes Care
- Geriatric Medicine: An Evidence Based Approach
- Surgical Treatment - Evidence-Based and Problem-Oriented
- Treating Alcohol and Drug Abuse
- Treating and Preventing Obesity

**Databases** [Top]

- ACP Journal Club (ACP)
- Cochrane Controlled Trials Register (CCTR)
- Cochrane Database of Systematic Reviews (COCHR)
- Cochrane DSR, ACP Journal Club, and DARE (Full-Text)
- Database of Abstracts of Reviews of Effectiveness (DARE)

**Family Medicine Clerkship** Alumni Medical Library Boston University Medical Center

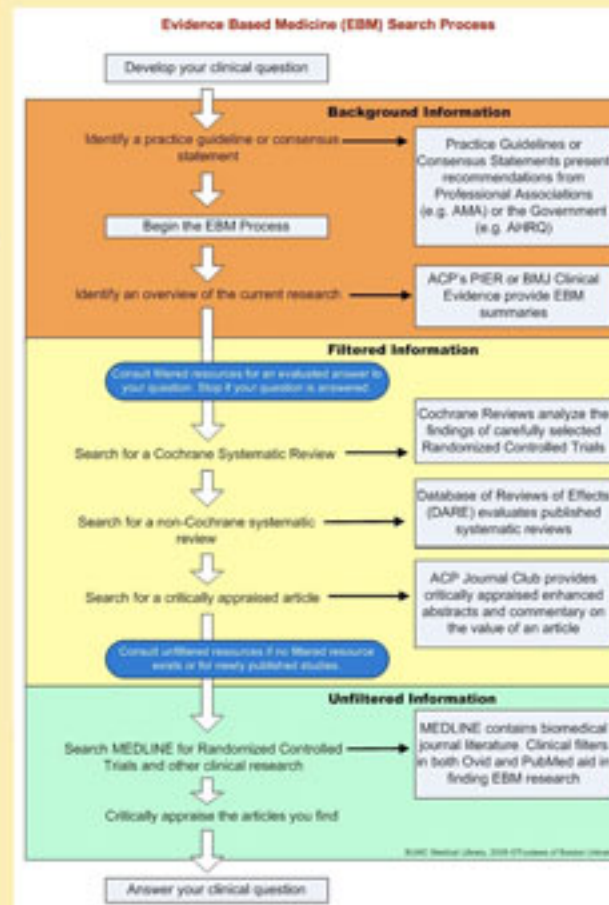
Sample Case | EBM Subject Guide | EBM Search Process | Civil Medicine | Assignment

Please read the case and identify the Patient, Intervention, Comparison and Outcome.

**Case:**

You recommend to Judith, a 65 year old patient you recently diagnosed with Type II Diabetes Mellitus, that she should purchase a home glucose meter to help improve glycemic control. Judith says that she isn't sure that she wants a home glucose meter. She mentions that her neighbor who is also diabetic, found that a home glucose meter didn't seem to help at all. Judith then asks you to find hard evidence that shows that the use of home glucose monitor is more effective than not using one to control her diabetes. You say you will get back to her before the end of the day.

Why discuss this as a group and use this case as an example as we search the EBM resources.



## Boston University School of Medicine

As an integral component of the School's six-week Family Medicine Clerkship, third-year medical students interact with medical librarians through a combination of online interactive tutorials and in-person instruction. This multi-faceted approach, which focuses on formulating clinical questions and searching the biomedical literature, is directly tied to the students' current clinical experiences. For example, following the Library's in-class presentation of a simulated patient case and related literature search demonstration, the students are required to apply their new skills to answering a question from their clinical experience. To support this training the Library utilizes the following resources:

\*Tutorials, designed by the Library, that introduce EBM's main concepts and guide students through forming a clinical question.

\*A subject guide that provides quick and easy access to the plethora of EBM information resources.

\* Online forms that increase student engagement during in-class sessions and transmit student data to faculty for grading.



## University of Vermont College of Medicine

UVM introduces the concept of critical appraisal of the literature early in the curriculum through a librarian-led lecture focusing upon the identification and selection of relevant and high quality articles, and practice in evaluating articles during small group sessions with preceptors. In the 2nd year clerkship "Bridges", librarians at the UVM campus and at the Maine clerkship site lead sessions on clinical decision making and answering clinical questions using best evidence. Critical appraisal worksheets and an understanding of the PICO concept (forming a question through the identification of a specific patient, chosen intervention, possible comparison and desired outcome) are components of this learning activity.

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