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Screening for type 2 diabetes: Why patients who self monitor glucose might be more depressed

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Why patients who self monitor glucose might be more depressed

Lucy M Candib

BMJ 2008;336;1263-1264
doi:10.1136/bmj.a246

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LETTERS

PATRICIA DE LA ROSA/STONE/GETTY IMAGES

SCREENING FOR TYPE 2 DIABETES

Screen women with gestational diabetes for type 2 diabetes

One way to reduce type 2 diabetes would be to target women with gestational diabetes.[1] Maternity services are increasingly screening women and treating gestational diabetes, after the demonstration of significant perinatal benefits.[2]

Within 10 years, 35-60% of women with gestational diabetes will develop type 2 diabetes.[3] These women are an already identified high risk group. Their children are also more likely to be obese and share a genetic propensity to type 2 diabetes.[4]

Following up women with gestational diabetes allows the targeting of two high risk people without additional screening. Many health service contacts are made in the first year of a child's life, therefore interventions may be easily delivered. Also, many women are receptive to health advice around the time of a birth when new lifestyle patterns are being established.

Improved follow-up of these women with promotion of diet, exercise, and pharmacology, together with prolongation of breast feeding and subsequent healthy infant feeding is likely to be effective for mother, child, and the health service.

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Competing interests: None declared.

1 Gillies CL, Lambert PC, Abrams KR, Sutton AJ, Cooper NJ, Hsu RT, et al. Different strategies for screening and prevention of type 2 diabetes in adults: cost effectiveness analysis. *BMJ* 2008;336:1180-5. (24 May.)
2 Crowther CA, Hiller FE, Moss JR, McPhee AJ, Jeffries WS, Robinson JS, et al, for the Australian Carbohydrate Intolerance Study in Pregnant Women (ACHOIS) Trial Group. Effect of treatment of gestational diabetes mellitus on pregnancy outcomes. *N Engl J Med* 2005;352:2477-86.
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4 Schaefer-Graf UM, Hartmann R, Pawliczak J, Passow D, Abou-Dakin M, Vetter K, et al. Association of breast-feeding and early childhood overweight in children from mothers with gestational diabetes. *Diabetes Care* 2006;29:1105-7.

Self monitoring of blood glucose: the cost to patients

Simon et al found that glucose self monitoring by patients with non-insulin treated type 2 diabetes increased NHS costs without benefiting glycaemic control.[1] Less intensive and more intensive self monitoring cost £92 (€117; $182) and £84 more than usual care.

Financial cost is just one factor to consider when weighing the benefits and costs of interventions. Patients who self monitored were more anxious and depressed than controls. Another cost is the time it takes to self monitor three times daily for two days a week[2] when each self monitoring episode takes around three minutes.[3]

Self monitoring at the prescribed frequency would take 15.6 hours annually. For working age adults, the wage rate represents the gain from working an hour and the opportunity cost of an hour spent on unpaid activities, and it can be used to translate time costs into monetary terms.[4] Using the 2005-6 adult minimum wage (about £5), 15.6 hours is worth £78—nearly as much as the additional NHS costs of the intervention. Valued at the average wage rate, time costs would greatly exceed the NHS costs.

People who develop self care recommendations should recognise the time requirements placed on patients. Although the NHS does not pay these costs, they affect patients' willingness to comply with recommendations. Time costs may help explain why at the end of the first year only 67% of patients in the less intensive group and 52% in the more intensive group still self monitored.[2] For patients who stopped monitoring, the staff effort paid for by the NHS, and some of the supplies, were wasted.

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Competing interests: None declared.

1 Simon J, Gray A, Clarke P, Wade A, Neil A, Farmer A, on behalf of the DiGEM Trial Group. Cost effectiveness of self monitoring of blood glucose in patients with non-insulin treated type 2 diabetes: economic evaluation of data from the DiGEM trial. *BMJ* 2006;336:1177-80. (24 May.)
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Why patients who self monitor glucose might be more depressed

O'Kane et al suggest that the negative effect of self monitoring of blood glucose might relate to "the enforced discipline of regular monitoring without any tangible gain."[1] I suggest an alternative explanation based on personal experience. In the first few years after diagnosis, many people do not really believe that they "have" diabetes because they feel well, especially those with easily controlled disease who are unlikely to have polyuria and polydipsia. The diagnosis only emerges from blood tests. They just take the pills and slip back into believing that "I don't really have it, I could get over it, it will go away if I exercise and eat better." Self monitoring of blood glucose throws it in your face. You can't deny that two pieces of pie did unmentionable things to your postprandial value. You must admit again and again that you have diabetes. Unmonitored patients do not have this constant reality check.

During 12 months of observation, monitored patients were more depressed because they confronted the reality of a chronic disease, while unmonitored patients could believe what they wanted as long as they followed the regimen. The real difference will come with the deterioration in their pancreatic function, when unmonitored patients will have to face the music too. At that point they may look "more depressed" while monitored patients might be more at ease with their diagnosis. One year is too short a time to incorporate the reality of a

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chronic disease into one's mindset. Only a much longer project would validate the differences in depression and long term outcome.

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Competing interests: None declared.

1 O'Kane MJ, Bunting B, Copeland M, Coates VE, on behalf of the ESMON study group. Efficacy of self monitoring of blood glucose in patients with newly diagnosed type 2 diabetes (ESMON study): randomised controlled trial. *BMJ* 2008;336:1174-7. (24 May.)

BROADENING ACCESS TO MEDICINE

Editorial opposes social justice and equal opportunity

Ip and McManus seem to conflate "political correctness" with the principles of social justice and equal opportunity that underpin widening access initiatives.[1] Shouldn't we have social justice and equal educational opportunity within the medical profession? Or do the authors think that these goals have already been "meritocratically" achieved and are redundant? As Wright states, their observation on the association between social class and intellect, with its causal overtones, requires challenge and more nuanced consideration.[2]

The authors selectively quote evidence from a report on the influence of schooling on higher education achievement.[3] The report found that students from independent schools (which around 30% of medical applicants in the UK have attended) achieve less than students from the state sector with equivalent A level grades. Ip and McManus also misrepresent the effect of school performance, which was reported as varied. The report also says that subjects allied to medicine and engineering have the strongest school performance effects.[3]

They also contend that such initiatives are costly but make no reference to comparative data for the cost of conventional routes and students. Such initiatives will have associated costs, but we need comparative cost data to make valid and robust conclusions about their relative worth.

The authors conclude by asking whether it is "worth our while to widen participation, particularly if this risks reducing standards?" But do we really risk reducing standards? Retention rates are similar for the extended medical degree programme, and some students have results in the top 20% of their cohort. Research shows that adjusted entry criteria students from poor performing schools have equivalent results in first year final exams.[4]

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Competing interests: None declared.

1 Ip H, McManus I. Increasing diversity amongst clinicians. *BMJ* 2008;336:1082-3. (17 May.)
2 Wright S. Missing the point [electronic rapid response]. *BMJ* 2008 http://bmj.com/cgi/eletters/336/7653/1082#195742.
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4 St George's University of London. *Widening participation works, results show*. 2008. www.sgul.ac.uk/index.cfm?5BD25ADF-99A1-3752-953B-E079E11F4373.

The extended medical degree programme at King's

We would like to comment on Ip and McManus's editorial on our extended medical degree programme (EMDP) at King's College London.[1]

Firstly, our aim in setting up the programme was to enable bright motivated pupils from inner London state schools to become doctors; we had no intention of future matching of doctors to patients, in terms of class or ethnic origin.

Secondly, the 50 EMDP places are extra places, funded by the Higher Education Funding Council for England and added to the 360 places on our conventional medical course.

Thirdly, we believe that we are not lowering standards with the EMDP students. Although they are given lower A level offers to enter medical school, once they are on the course they have to take the same assessments and achieve the same pass mark as conventional students.

Interestingly, in the two most recent assessments, more than 20% of the EMDP students came in the top 20% of the whole cohort. The increased diversity provided by the EMDP students has had a positive impact, and the medical school and these students are justifiably proud of their achievements.

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Competing interests: None declared.

1 Ip H, McManus IC. Increasing diversity among clinicians. *BMJ* 2008;336:1082-3. (17 May.)

Lessons in medical school access from America

Ip and McManus worry that widening participation schemes for entry to medical school sacrifice "equality of opportunity" because applicants are not all "treated uniformly."[1] But it could be argued that those entering medical school through such schemes have not had equal opportunity to attend high achieving schools.[1]

A scheme run by a university in the US might solve several of the objections to such schemes and help redress the class divisions in the UK school system. Rather than considering exam results only, the university gives weight to the student's rank within the school. An admissions policy that requires students to be in the top X% of their year treats all students uniformly and recognises that it can be as difficult to get a B grade from a poorly performing school as an A grade from a high performing school. If such a scheme were adopted, would it affect the distribution of the children of ambitious professionals in UK schools—would middle class parents choose schools in deprived areas to "game" the system?

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Competing interests: JPF came from a working class background and state comprehensive school with entry to medical school through a conventional route.

1 Ip H, McManus IC. Increasing diversity among clinicians. *BMJ* 2008;336:1082-3. (17 May.)

Is the extended medical degree programme misguided?

If tomorrow's doctors should reflect the social and ethnic diversity of our country,[1] why is the high proportion (91%) of ethnic minorities among extended medical degree programme students applauded when half the conventional students are from this group anyway?

Perhaps we need a selection policy to ensure that the ethnic mix of our doctors reflects the composition of our society (8-9%).[2]

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Competing interests: None declared.

1 Garlick PB, Brown G. Widening participation in medicine. *BMJ* 2008;336:1111-3. (17 May.)
2 Gill PS, Kai J, Bhopal RS, Wild S. *Black and minority ethnic groups*. http://www.hcna.bham.ac.uk/series/bemgframe.htm.