



Diabetes in Africa: the situation in the Seychelles

P Bovet, A Gabriel, C Shamlaye and F Paccaud

Heart 2009;95;506-507

Updated information and services can be found at:

<http://heart.bmj.com/cgi/content/full/95/6/506-a>

These include:

References

This article cites 8 articles, 1 of which can be accessed free at:

<http://heart.bmj.com/cgi/content/full/95/6/506-a#BIBL>

Rapid responses

You can respond to this article at:

<http://heart.bmj.com/cgi/eletter-submit/95/6/506-a>

Email alerting service

Receive free email alerts when new articles cite this article - sign up in the box at the top right corner of the article

Notes

To order reprints of this article go to:

<http://journals.bmj.com/cgi/reprintform>

To subscribe to *Heart* go to:

<http://journals.bmj.com/subscriptions/>

Featured correspondence

presently does. This is because it is politicians and not NICE who are directly accountable to the key stakeholders—that is, the public, whose dual guise as patients and tax payers drives this dilemma.³

Questions of clinical-effectiveness can yield to randomised controlled clinical trials. However it is clear, from the principle of fact-value distinction first expressed by David Hume,⁴ that the value of an intervention cannot be determined from the trial data because trial data only ever return a factual conclusion. Questions of value yield to the principles of ethics. Questions of cost yield to principles of economics.

As the present situation with drug-eluting stents demonstrates there seems to be a need to engage doctors who can wield the full spectrum of such principles with the aim of better protecting the interests of patients.

R Mohindra

Correspondence to: Dr R Mohindra, 63 Newlands Road, Newcastle upon Tyne NE2 3NT, UK; raj.mohindra1@googlemail.com

Competing interests: None declared.

REFERENCES

1. **de Belder MA.** NICE guidelines for the use of drug-eluting stents: how do we establish worth? *Heart* 2008;**94**:1646–8.
2. **Rawlins M,** Culyer AJ. National Institute for Clinical Excellence and its value judgments. *BMJ* 2004;**329**:224–7.
3. **Burke K.** NICE needs sweeping changes to maintain credibility, say MPs. *BMJ* 2002;**325**:5.
4. **Hume D.** *Treatise on human nature*. 1738. Book III part 1. Available at http://oll.libertyfund.org/?option=com_staticxt&staticfile=show.php%3Ftitle=342&chapter=55211&layout=html&Itemid=27 (accessed 17 December 2008).

The author's response: Dr Mohindra raises interesting points.

As regards clinical-effectiveness, we must not confuse effectiveness in reducing restenosis and the need for repeat treatment (about which there is no doubt) and the potential for a reduction in later morbidity and mortality (about which there is continuing debate). The point is that we cannot exclude the latter possibility and this raises the question of sensitivity analyses in cost-effectiveness analyses. The NICE models of cost-effectiveness usually result in a black and white view of the world, when there are many criteria that influence treatment decisions in individual patients. There is considerable uncertainty in these economic models, which should be recognised.

Dr Mohindra writes that any balance to be struck is between value and cost, not between clinical-effectiveness and cost-effectiveness, with value being seen both in terms of effectiveness and how the patient perceives this. Many others have discussed the limitation of relying wholly on an

assessment of cost per quality-adjusted life year (QALY) in this regard and so there is nothing new here. NICE itself has stated that it does not have a threshold at which cost-effectiveness becomes unacceptable, although greater reliance on other factors is required for costs per QALY of more than £20 000.¹ He is right to point out though that I did not highlight this distinction in my editorial.

As regards the cost of stents, he is correct that this is something that currently depends on market forces; because of this, the cost can vary across the country. I am informed that the NICE committee had some difficulty dealing with this problem and ultimately decided to use an “average” cost of a bare metal stent, although for some reason they were provided with costs that were significantly lower than the costs identified by other means.

The value of a treatment as perceived by the patient is clearly very important. Consider a “low risk” situation where a patient treated with a bare metal stent has a 10% risk of angiographic restenosis and a clinical restenosis rate of 5% (ie, a 1 in 20 chance of requiring a second treatment). For the same patient a drug-eluting stent might offer a 5–6% chance of angiographic restenosis with a 2–3% chance of clinical restenosis (ie, a 1 in 50 chance of requiring a second treatment). I don't think many patients would find this choice very difficult but, depending on the relative costs of the stents, the NHS might find the 2–3% absolute difference unacceptable. One would have to be extremely sure of the reliability of cost-effectiveness analyses before denying this benefit to patients.

Because value is more difficult to establish than effectiveness, the current NICE methodology puts great pressure on clinicians to deny patients a better treatment. In calling for this difference between effectiveness and value to be considered, Dr Mohindra calls for greater involvement of politicians in the process and yet NICE claims to be an “independent body”. He has not outlined what sort of involvement he would find helpful. There is a possibility that greater political involvement might lead to a reduction in the range of cost per QALY that is deemed acceptable and so greater political involvement might make matters worse rather than better. Politicians in committee will always ask for a line to be drawn somewhere (although they sometimes react differently when confronted with a specific constituent's medical problems), whereas patient groups and clinicians will always want what is “best”, regardless of cost. Some system is needed if only to avoid “the tragedy of commons”, whereby the individual demand by every patient for the best current treatment regardless of cost leads to a level of healthcare spending that cannot be provided.² Introducing an ethicist into the process might help, if only to outline the

dilemmas when cost-effectiveness analyses fall into the zone when additional justification is required to support the use of a new treatment.

Dr Mohindra has written elsewhere about the “affordability gap”—that is, the gap between evidence-based treatments and NICE-approved treatments.³ This is currently under great scrutiny, especially in the field of cancer treatment, where we might see that the value of a few additional weeks of life outweighs the results of cost-effectiveness analyses. In a recent presentation to the British Cardiovascular Society, I suggested that NICE *does* affect the clinician's role as the patient's advocate, but its system of appraisal, however imperfect, does at least provide a societal framework that both doctors and clinicians can live with as long as it is fair, consistent, intellectually robust and transparent. Many feel that the NICE review of drug-eluting stents has been anything but.

The debate about how to value a treatment will continue.

M A de Belder

Correspondence to: Dr M A de Belder, Cardiothoracic Division, The James Cook University Hospital, Marton Road, Middlesbrough TS4 3BW, UK; mark.debelder@stees.nhs.uk

REFERENCES

1. **Raftery J.** Review of NICE's recommendations, 1999–2005. *BMJ* 2006;**332**:1266–8.
2. **Ferner RE,** McDowell SE. How NICE may be outflanked. *BMJ* 2006;**332**:1268–71.
3. **Mohindra RK,** Hall JA. Desmond's non-NICE choice: dilemmas from drug-eluting stents in the affordability gap. *Clinical Ethics* 2006;**192**:105–8.

Diabetes in Africa: the situation in the Seychelles

To the editor: Professor Levitt recently reviewed the epidemiology, management and healthcare challenges related to diabetes in Africa,¹ but did not include data from the Seychelles. We would like to add some information from the Republic of Seychelles, an island state located 1800 km east of Kenya, where the majority of the population are of African descent.

Based on two independent surveys of the population aged 25–64 years in 1989 and 2004, the prevalence of diabetes (fasting blood glucose ≥ 7 mmol/l or treatment, or both) increased from 6.2% to 9.6% in men and from 6.1% to 9.2% in women.^{2–4} The prevalence reached 11.5% in 2004 when results of the oral glucose tolerance test were also considered. The prevalence of obesity increased markedly during this interval^{4–5} and overweight subjects accounted for 49% of all cases of diabetes in 2004.⁴ Furthermore, prediabetes was found in an additional 22% of the population.⁴

Of all cases of diabetes in the population aged 25–64, 54% were aware of the diagnosis with most of them taking glucose-lowering drugs.⁴ However, less than a fifth of diabetic people receiving treatment had blood glucose, blood pressure or blood cholesterol below the recommended targets.⁴ Furthermore, we found that people with prediabetes already had levels of several cardiometabolic risk factors which had worsened and were therefore at increased cardiovascular risk.⁶ We also confirmed a strong association between diabetes and microalbuminuria in the Seychelles⁷ and found a high prevalence of the metabolic syndrome.⁸

Our figures further contribute to a map of the “diabesity” epidemic in the African region. Limited therapeutic control among diabetic patients in the Seychelles is challenging since this occurred while the population was well aware of diabetes following sustained awareness campaigns since the late 1980s, and healthcare, including drugs in all

major therapeutic classes, is provided at no direct cost through an easily accessible network of health centres. The situation in the Seychelles may provide a good case study for current and future trends in rapidly developing countries in the continent and, possibly, for middle-income countries in other regions.

P Bovet,^{1,2} A Gabriel,¹ C Shamlaye,¹ F Paccaud²

¹Ministry of Health and Social Development, Victoria, Republic of Seychelles; ²Institute of Social and Preventive Medicine (IUMSP), University of Lausanne, Switzerland

Correspondence to: Dr P Bovet, Institute of Social and Preventive Medicine (IUMSP), University of Lausanne, Bugnon 17, Lausanne 1005, Switzerland; pascal.bovet@chuv.ch

Competing interests: None.

REFERENCES

1. **Levitt N.** Diabetes in Africa: epidemiology, management and healthcare challenges. *Heart* 2008;**94**:1376–82.
2. **Tappy L, Bovet P, Shamlaye C.** Prevalence of diabetes and obesity in the adult population of the Seychelles. *Diabet Med* 1991;**8**:448–52.
3. **Bovet P, Shamlaye C, Gabriel A, et al.** Prevalence of cardiovascular risk factors in a middle-income country and estimated cost of a treatment strategy. *BMC Public Health* 2006;**6**:9.
4. **Faeh D, William J, Tappy L, et al.** Prevalence, awareness and control of diabetes in the Seychelles and relationship with excess body weight. *BMC Public Health* 2007;**7**:163.
5. **Bovet P, Chiolero A, Shamlaye C, et al.** Prevalence of overweight in Seychelles: 15-year trends and association with socio-economic status. *Obes Rev* 2008;**9**:511–7.
6. **Faeh D, William J, Yerly P, et al.** Diabetes and pre-diabetes are associated with cardiovascular risk factors and carotid/femoral intima-media thickness independently of markers of insulin resistance and adiposity. *Cardiovasc Diabetol* 2007;**6**:32.
7. **Prujm MT, Madeleine G, Riesen W, et al.** Prevalence of microalbuminuria in the general population of Seychelles. *J Hypertens* 2008;**26**:871–7.
8. **Kelliny C, William J, Riesen W, et al.** Metabolic syndrome according to different definitions in a rapidly developing country of the African region. *Cardiovasc Diabetol* 2008;**7**:27.