Reviewer's report

Title: The Economic Costs of Diabetes Complications in the United Arab Emirates

Version: 3 Date: 9 November 2009

Reviewer: Mark Pennington

Reviewer's report:

Major Compulsory Revisions - none necessary in my view

Minor essential Revisions - there appear to be a few places where a spellchecker has supplied the wrong word-

Pge 3, second para - 'most of these costs incurred by managing the squeal of DM [6].' squeal should be sequelae?

Page 7, second para - 'In addition to the routine management the following sequel of chronic diabetic...' Sequel should again be sequelae?

There are other minor typos and areas where the english could be improved:

Page 4 last para - I would prefer the following wording: 'However, despite that, few efforts have been made to estimate its costs in the Middle East; and only two studies have been published in the rest of the region..'

Page 4 last para - (approximately 500,000 population).

Page 11 last para - the first sentence of this paragraph is simply a repeat of the last sentence of the previous paragraph

Page 15 last para - 'However, to offset the potential costs of screening it may be worthy...' worthy should be worth

Page 14 last para - 'more efforts are thus needed to address the burden of problem on health care resources available in the country...' Do you mean burden of the problem?

Page 14 first para - There is some interesting data here but the use of the terms per capita and per patient is confusing. I would interpret the denominator in per capita costs to be the entire population, whereas the denominator for per patient costs would be DM patients. The last sentence of the paragraph refers to both. We need some clarity here and I would like to know the prevalence of DM in Iran to underscore the per capita costs (if available).

Page 4 first para - can we have the cost year for the data from europe (Code-2)?

Page 15 second para and in general. You observe that costs are higher for patients diagnosed incidentally and suggest that their disease has progressed
further. I'm sure that this is true. It's not clear, however, that patient costs would fall if they were diagnosed earlier. They are likely to commence treatment earlier and undoubtedly initial costs would rise. Whether this is offset by a delay on the onset of micro and macro vascular complications, and the costs that accompany it, is not clear. I would expect the progression of the disease to be slowed in patients with earlier diagnosis, but the overall costs for these patients may not be lower once future costs are discounted.

It is highly likely that patients will enjoy increased HRQoL through earlier diagnosis. I would be very surprised if any cost savings would offset the cost of a mass screening campaign. However, the benefits in terms of increased HRQoL MAY justify the cost of screening. To answer this question would require an economic evaluation of screening for DM.

I certainly do not support the assertion that, 'no matter how these costs are calculated, the price in terms of human suffering is always greater and should justify all prevention efforts.' Firstly, if the price in human suffering is less than the cost of prevention then that prevention is an inefficient use of resources. Few health care systems would prescribe treatments for headaches that cost hundreds of dollars - the human suffering is not worth that cost. However great the suffering from DM may be it cannot justify prevention at any cost. There are clearly competing uses of those scarce health care resources. A large burden of disease of itself does NOT justify a large preventative programme. There must be evidence that the programme can reduce the burden sufficient to justify its cost. Alzheimer's disease exacts a large burden in the UK, but we do not fund large preventative health care programmes for Alzheimer's. This would only be justified if there were programmes available that could reduce this burden. There are a number of potential programmes to reduce the incidence of DM, and to help sufferers manage their condition better, but we should be confident that their impact justifies their cost before implementing them.

Discretionary Revisions -

the data you cite on page 3/4 on the costs of DM is quite old, are there any newer estimates available?

Page 7 middle para - you say that you did not correct for costs not attributable to DM and hence that you have overestimated. I appreciate that this may be difficult to do, but my concern is that you may have significantly overestimated. How can I be confident that you have not? Do you have some way to estimate what proportion of costs should actually have been attributable to another condition. I think you should present some estimate of this or state more clearly that the costs you estimate are an overestimate, and the true costs are likely to be less than your estimates.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published
**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.