Reviewer’s report

Title: Applying a private sector capitation model to the management of type 2 diabetes in the South African public sector: a cost-effectiveness analysis.

Version: 1  Date: 20 February 2014

Reviewer: Elizaveta Sopina

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Major Compulsory Revisions:

The question posed by the authors is very interesting and internationally relevant. Diabetes, like many chronic conditions, is a growing issue and will continue to put increasing pressure on health care budgets. Therefore, investigating cost-effectiveness of various ways of managing this condition is an important research area. However, given the shortcomings in the methodology I feel the findings would not be sufficiently reliable and the paper needs further work. I highly recommend revising the methodology for this study and conducting further analysis before seeking publication.

The description of the methodology used in this study is lacking significant detail. A number of aspects of the methodology remain unclear.

The study states that ‘cost-effectiveness’ modelling was performed, however, does not explain what type of model was used. This needs to be described in more detail and the choice of model needs to be justified. However, it is perhaps advisable to reconsider the type of model used. It appears that the costs were only considered for a year, and all patients were considered to have the same needs. Given that diabetes is an incurable long-term condition, this approach taken by this study seems unsuitable – as both the effects and costs of a significant intervention like the one investigated are likely to have a lasting impact and need to be considered over a longer time frame.

The perspective of the study also needs to be explicitly stated – was it from the point of view of a health system, the patient, the government, etc?

I would recommend reconsidering the approach to costing the comparator arm of the model. It is stated that the comparator model was ‘set at the tertiary level of care because the studies references were undertaken in tertiary hospital settings’. From this description it is unclear whether or not the reality of Diabetes management in South Africa is in fact reflected. A more robust approach to estimating costs for the base case is to simulate the real-world scenario as closely as possible in the model by identifying the patient pathways and then populating these pathways with costs – either from primary or published data.

There is also a lack of clarity around the medication included in the analysis. Given that diabetes is often accompanied by a myriad of comorbidities, it is
important to ensure and state in the paper that the medications included in the analysis were indeed only diabetes-related.

Discretionary Revisions:
TyposMinor errors:
• The first sentence in Background section – the word ‘observable’ needs to be removed or the sentence needs rephrasing.
• The authors refer to ‘SEDMSA’ guidelines. This should be corrected to SEMDSA – Society for Endocrinology, Metabolism and Diabetes of South Africa.

Level of interest: An article of limited interest

Quality of written English: Acceptable

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