Reviewer's report

Title: The economic impact of diabetes through lost labour force participation on individuals and government: evidence from a microsimulation model

Version: 2
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Reviewer: Nick Hex

Reviewer's report:

The article is well written and makes some interesting points about the indirect costs of diabetes. The quantification of the loss of income at the macroeconomic level is a helpful addition to the literature in this area. The description of methods is clear and the methods themselves appear to be robust. The results are presented clearly and the conclusions flow logically from the results.

I have a number of comments:

1) Major compulsory revision: The article would benefit from a statement of the limitations of the analysis. There are three key areas where I think a clear outline of limitations would be helpful.

Firstly, the analysis is limited to people who have reported that they are no longer in work as a result of having diabetes. It does not include other forms of absenteeism (e.g. time off work for sickness), presenteeism, GDP lost through early mortality, the economic impact of carers having to give up work etc. I appreciate that the study did not set out to cover these areas, which is fine, but as the title refers to the economic impact of diabetes through lost labour force participation, I think a reference to these other forms of indirect economic impact would be warranted, somewhere in the text.

Secondly, the age range is limited to 45-64 years. The report alludes to this being the age range which experiences the largest economic impact but some clarity about why the data for people below 45 years was not analysed would help.

Thirdly, the calculations of lost income taxation revenue and GDP do not appear to take into account levels of unemployment and potential 'friction periods', time in which a replacement worker might be found. The WHO guide to identifying the economic consequences of disease and injury refers to this on p 26. This may not be a factor in Australia at present but it should be acknowledged and explained.

If these points are addressed I would be happy to recommend acceptance of the article.

2) Minor essential revision: p4 line 6 - there is an 'as' missing from the sentence ending "...which is twice as many in 1990."

3) Minor essential revision: p8 line 14 - there is a word missing in the sentence,
"...who reported they did not _a chronic health condition..."

4) Discretionary revision: The variables described at the top of page 8 could be shown in a diagram for greater clarity.

5) Minor discretionary revision: Would there be any value in showing the data for the group "Not in labour force, no chronic health condition", in Table 1 and text? This could provide a comparator for those people not in work as a result of diabetes.

**Level of interest:** An article of importance in its field

**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.