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
Date: 7 December 2013

Reviewer: Anne Magnus

Reviewer’s report:

This is an interesting paper that may well draw attention to the growing costs of a disease associated with ageing and many other behavioural risk factors in Australian society, but its results are quite exaggerated and the suggestion of potential prevention of the indirect costs associated with diabetes are over optimistic. A more balanced evaluation would provide a more accurate estimation of costs now and potentially in future if investment in prevention was undertaken.

Major compulsory revisions

1. The manuscript needs to acknowledge that the expected growth in diabetes prevalence is limited to Type 2 Diabetes only and that Type 2 diabetes is the only preventable form of the disease. They also don’t sufficiently acknowledge the percentage of this increase that may be potentially preventable, given its link to unhealthy lifestyles, the expanding obesity epidemic and absence of sustainable preventive interventions to combat obesity. Is it 100%, 50% or 2% that is preventable? Some sensitivity analysis would make this manuscript more useful to promote their message of “investment in prevention seems desirable”, by identifying the realistic gains from that potential investment.

The initial data extraction from SDAC is of people who reported their main chronic illness was diabetes. The AIHW estimates that 89% of the diabetes prevalence in Australia is Type 2. (http://www.aihw.gov.au/diabetes/prevalence/).

The estimates of income lost, welfare paid and taxes lost should be reduced in line with this at the point of identifying the potentially preventable component of these losses.

2. I would also like the authors to provide supportive argument for the assumption that workers have left the workforce "because of diabetes" if they report diabetes as their main health problem. Some discussion of the scope and distribution of multiple health problems in this population would be appropriate and add to the strength of the manuscript.

Minor essential revisions

3. Page 1

"2010 reports that there were 1.3 million deaths were due to diabetes worldwide in 2010" needs to be rewritten as

"2010 reports that 1.3 million deaths were due to diabetes worldwide in 2010"
4. Page 8
"reported they did not a chronic health condition" needs to be rewritten as
"reported they did not have a chronic health condition"

Discretionary Revisions

5. It would be a stronger paper if the components of welfare payments were explained. Is it comprehensive and incorporate health care payments, rent assistance, child support payments and allowances?

6. The paper would benefit from providing some justification for making the following assumption on Page 10, and/or performing a sensitivity analysis on varying that assumption if need be, to reflect actual labour force participation data reported in the most recent Australian National Health Survey.

“assuming that otherwise those with diabetes would have the same labour force participation rate and full time and part time work rates as people without a chronic health condition.”

7. The discussion of the ability of older workers who retire early due to diabetes in Australia and their ability to pay for future health costs, does not appear to acknowledge universal health coverage in Australia, by referring to the studies in the US. Rather than reduced ability to pay from reduced savings, the greater impact on quality of life is likely to be longer waiting times for appropriate care in the public system.

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

**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