Reviewer's report

Title: Incidence of type 2 diabetes in Aboriginal Australians: an 11-year prospective cohort study

Version: 1 Date: 7 April 2010

Reviewer: Christine Meisinger

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Based on data from 761 Aboriginal Australians aged 20 to 74 years free from diabetes at baseline, incidence rates of diabetes and its associations with impaired glucose metabolism were investigated.

Major Compulsory Revisions:

The methods section is not very clearly written and needs revision. The fact, that not all of the participants got a standardized OGTT to determine glucose status is the main shortcoming of the study. Thus, it is probable, that some of the participants are misclassified.

It would be desirable to describe the research methods and procedures in more detail. It is not clear for me, how many of the persons got an OGTT (with the determination of both fasting plasma glucose and 2-hr plasma glucose), how many of the persons got a random glucose test only and how many persons got a fasting glucose test only at baseline to determine their status of glucose metabolism.

Measurements: new diabetes cases were identified through hospital records and outpatient clinical records. How were these cases diagnosed: through determination of fasting plasma glucose or through OGTT, treatment with hypoglycaemic medication? It is unlikely, that all diabetes cases were captured in this was and thus it is most probable, that the number of incident cases is underestimated. In what direction could these facts have biased the results?

Were the treating physicians of the participants contacted to gather information on incident diabetes?

How many follow-ups were conducted? Were follow-up information collected exclusively through hospital records or were postal questionnaires or follow-up examinations conducted too? How many of the participants were lost to follow-up?

What further data was collected at baseline examination (e.g. what blood parameters and physical examinations were performed, e.g. waist circumference, blood pressure?). How were the examinations conducted (standardized measurement? Self-report?).

Was information on physical activity, diet, smoking, alcohol consumption assessed at baseline? If not, in the limitations section, the authors should add,
that important confounders were not assessed in the baseline examination and discuss how this shortcoming could have influenced the results.

Minor Essential Revisions:

Page 2, second paragraph, line 7: …criterion for IFG, IFG and IGT may….: please correct

The term “first diabetic incidence” or “first event” is somewhat misleading for the manifestation of the disease diabetes. Please revise.

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'