Reviewer's report

Title: Prevalence of diabetes mellitus and the performance of a risk score among Hindustani Surinamese, African Surinamese and ethnic Dutch: a cross-sectional population-based study

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Reviewer: Nigel Unwin

Reviewer's report:

Unfortunately, as in my first review, I remain confused by the authors’ aims and approach to the analysis in this paper, which is largely based around the prediction of all diabetes (both previously diagnosed and newly detected diabetes). The authors say that they wish to compare their findings to the performance of other guidelines, but as far as I'm aware there are no guidelines for finding known cases - quite simply because they don't need finding. By definition they are already "found".

Guidelines that I'm familiar with are all about screening for diabetes i.e. finding unknown cases, and the references the authors refer to (8 to 12 in the paper) are all about this. The reason it is invalid to include those with a diagnosis in a cross sectional analysis is because those with a diagnosis are likely to be systematically different from those without a diagnosis e.g. more severe initial symptoms/disease, may have modified lifestyle/weight as a result of the diagnosis etc. In other words there are likely to be no longer typical of the people a guideline is designed to help detect.

Just to make the point that others have NOT included people with known diabetes:

=>In reference 8, they state: "The 535 subjects with known diabetes or incomplete risk score data were excluded from the study".

=>In ref 9, they state, "A population-based sample of 1077 people, aged 40 to 64 years, without known diabetes"

=>In ref 10, they refer to, "A sample of participants from the Rotterdam Study (n = 1,016), aged 55-75 years, not known to have diabetes completed a questionnaire on diabetes-related symptoms and risk factors and underwent a glucose tolerance test"

Etc.

In a longitudinal study, one might start with people without known diabetes and base the predictive model on doctor diagnosed diabetes at follow up (as was done in the Finnish score) - because resources don't allow re examination of the cohort, but that is very different to including people with a diagnosis in a cross
sectional study.

One approach the authors might take, which I would see as justified from a pragmatic point of view, is to say that they included all people with diabetes because of small numbers and lack of power if only including those with newly detected diabetes. However, they then went on to examine the performance of the score in those with only newly detected diabetes (which they now do in table 4).

**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:**

No competing interests