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:

This is a well written paper, on an important and timely topic, based on a dataset from a well conducted study. However, there is, in my view, a major flaw with the study as it is currently analysed, and I think that this would need to be addressed before publication is considered. The analysis is based on predicting all (both diagnosed and previously undiagnosed) diabetes. However, clearly the whole point of a risk score is to provide an efficient approach to identifying those who are undiagnosed, and clearly therefore it is this group for whom the risk score should be derived. There are plausible reasons as to why the scores could be somewhat different for diagnosed and undiagnosed diabetes. If the authors wish to include those with previously diagnosed diabetes (presumably to improve study power) they need to demonstrate in their analyses that doing so is unlikely to alter their findings e.g. to show that qualitatively at least the results are very similar with or without those with diagnosed diabetes included. Ideally of course the study would have sufficient power to conduct this only on those with undiagnosed diabetes.

Another major issue is that the study is based only on fasting glucose. The potential limitations of this receive insufficient attention, and are passed off with the phrase in the discussion, "which might have underestimated the true prevalence rates for DM",. It will certainly have underestimated the true prevalence (there are many publications on this, including from multiethnic populations), and the authors should also consider whether the inclusion of diabetes based on post challenge glucose might have altered their results for the risk score. There are published risk scores which have used 2 hour and fasting glucose and others which have only used fasting, and a critical discussion of these would be appropriate.

What next?: Reject because scientifically unsound

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