Review of: "Evaluation of Diabetes Risk Score Tool for Detecting Undiagnosed Type 2 Diabetes Mellitus in Attendees of Referral Clinics at Primary Health Care Centers, Sudan"

Annette Dobson[1]

1 University of Queensland

Potential competing interests: No potential competing interests to declare.

Studies of this kind are useful to document the performance of a diabetes risk score (DRS) in low-income countries. It would have been helpful if the Introduction had included an explanation that the authors see the DRS as the first part of a 2-stage process for diagnosing diabetes so that only people with high DRS values would go on to have the more expensive, but definitive biochemical test such as HbA1c (assuming this is the logic for using the DRS).

How was the sample size of 226 determined? This is important as it requires thinking through the required level of accuracy for the intended purpose and the cost of the tests. There is plenty of free software for doing the calculation, e.g., R or MedCalc, but the health system assumptions behind the study design should be stated explicitly.

I assume the difference between the number of people recruited, 226, and the number for whom data is provided, 214, is that 12 people met exclusion criteria, but this should be explained.

Can you believe population estimates that are accurate to the last digit – maybe to the last 10,000?

Who was the researcher who obtained the written consent? Who was the Principal Investigator who was the only person who had access to the personal information? Are they different from the authors? In the interests of open science and fair acknowledgement of the research team, I think these people should be identified.

The tables would be more informative if they included columns for those with low or high DRS, and low or high HbA1c, as well as the totals. Then the results about the performance of the tests in different subgroups would be clear and not just mentioned, without data, in the Discussion.

The ROC curve in Figure 1 is inconsistent with the data presented, but I can't work out what has gone wrong. It definitely needs to be corrected.

What do the superscripts following the reference numbers indicate?