Reviewer's report

Title: Detecting type 2 diabetes and prediabetes among asymptomatic adults in the United States: modeling American Diabetes Association versus US Preventive Services Task Force diabetes screening guidelines

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Reviewer: Tanja Srebotnjak

Reviewer's report:

The manuscript compares the screening and detection rates for undiagnosed type 2 diabetes and undetected prediabetes of the USPSTF and ADA screening guidelines. To estimate the number of persons with undiagnosed diabetes and prediabetes they develop a predictive model using NHANES data and then apply the model(s) to the MEPS data, which includes health care utilization information. The MEPS data allow the authors to examine the relationship between the probability of having undiagnosed type 2 diabetes or prediabetes on the one hand and the average health care use profile of different patient groups.

The manuscript is well written, concise and provides new insights into the effectiveness and efficiency of the USPSTF and ADA screening guidelines. I applaud the authors for the work they have done.

I only have the following comments and requests for minor edits:

Abstract: The Results section could make reference to the additional and relevant findings, i.e., of effectiveness vs efficacy of USPSTF and ADA, the younger population detected by ADA and very importantly, the different racial/ethnic detection profile of the ADA vs. the USPSTF guidelines.

p.4 line 4: insert 'estimated' in 'the 26 million'
p.4 line 18: remove double comma
p.5 line 1: remove double 'the'
p.5 line 22: insert 'population' after non-institutionalized
p.6 line 13: change 'contain' to 'contains'
p.7 line 21: the age groups 45-54 and 55-64 are lumped together in the Results section and two figures. The exact age grouping should be clarified.
p.9 line 14: delete 'that'
p.10 line 2: Since so much hinges upon the predictive validity of the polytomous and logistic regression models, the authors should provide quantitative evidence of their reliability. This could include summary statistics of predicted cases of undiagnosed type 2 diabetes and prediabetes as well as information on false positive and false negative individual predictions.
p.11 line 4: Here, the age group is 45-64. See comment above on the definition of age groups.
p.12 line 17: 'diagnosed' in between 'without diabetes'
p 13 lines 1-4: While the statistics on average primary care visits per risk group are impressive, using the average opens them up to sensitivity to outliers. And the visit rate among those with 10 percent of higher probability of undiagnosed diabetes is calculated over a much larger interval than for the other 2 risk groups and could be potentially misleading.
p. 14 line 7: remove quotation marks.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.