Editorial comments:

The revision has been substantially improved. However, I am still concerned about the use of FRS, but not a diabetes risk score. Although it has been argued that diabetes could be a cardiovascular disease equivalent, but this may not be so in clinical practice. I would like to highly recommendate the authors to use a diabetes risk score to stratify the analyses.

Thank you very much for your important comment. Our group also carefully discussed about stratification.

The Cambridge Score and Leicester Risk Assessment score are recommended in the NICE guideline as examples of diabetes risk scores.
Parameters of Cambridge Score are age, BMI, use of blood pressure medication, history of high blood glucose, physical activity < 4h/ week, waist circumference, as well as daily consumption of vegetables, fruits or berries. Unfortunately, we did not obtain data for waist circumference and daily fruit and vegetable consumption, thus precluding calculation.

Parameters of the Leicester Risk Assessment score include age, gender, antihypertensive medication, BMI, ethnicity, first degree family history of type 2 DM, and waist circumference. Again unfortunately, we did not obtain data for waist circumference and first degree family history of type 2 DM and, as such, calculation could not be completed.

We will consider these in future studies should clinical databases including these parameters become available to us.

Cambridge Score


The Leicester Risk Assessment score


Reviewer reports:

Reviewer #2: No major comments, but the manuscript still need careful language editing. Specifically, please revise/correct the following sentences:
Abstract, line 18

Abstract line 18 has been changed to “Among obese 30-44 year olds, we found substantially shorter intervals compared to other groups.”

P1, Line 13, abbrs for GPs

We replaced “GP” with General Practitioners.

line 15, be at high risk

Correction was made as suggested.

p2, line 5, those of 45-64

Correction was made as suggested.

line 6, unit of bmi

Correction was made as suggested.

p6, delete "There were no clinically relevant 4 differences between urban and rural cohorts" The description below shows large differences to me.

Thank you for the comment; we have clarified the paragraph as follows:

There were no clinically relevant differences between urban and rural cohorts in terms of HbA1c and BMI; mean HbA1c in the urban and rural cohorts was 5.5 (0.3) % and 5.3 (0.4)%, respectively. Mean BMI was 22.3 (3.2) kg/m2 in the urban cohort and 22.7 (3.0) kg/m2 in the rural cohort. Mean (SD) age of the rural cohort was roughly 5 years older than that of the urban cohort at 51.2 (10.2) and 46.5 (10.4) years, respectively. Mean (SD) FRS was slightly higher in rural than urban cohort, at 9.0 (0.08)% and 6.0 (0.07)% respectively. The proportion of current smokers in the rural cohort was twice that of the urban cohort. We merged the two cohorts into a single population for subsequent analyses to increase the generalizability of this study.
line 14 and line 16, revise the use of language-

p.6 line 14 is “Table2 and Table3 show the time interval at which the signal exceeded noise for each BMI stratification by age group.”

p.6 line 16 is “In underweight and normal weight individuals 60- 74 year old, screening intervals were similar.”