Author's response to reviews

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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Version: 2  Date: 7 March 2008

Author's response to reviews:

Dear Dr. Edmunds,

Thank you for giving us the opportunity to address the comments of the reviewers. Below is a specification of how we addressed the concerns that were raised.

Reviewer: Nigel Unwin

1. We agree with the reviewer that a risk score which predicts newly diagnosed cases is useful for daily practice. Nevertheless, prediction of all cases of DM is also of value; if the aim is to assess whether current guidelines for selective screening need to be tailored to South Asian and African origin populations, this information is needed to determine whether the criteria (e.g. guidelines and risk score) are suited to detect all cases of DM (potentially at an early stage). Therefore, we decided to include both analyses in the manuscript.

We have calculated the diagnostic accuracy of all risk scores in a subgroup analysis, excluding those with known DM (see table 4, page 24). The results are similar to the results in the full population, suggesting no major effect of inclusion of known DM cases. Due to the small numbers of persons with newly diagnosed DM, we were unable to carry out further modelling procedure in this subgroup.

2. We have added a discussion and references to the discussion section concerning the diagnosis of DM based on fasting glucose alone (see page 11).
Reviewer: Ike Okosun

1. We have added ethnicity-specific estimates for the prevalence of DM, standardised by age (using the direct method) to Table 1 and to the text (see pages 8 and 19).

2. Confidence intervals were added around the parameters reflecting the `test characteristics¿, e.g. AUC and sensitivity in tables 3-5 (see pages 22-25). In addition, we added the specificity (CI) to table 3. In table 3, no intervals were calculated for the proportion selected for screening, the prevalence and the number needed to screen, as these reflect the use of the `study situation¿ (and are dependent on the characteristics and prevalence of DM in our population).

3. The statement that screening for DM should start before the age of 45 was changed (see pages 2 and 12).

4. Information on the assays used was obtained from the Department of Clinical Chemistry and added to the Methods (see page 5).

5. The document was checked for grammatical and typing errors.

6. A comparison between participants and non-participants is made on page 5. In addition, a statement was added to the Methods comparing the characteristics of eligible persons and excluded persons (see page 6).

7. The representativeness of the results was addressed in the discussion (see page 11).

Reviewer: MA Sayeed

1. Data on the number of persons per ethnic group in Amsterdam (denominator), the proportion of participants and their parents born in Surinam, the ethnicity of the parents was included in the Methods (see page 4).

2. The representativeness (and limitation of the 60% response rate) was discussed (see page 11).

3. The document was checked for missing labels etc.

General

A statement on compliance with the Helsinki Declaration was added to the note concerning the ethical approval of the study.

Finally, we have checked the document against the journal style and corrected
formatting errors.

We look forward to your decision concerning publication of the revised manuscript.

Yours sincerely,

Prof. K. Stronks