Reviewer's report

Title: Shifting from glucose diagnosis to the new HbA1c diagnosis would reduce the ability of the Finnish Diabetes Risk Score -FINDRISC- in screening glucose abnormalities within a real-life primary healthcare preventive strategy.

Version: 1 Date: 25 October 2012

Reviewer: Fernando Guerrero-Romero

Reviewer's report:

In this study, authors investigate differences in the performance of the Finnish Diabetes Risk Score (FINDRISC) as a screening tool for glucose abnormalities by shifting from glucose-based diagnostic criteria. For this purpose, the main diagnostic categories were defined based in the WHO, ADA, and HhA1c criteria as normal, prediabetes, and diabetes.

Major Compulsory Revisions

• The main concern is related with the criterion for define diabetes based on the FPG. The ADA criterion established that in the absence of unequivocal hyperglycemia, results should be confirmed by repeat testing. In this study, as the FPG was not repeated, the prevalence of glucose metabolic disorders, based on this diagnostic criterion, is seriously flawed.

• On this regard, it will be expected that the prevalence of diabetes and prediabetes, based on one measure of FPG, reflect a significant number of false negative tests, with a high prevalence of diabetes and prediabetes; however, the prevalence, based on one measure of FPG, was the lower and the prevalence of prediabetes similar as compared with other diagnostic criteria. These issues should be appropriately discussed, or the diagnostic criteria based on one measure of FPG deleted from analysis; taking into account that is not the original diagnostic criteria proposed by the ADA.

• Analyzing data showed in the Table 4, it is clear that the cutoff point of the FINDRISC is 14 (both the highest sensitivity and specificity). Why authors selected the cutoff point of 13? Decreasing the cutoff point, unnecessarily increases the false negative tests and the costs of confirming diagnosis.

Minor Essential Revisions

• Data on text, to describe AUC, unnecessarily repeat data shown in Figure 3. It should be deleted the text, or delete the Figure 3.

Quality of written English: Acceptable

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