Reviewer's report

Title: Initial Impact and Cost of a Nationwide Population Screening Campaign for Diabetes in Brazil: a Follow up Study

Version: 1 Date: 31 October 2007

Reviewer: Andrea Icks

Reviewer's report:

General
October 29, 2007
Review
BioMed Central

Toscana et al. Initial Impact and Cost of a nationwide Population Screening Campaign for Diabetes in Brazil

This is a very interesting article of an important and timely issue. However, I have difficulties to be confident in the results and conclusions of the paper.

Major points:

1. What are the rationals for the chosen cut off’s and categories to define the classes of glucose metabolism disturbances? Did the authors perform a pre-test? A validation of these categories? The authors should describe the characteristics of the patients within the categories.

2. As I understand the study design a three or four stage sampling was done. The first steps (selecting municipalities and primary health care unit) are clear. However, would it be better to select proportional to the number of target population rather than proportional to tests reported? Further, I do not understand the following step, the selection of screenees and positive screenees: how were subjects selected? In a simple random sampling? Why did the authors aim at selecting 2,000 or 200 subjects? Is selection bias to assume? The selection of subjects for home interviews is done by choosing the first 100 positive screenees. Selection bias may be present.

3. The authors state that they do their analyses taking into account the sampling process. The used procedures and estimates should be explained.

4. The positive predictive value (only given in the table) is rather low. This result should be presented in the text and discussed.

5. For confirmation, no OGGT was used. This should be discussed. Fasting status was defined as 4 hours without food ingestion. Also this point should be discussed.
6. I wonder how about two third of the target group could be reached within one months. Are the authors sure that the number of capillary glucose tests is valid? That there is no double counting or something else?

Minor points:
1. In the abstract, confidence intervals should be presented.
2. Two of the 50 selected municipalities were excluded (first paragraph page 6). However, in the following paragraph, the authors describe that the first 100 positive screenees from each of the 50 municipalities were selected. How is it to understand?
3. Local costs were assessed (page 7, 4th paragraph). However, as I understand the methods description, for the cost analysis, local costs were estimated (page 8, first paragraph). Why?
4. I would suggest not to include subjects with prior diagnosed diabetes in the main analysis, since this is an additional question. Usually screening is performed to detect undiagnosed diabetes, not to include people who know that they suffer from diabetes in the health care system. Perhaps this point could be described in the discussion.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)