Reviewer's report

Title: Glucose testing and recognition of incident diabetes: a cohort study

Version: 1 Date: 25 April 2006

Reviewer: Wolfgang Rathmann

Reviewer's report:

General

Overall, this is a well-written manuscript on an important clinical issue. The study design and analyses are thoughtful and appropriately executed. The discussion section adequately positions the present study results in the context of the literature. The authors also addressed some limitations, however, there are a number of additional points which need to be clarified.

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

1. The study was based on 301 patients, which had together contact to 19 different primary care physicians. Only 57% saw their own primary care physician for every visit. The 19 physicians may be different with respect to their interest in diabetes screening and their individual emphasis on follow-up of routine lab tests. The authors adjusted for continuity of physician care in multivariate models (OR 1.4; 95%CI: 0.7-2.8). However, it would be interesting to see if results for follow-up of glucose tests are different when restricting to all patients with continuous follow-up by the same physician.

2. The vast majority of glucose tests (90%) were part of the routine lab investigation in new patients. The authors reported that physicians documented in 3% only that patients were fasting. Given that 97% were nonfasting (random) blood glucose values, other cut-offs should be used, as recommended by the ADA (e.g. diabetes: equal or above 200 mg/dl).

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

1. Socioeconomic factors are known to have an impact on the prevalence of (undiagnosed) diabetes and on health care use. Therefore, a more detailed description of the practice background population should be given. Readers outside the U.S. may not know if a proportion of 41% patients of minority ethnicity is above the American average or not.

2. The authors should comment the validity of the exclusion criteria “patients with known diabetes”. Obviously, this was based on the initial visit only. Is it conceivable, that a prevalent diabetes may not have been recorded at the first visit in a substantial number of patients?

3. There was no continuity criteria for subsequent visits except that patients should have at least 2 other visits by the end of 2002. Thus, in an extreme situation, a patient may have been seen by the physician in January 1999 and December 2002 only. Is it possible, that patients may have been additionally treated outside the practice (for diabetes) over the study period?

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Discretionary Revisions (which the author can choose to ignore)

The authors stated that patients were followed up for at least 3 years in order to be consistent with the screening interval recommended by the ADA. However, the ADA recommended this diabetes screening interval beginning at the age of 45 years. The average age in the present study was 40 (SD 14) years.
What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests.