Reviewer's report

Title: Association between second-generation antipsychotics and newly diagnosed treated diabetes mellitus: does the effect differ by dose?

Version: 1  Date: 4 July 2011

Reviewer: Jimmi Nielsen

Reviewer's report:

Type II diabetes is an important side effect to antipsychotic treatment. Furthermore, diabetes is associated with increased mortality which make this a very important topic. The dose-response association is not entirely clear and warrants more attention.

Major Compulsory Revisions:

1) It is not clear to me how and why the dose was divided in three groups. Why not use dose as an ordinal scale? Otherwise use a uniform way to divide the dosage intro groups, such as half and one quarter of maximum licensed dose?

2) This is a suboptimum design to investigate a dose association due to confounding by indication, i.e. patients with more severe psychiatric disease receive higher dosage. Please rephrase the conclusion of this manuscript:"This study provides important evidence of a....." It should be: "This study suggest a dose-response relationship ..." Please describe some of the limitations in the conclusion section!

Minor Essential Revisions

3) The background section should be updated including more recent studies about diabetes type II and antipsychotic treatment, e.g. nielsen et al. schizophrenia bulletin Aug 2010. This study has a quite similar design and should be discussed.

4) Please explain why extreme outlier in dosing occur and the criteria for deleting them.

5) Please state how the cox regression was tested for proportional hazards! graphical?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests:

I declare that I have no competing interests