Reviewer's report

Title: Antipsychotic polypharmacy in a regional health service: a population-base study

Version: 2 Date: 27 April 2011

Reviewer: Hans Rittmannsberger

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Major Compulsory Revisions

There are 2 major problems of this paper due to the data base
1. It provides only limited information on patients, especially no diagnosis. If there is no information on diagnosis, it seems difficult to comment on adherence to treatment recommendations since these usually are centered on diagnosis.
2. It is difficult to single out patients with combination therapy – my problems concerning criteria see below

Special remarks:

Introduction, 4. paragraph:
Although no diagnoses are assessed the authors always discuss matters as if
1. dealing with schizophrenia only
2. treatment resistance being the only cause for polypharmacy
So a good deal of polypharmacy might be caused by antipsychotics given for sleep promotion.

Outcome, 2. paragraph

Criteria for antipsychotic combination: it is hard to understand why these criteria had been chosen (especially criteria 2). The rationale should be explained. Applying these criteria about 60% of patients receiving prescriptions for more than one antipsychotic were labeled as "unspecified polytherapy" and excluded from further discussion. It is questionable whether it is appropriate to exclude such a large proportion of patients.

Conclusions

Conclusions: "...it appears not to follow the available clinical practice guidelines": considering that there is no information on diagnosis it is hard to support such statement.

Perhaps it would be more fruitful to explore the soundness of drug combinations in the light of the existing literature (e.g. there are studies on combinations with clozapine) and clinical practice (e.g. the combination of a non-sedating drug like risperidone with a sedating drug like quetiapine might be considered more
reasonable than the combination of two sedating drugs like quetiapine and olanzapine; combinations of more than 2 drugs might always be viewed as inappropriate).

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

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'