Reviewer’s report

Title: Prescribing trends of antipsychotics in youth receiving income assistance: results from a retrospective population database study

Version: 1 Date: 30 January 2013

Reviewer: Irene Eriksson

Reviewer’s report:

This study presents data on the use of antipsychotic medications in younger patients receiving income assistance in Nova Scotia, Canada.

The manuscript requires a thorough edit to improve grammar, language and style.

Major Compulsory Revisions

1. Comments on the Abstract
   a) The background is scarce and does not state the purpose of the study.
   b) The results section: the statements “Antipsychotic use doubled over the study period” and “males received more APs” are ambiguous.
   c) The conclusions: “This study raises questions about antipsychotic prescribing given the wide range of diagnoses, doses, duration and psychotropic co-prescribing for all ages, even those under 5 years old.” This study describes the use in patients <=25 only, hence, “all ages” is misleading.

2. Comments on the Background
   “We aimed to characterize various aspects of AP prescribing (e.g. indication/diagnoses, prescriber type, antipsychotic type, etc.)” is vague. Be specific about the purpose of the study.

3. Comments on the Methods
   Overall, the methods sections lacks structure and should be thoroughly revised to aid the reader’s understanding:
   a) The inclusion and exclusion criteria for the study cohort are not provided.
   b) This is a database-based study and it is essential that authors provide a very clear description of each database used.
   c) It would help if the authors explain the purpose of identifying “long-term users”. Also, it should be clear from reading the methods section what analyses were performed (and why) for this sub group only.
   d) The definitions of incident and prevalent prescriptions are unclear. Did the authors use a 6 months interval prior to October 1, 2000 to identify any dispensation of antipsychotic medications that might have occurred prior to the study period?
e) In the “Identification of diagnoses” section – consider adding a graphical representation of the algorithm used to identify diagnoses attributable to antipsychotic medication use.

4. The Statistical Analyses section (has to be revised)
   a) I recommend that the description of time series analyses is assessed by a statistician experienced in conducting this type of analysis.
   b) I noted that the Results section provides the results of some survival analyses, but the authors do not mention these analyses in the statistical analyses section.

5. The Results section
   a) The authors should be careful with implying that “over one-third of antipsychotic treatments were started during an inpatient stay”. In my opinion the manuscript does not provide information to arrive at such statement.
   b) In “Doses prescribed”: “Dosing of olanzapine appeared to be higher than dosing of the other SGAs likely as a reflection of its greater use in the treatment of psychosis.” – the “likely as a reflection of its greater use in the treatment of psychosis.” should be in the Discussion.
   c) In “Duration”: consider using a table to report the “median (IQR) duration of AP use”.

Minor Essential Revisions

1. Incomplete sentences and sentences that appear to contain fragments:
   a) “We designed as a mixed methods study with the first phase consisting of a retrospective population database study, which is reported here.”
   b) “The maximum allowable number of days for Pharmacare reimbursement is 100 days supply.”
   c) “The hierarchy includes priorities assigned based on the databases from the diagnosis was extracted (i.e. the source), the provider type, and the diagnoses.”
   d) “Information about the type of prescriber of the was available for 52% of incident antipsychotic prescriptions.”
   e) “It is apparent from our study, and the work of others, [2, 14] the use of SGA agents in younger age strata are used at an increasing rate.”
   f) “Our findings contextualized with the current literature demonstrate that there is a need for capacity building in clinical areas in which these agents are used and with a research enterprise to enhance our understanding of appropriate use and whether targeted interventions are needed to alter current practices.”


3. “Patient location” – same as place of residence?

4. “International Classification of Diseases (ICD) codes were used to determine
diagnoses of encrypted unique patient identifiers.” – this is an example of a sentence that needs to be revised for clarity.

5. “Multi-counting was avoided by only counting the first time the ICD code appeared for each unique identifier.” – this is a technical detail that can be omitted.

6. “Mean prescribed daily doses were calculated for each AP using Pharmacare claims and the days supplied field.” – unclear. By “Pharmacare claims” do you mean a certain variable or the whole database?

7. In statistical analyses: “Age categories for claimants were divided 0-5, 6-10, 11-15, 16-20, and 21-25.” Sentence can be omitted as the age stratification will be obvious from the tables.

8. Recommendations for the tables/figures:
   a) Table 3 reports a mix of numbers, with percentages calculated using inconsistent denominators. I tried to think of alternative ways of presenting these data – please see attachment.
   b) Table 4 – please provide the units for the doses
   c) Figure 5 – a table might be better for reporting these data
   d) Figure 6 – consider reporting proportions instead of counts

Discretionary Revisions
N/A

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

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests.