Reviewer’s report

Title: Longitudinal pharmacoepidemiological and health services research for substance users in treatment: protocol of the Belgian TDI-IMA linkage

Version: 0 Date: 15 Oct 2017

Reviewer: Stephen Nkansah-Amankra

Reviewer's report:

The paper looks interesting, but requires further copy editing before it can be published. The authors could improve the quality of the paper by addressing following in the revised version of the paper.

1. "Case definition" should be elaborated in the paper instead of referring the reader to other sources. Specific limitation with the current definition and how the authors operationalized the case definition in the current study should be articulated. The constructs of "episode" and "treatment" as explained in the paper are not clear and leaves the reader with some confusion. These should be clearly explained.

2. The authors mention the use of "a deterministic algorithm" to link TDI and IMA database. It will be helpful to the reader if the authors could explain this algorithm and specifically what it seeks to achieve (in a more broad sense) and why it is described as deterministic, and particularly which causal framework it is meant as deterministic? The authors also mention another algorithm in the same section, but it is not clear if this is also deterministic as previously described. The latter algorithm needs further explanation.

3. The study appears to apply matched case control study, but did not explain the rationale for using following matching variables: sex, age, and place of residence. Importantly, who were these groups matched on and what were their background characteristics? So after matching on the selected variables, how many subjects were available for analysis? It is not clear from the paper the "unit of analysis' applied in making inference for discussion. This has to be explained in-depth.

4. The data linkage procedure is not clear, and authors need to explain how the linkage is related or different from the algorithm used.

Level of interest
Please indicate how interesting you found the manuscript:

An article of limited interest
Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

No competing interest to declare

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal

Do you want to get recognition for reviewing this manuscript? Add a record of this review to Publons to track and showcase your reviewing expertise across the world’s journals. Signing up is quick, easy and free!

Yes