Reviewer’s report

Title: Case Identification of Mental Health and Related Problems in Children and Young People using the New Zealand Integrated Data Infrastructure

Version: 1 Date: 18 Dec 2019

Reviewer: Elizabeth Ford

Reviewer's report:

Thank you for the opportunity to review once again this interesting manuscript, and congratulations to the authors for incorporating many of the previous reviewers' comments.

The manuscript is much improved. Just two comments before I can recommend acceptance:

1) Table 1 is still blank - what information should this contain?

2) I am still concerned about the issue of Pharms data over capturing potential cases (false positives). For example amitryptiline and diazepam are both included in the list which in the UK may be prescribed for neuropathic or muscle pain respectively. This could lead to over identification of cases, reflected by the high rate captured by this data. This is still nothing discussing this risk in the discussion - it should be directly alluded to in the discussion of the future method refinement - potential validation exercises might result in an adjustment of the list of included medications or result in a combination of codes being needed to identify a case, e.g. a pharm prescription as well as a code from another source. This brings me to another point which could be made in the discussion, one very early method of validating, might be to look at the rates of conditions identified by each source. It's tricky to work this out from Table 2, but could be proposed for future work. For example if one source identifies a prevalence of e.g. substance use of 2% and another of 10% you would have to conclude that one data source is likely identifying many false positives or the other is under-identifying cases.

If the authors could address these issues in the discussion I would be satisfied with the other changes made to the paper.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes
Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
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Acceptable

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