Reviewer’s report

Title: Morbidity, mortality and missed appointments in healthcare: a national retrospective data linkage study.

Version: 0 Date: 18 Oct 2018

Reviewer: Laurence D. Gruer

Reviewer's report:

This well-written paper describes a well-designed and executed innovative study with important new results. It certainly merits publication, subject to a few minor amendments.

Summary

It would be helpful to include that the analysis covered the appointment history for the three years before the follow-up period.

Line 106 "Routine data were extracted".

It would be helpful if the authors could list, perhaps in the supplementary material, the categories of data included in the extract.

Did the participating practices provide data on all their patients or were there any restrictions? I was amazed that in many categories there were no missing data!

It would be helpful to indicate what proportion of the Scottish population the cohort represents.

L 155 Can the authors confirm that the 824,374 patients in the cohort were all alive on 5 September 2016? Could any denominator bias have been introduced by patients leaving NHS Scotland during the follow-up period or numerator bias from having died outside Scotland? If so, mention in "Limitations".

L219 I think "missed appointments" should be replaced by "all-cause mortality".

L260 "A pattern of repeatedly missing appointments is thus a potentially valuable clinical marker both for multiple morbidity and for increased risk of premature mortality" I agree that the study shows repeated missed appointments are a valuable marker for increased risk of premature mortality i.e. something that has not yet happened. I'm not sure it is worth saying they are also a valuable marker for multiple morbidity as that will already be obvious from the clinical record.
L273 "larger appointment booking intervals". This is unclear. Do you mean "longer delay between the appointment being booked and taking place"?

L277 Limitations. I think it is preferable to place this paragraph near the beginning of the discussion, after the summary of the main findings. Having in mind the possible weaknesses of the study can help the reader evaluate how the authors interpret and contextualise their findings in the rest of the discussion.

Appendix A Last category in the table. Should be "psychoactive" rather than "photoactive"!

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.

Not applicable

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
Please indicate the quality of language in the manuscript:

Acceptable

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.

I declare that I have no competing interests

**Statement on potential review bias**

Please complete a statement on potential review bias, considering the following questions:

1. Did you co-author any publication with an author of this manuscript in the last 5 years?

2. Are you currently or recently affiliated at the same institution as an author of this manuscript?

If you can answer no to all of the above, write 'I declare that I did not publish with these authors in the last 5 years and also meet the affiliation criteria'. If your reply is yes to any, please give details below.

I declare that I did not publish with these authors in the last 5 years and also meet the affiliation criteria.

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