

Dear Dr. Beard

Manuscript ID BMJ.2016.033234 entitled "Association between population changes in use of e-cigarettes on changes in quit attempts, the success of quit attempts, use of smoking cessation pharmacotherapy, and use of stop smoking services: a time-series analysis"

Thank you for sending us your paper. We sent it for external peer review and discussed it at our manuscript committee meeting. We recognise its potential importance and relevance to general medical readers, but I am afraid that we have not yet been able to reach a final decision on it because several important aspects of the work still need clarifying.

We hope very much that you will be willing and able to revise your paper as explained below in the report from the manuscript meeting, so that we will be in a better position to understand your study and decide whether the BMJ is the right journal for it. We are looking forward to reading the revised version and, we hope, reaching a decision.

Georg Roeggla  
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[https://mc.manuscriptcentral.com/bmj?URL\\_MASK=b704404d620a4fc5b440518bcad19da3](https://mc.manuscriptcentral.com/bmj?URL_MASK=b704404d620a4fc5b440518bcad19da3)

**\*\*Report from The BMJ's manuscript committee meeting\*\***

These comments are an attempt to summarise the discussions at the manuscript meeting. They are not an exact transcript.

Manuscript meeting 16.06.2015

Wim Weber (chair), Jamie Kirkham (stats), Georg Roggla, Jose Merino, Tiago Villanueva, Jessamy Bagenal, Amy Price, Rubin Minhas

Decision: Ask for Revision

The committee was interested in the topic of your research. The following concerns were mentioned:

- The main concerns is that the committee thought your paper was a rather difficult read as it currently stands, particularly around the area which describes where the data came from.
- We didn't find an ethics vote.
- What is the clinical relevance of the small increase in success of quit attempts?
- Your paper adds some interesting information but the conclusions are made a little strongly.
- What about those smokers that used a variety of techniques to quit smoking?
- The methods look complex but they are appropriate. We were glad to see a proper use of a times series model and one where the analysis plan was pre-registered with amendments fully documented.
- What does this add to West R et al. Estimating the population impact of e-cigarettes on smoking cessation in England. *Addiction* 2016; 111: 1118-9?

First, please revise your paper to respond to all of the comments by the reviewers. Their reports are available at the end of this letter, below. Please also respond to the additional comments by the committee.

In your response please provide, point by point, your replies to the comments made by the reviewers and the editors, explaining how you have dealt with them in the paper.

Comments from Reviewers

Reviewer: 1

Recommendation:

Comments:

The effects of e-cigarettes are often very passionately debated and evidence available is often patchy and inconclusive. The present manuscript is a very neat and clear paper that provides urgently needed data about the population-level impact of e-cigarette use and presents them objectively. My comments are mainly editorial in nature. I am not able to evaluate the statistical analysis used and would refer this to a statistical editor or expert in the use of ARIMAX modelling.

1. The title needs double-checking, it reads association between... on...
2. What is already known paragraph: I find it a bit odd to refer to a specific systematic review here and would suggest referring to concerns about this in general. Otherwise, a reference would be needed here
3. What this study adds: The sentence about the TPD is too vague to be meaningful. It could possibly be clarified why these

findings are important when considering the TPD, but I would suggest removing the sentence as it does not seem to be based directly on the study findings. Also, there is little or no discussion of the TPD in the main body of the manuscript so this appears like an afterthought.

4. Introduction: The first sentence needs some references

5. Aim 1 is nearly unreadable, please consider splitting this sentence or rephrasing to make clearer.

6. Aim 2: As in the title, this talks about associations on something. Also outcome 'attempts' – would this be proportion making an attempt, number of attempts or something else? Please define

7. Aim 3: as above - 'association on'; and is it really necessary to repeat the words 'quit attempt' eight times within this sentence? It is tautological to say 'during a quit attempt among those who made a quit attempt'

8. page 6, line 19 and 44: Why was 0.1% chosen, presumably this was the figure when data were first collected?

9. It would be useful to have response options for the question on aids used during quit attempts and to give all outcome variables labels.

10. "Price of cigarettes was correlated 0.99 with time and was thereby taken into account by use of differencing to make the series stationary" This sentence will be completely opaque to most readers and should either be explained or moved to the supplementary appendix.

11. Analysis: I appreciate the appendix, but some explanation of ARIMAX modelling would be helpful here, e.g. 'first differenced and seasonally differenced'.

12. Sample characteristics: The stop smoking services do not report the number of smokers but the number of quit attempts made with them

13. In terms of writing style, it would be better not to start most paragraphs in the results with 'Table x shows...' or 'Figure x shows...'. At least in some places describing the finding and then referring to the table/figure would flow better

14. briefly define in one place what determines that a result is inconclusive

15. Discussion: page 12, line 32: which policies?

16. To address concerns about population impact, a brief mention of e.g. prevalence of e-cigarette use among never smokers would also be helpful.

17. The formatting of tables 2 to 4 is disgraceful even though this is only review stage. Please reformat so that the font size is reasonable and they don't extend beyond the page margins.

Additional Questions:

Please enter your name: Leonie Brose

Job Title: Lecturer

Institution: King's College London

Reimbursement for attending a symposium?: No

A fee for speaking?: No

A fee for organising education?: No

Funds for research?: No

Funds for a member of staff?: No

Fees for consulting?: No

Have you in the past five years been employed by an organisation that may in any way gain or lose financially from the publication of this paper?: No

Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this paper?: No

If you have any competing interests ([please see BMJ policy](#)) please declare them here: I have no competing financial interests in relation to this paper.

Reviewer: 2

Recommendation:

Comments:

This is an important and timely study that provides strong empirical evidence in support of e-cigarettes' potential to benefit public health by promoting cessation of combustible cigarette use. Large-scale studies looking at the population-level impact of e-cig use for smoking cessation have been lacking. Other population-based studies on e-cigs' impact on smoking cessation have had significant methodological limitations. Thus the current study certainly addresses an important gap. Furthermore, this is the first study to use multi-year data and time-series methods to elucidate the link between increase in e-cigarette use and increase in smoking cessation. The study adequately adjusts for potential confounders (e.g., anti-smoking policies, media campaigns). Another methodological strength of the study is the detailed way in which e-cig use is assessed (e.g., any use for cessation help, use during quit attempt). The study is well-written and data analysis is well-explained. This study is likely to significantly advance tobacco control research.

I have a few minor suggestions that the authors may want to consider:

1. It may help the reader if the sampling strategy is explained some more. For example, how many households were contacted monthly or quarterly? My understanding is that random location sampling involves quota-based sampling and response rates do not apply to this method. This may need to be mentioned.
2. The finding related to the decline in rates of quit attempts over years may need some discussion.
3. Page 5, second paragraph, question #3, a-c, it may not be necessary to mention "among those who made a quit attempt."
4. Page 11, last paragraph, there is a typo.
5. Please distinguish between over-the-counter NRT and prescription NRT with examples. The negative relationship between e-cig use and prescription NRT use, but not the other NRT use, may need some discussion.

Additional Questions:

Please enter your name: Pallav Pokhrel

Job Title: Associate Professor

Institution: University of Hawaii Cancer Center

Reimbursement for attending a symposium?: No

A fee for speaking?: No

A fee for organising education?: No

Funds for research?: No

Funds for a member of staff?: No

Fees for consulting?: No

Have you in the past five years been employed by an organisation that may in any way gain or lose financially from the publication of this paper?: No

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