Reviewer’s report

Title: The epidemiology, healthcare and societal burden and costs of asthma in the UK and its member nations: analyses of standalone and linked national databases

Version: 1 Date: 04 Jul 2016

Reviewer: Mohsen Sadatsafavi

Reviewer's report:

This is the second review of the manuscript entitled "The epidemiology, healthcare and societal burden and costs of asthma in the UK and its 2 member nations: analyses of standalone and linked national databases".

The authors have successfully addressed the previous comments. I have one request for an essential revision. All my other comments aside from typos corrections are discretionary.

Major comment:

1. Under the section "Economic modelling" the authors discuss the use of bootstrapping for quantifying uncertainty around cost estimates, and the use of beta distribution for modeling uncertainty around prevalence. It is not obvious what the content of the excel file is. Bootstrapping to quantify uncertainty is mostly used in the presence of individual-level data, whereas the use of the beta distribution for prevalence indicates dealing with aggregated data. More description of the methodology used for cost estimation, in particular modeling uncertainty around the estimates, is warranted.

Minor comments:

2. Abstract: background: "there are a lack of reliable data -> "the is a lack of reliable data"

3. Not sure the last sentence of the abstract is supported by the results.

4. Methods, line 94: current table 1 and 2 are very similar to each other and can potentially be combined. The previous suggestion to reporting the sources of data in a tabular format was based on the feeling that the reader might frequently need to resolve the meaning and content of different datasets referred to by their abbreviated names. Such a table would have databases as rows not outcome metrics.
5. Methods, under section 'prevalence' (line 165+): only annual prevalence is defined but the next sentence talks about lifetime and annual prevalence. These are defined in more details later on so rewording this section can help with the consistency and coherence of the paper.

6. Methods, under 'prevalence': "while the questions for asthma were similar in England …" this sentence needs correction.

7. Methods, line 443: "costs based on a sample 443 within a country, were extrapolated to population levels" there is an extra comma here.

8. Results, under "financial costs of asthma": why the reported total costs and costs of medications the same (1.1b)? The reader might be confused unless additional description is added.

9. Results, line 597 "burden of patients with asthma" is a vague phrase and needs revision.

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.

Unable to assess

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

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