Reviewer’s report

Title: Patient preferences for dry powder inhaler attributes in asthma and chronic obstructive pulmonary disease in France: a discrete choice experiment

Version: 0 Date: 17 Nov 2016

Reviewer: Pierachille Santus

Reviewer's report:

The present paper reports results from a study conducted in French patients. The aim was to analyze the preferences and attribute choices of patients with COPD and asthma regarding DPI inhalers (within Turbohaler and Diskus users). Although the rationale is strong and the study design is well based, there are some major issues that must be addressed.

Please find below my concerns

- Why authors decided to evaluate only DPI inhalers? This should be stated in the background section

- It is not clear if the study was designed to investigate European patients of French patients, or if this represents a sub-analysis of a pre-existing study. Please clarify this in the last lines of the background section.

- All over the introduction should be shortened and focused on the main problem that is represented by the choice of the inhaler and the clinical consequences of choosing one inhaler instead of another.

- Methods section: it is not clear how the patients were selected. Were outpatients followed by general practitioners/specialists? How the diagnosis was made? In table 3 authors report a mean age for patients with COPD of 48 years old (!!!) which is really surprising and merely reflects the average population of patients with COPD that is seen in the outpatient clinics and has problems with the inhalers. Moreover, considering the standard deviation of the age, it appears that there are some patients that BY DEFINITION shouldn't be part of the COPD group (around 35 years old!).

- Who selected the patients? Were they consecutive?

- What kind of disease control did the asthmatic patients have? Were the patients with COPD clinically stable?
- It is not clear why the only DPI's selected for evaluation were the Turbohaler and the Diskus. Why others like Neohaler, Genuair, Nexthaler, HandiHaler were excluded?

- Table 2. Please explain why among the hygiene-related items, the replacement of the mouthpiece has been considered as a valuable attribute. As for my knowledge, neither the Diskus nor the Turbohaler can have their mouthpiece changed, therefore the judgement of patients in the current study may be biased.

- Figure 1 and 2 are not clear. The legend reports that they should represent the three most important attributes for patients with asthma and COPD. The figures however report all the attributes in a random order making it difficult for the reader to comprehend the real importance of each item. The figure must be changed in order to appear self explaining and direct. (e.g. horizontal bar diagram with ranked attributes with different colors for asthma and COPD). I suggest to put in higher to lower the ranking for figures 3 and 4 (maintaining the format of the figure).

- Page 13 lines 286-289: the sentence regarding the COPD patients is not clear. Which difference the authors refer to?

- Discussion: the discussion is sufficiently well conducted. The big issue is that the age (see above) of the two groups is very close one to each other, and that patients with COPD appear to be really young and hardly would have co-morbidities like neurological problems or dexterity issues that are reported by the authors. It is hard to believe that this sample represents a real life scenario. Probably to focus only on the asthma group would be more clinically significant.

This paper represents a survey with a local interest mainly addressed to general practionners.

**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.

No

**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

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