Reviewer’s report

Title: Reliever salbutamol use as a measure of exacerbation risk in chronic obstructive pulmonary disease

Version: 2
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Reviewer: Surya Bhatt

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The authors performed a retrospective analysis of a study comparing budesonide/formoterol with formoterol and patients with moderate to very severe COPD and assessed the use of rescue beta agonist to a certain risk of exacerbation in the immediate (3 weeks) and long-term future (10 months). This is a very timely study as there are few indicators of an impending reported exacerbation other than use of daily symptom charts which are not very practical in the real world. The idea is similar to symptom/medication use report in bronchial asthma; this has proved very useful for assessing asthma control. I do have a few comments.

Major:
1. The author should clarify why 3 weeks and 10 months for chosen for time periods. While 10 months might be due to the overall duration of the study, 3 weeks needs to be explained better.
2. The definitions for low medium and high reliever use or different for short-term and long-term exacerbation risk determination. Please clarify why this is the case.
3. Can the authors provide quantification of risk in the short-term similar to data provided for long-term risk (21, 67 and 135%).
4. The authors should perhaps provide incidence risk ratios as they adjusted for exacerbation clustering using Poison regression. When calculating the incidence risk ratio, did they correct for the number of exacerbations in the year prior to enrollment? History of previous exacerbations is one of the most important predictors of future exacerbations, and this will be important information to note.
5. The authors also had access to symptom charts and PEFR measurements. They should comment on how rescue inhaler use correlated with the above measurements.

Minor:
1. Line 134: The authors perhaps mean 0 inhalation as reference group and not > 0.

Level of interest: An article of importance in its field
Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.