Reviewer's report

Title: Psychosocial risk factors for hospital readmission in COPD patients on early discharge schemes: a cohort study

Version: 1 Date: 14 April 2011

Reviewer: Judith Garcia-Aymerich

Reviewer's report:

Major Compulsory Revisions

1. Relapse vs readmission. The admission within a period predefined of at about 1-2 months is not considered as a readmission (a new exacerbation) but a relapse (a failure of recovery of the previous one). It is likely that risk factors for relapse are not the same than for readmission. This distinction is not clear in introduction and, as a consequence, is not included in the analysis and not considered in interpretation of results.

2. Temporality. Although the prospective nature of the study would allow to distinguish between risk factors and outcomes of the readmission, the authors do not include the time as a factor and so some of the analysis and interpretations are misleading. As examples, last sentence of results in Abstract, and Figures 1-3. Please review and reanalyse.

3. Statistical approach-Contradictory results. The authors approach the association between risk factors and admission in three ways, which is appropriate and usual in the field. However, results differ depending on the approach, which is not so common. Authors should work on this. Some proposals: (i) please re-think which approach responds to the research question better; (ii) assess goodness of fit of the three models; (iii) discuss in discussion about the differing results.

Minor Essential Revisions

4. Abstract. The association between home ownership with number of readmissions is provided as a “B” which makes the reader think this is obtained from a linear regression (which actually would not be appropriate). However, this comes from a Poisson model, which provides IRR. Please clarify.

5. Please review previous literature on the topic. (i) Second paragraph of intro. Hernandez C 2003, Eur Respir J; (ii) review a recent report on effect modifiers playing a role in anxiety-depression-quality of life in COPD and comment, may provide interesting information for the discussion of this manuscript (Balcells E HQLO) (some minor comments below come from having read that paper)

6. Please review interpretation of previous research. Example: background, fourth paragraph: it is stated the research is “not well understood” because
previous papers "have reported negative results". If previous papers have reported negative results, the previous research is not “not well understood” but simply “negative”.

7. When was COPD defined? During the admission, before or after? Stability should be ensured. Please clarify.

8. Methods. Arterial blood gases are reported to describe the cohort but not stated as potential confounders (last paragraph page 4). Indeed, PCO2 may behave as a confounder. Please consider.

9. Methods. Page 5, first paragraph, last sentence. “Readmissions for non-CPOD were excluded”. Were these patients censored after a non-COPD admission? Or were followed until the end of follow-up or next COPD admission? Please clarify.

10. Analysis. Did you test the role of working status? It is likely to be an effect modifier of some of the associations provided.

11. Analysis. Was there any interaction between depression and quality of life?

12. Discussion. First paragraph. It should be rewritten because it does not come from the results of the study (see major comment about stats).


Discretionary Revisions

14. Results. If available, please provide characteristics on the patients who refused to participate. At least gender, age and smoking status.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**
'I declare that I have no competing interests'