Reviewer's report

Title: Rationale and design of the Costs, Health status and Outcomes in Community-Acquired Pneumonia (CHO-CAP) study in elderly persons hospitalized with CAP

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Reviewer: Olga Ochoa-Gondar

Reviewer's report:

Rationale and design of the Costs, Health status and Outcomes in Community-Acquired Pneumonia (CHO-CAP) study in elderly persons hospitalized with CAP.

Reviewer's report

The CAPITA study is a good opportunity to start up a nested matched cohort study with a primary objective of describing health outcomes, quality of life and health care resource use of patients hospitalized with CAP. Also, as secondary objective, the baseline status in a large cohort of people (approx 25,000 individuals) over 65 years living in the community will be described. The results of this study will provide valuable information for further cost–effectiveness studies on preventive measures of CAP, as pneumococcal vaccination with PCV13 in adults.

The paper is well written and it is scientifically and methodological accurate. I have few comments.

Minor comments:

1. Background

2nd paragraph: The authors state that it is important to include all healthcare resource use, not only resource use related to the index CAP episode during the 12 month follow-up, based on that pneumonia can trigger stroke and cardiovascular events. Authors should argue in detail why they include all resources for this time period. Also, they should specify the concept post-discharge mortality (mortality occurred within 30 days after diagnosis or during the 12 months of follow up?). These clarifications should be included in the methodology section even though they are first mentioned in background.

2. Methods/Design

The authors should mention/clarify that CAP cases included in CHO-CAP study are cases of pneumococcal pneumonia by PCV13 serotypes. This is mentioned for CAPITA study but not for the CHO-CAP study.

Page 7, line 116 and line 126. The authors should explain with a simple
sentence, why recent diagnosis of malignancy is an exclusion criteria. Cancer is a risk factor for suffering pneumonia and the current recommendations about antipneumococcal vaccines include these immunocompromised persons.

Page 7, line 124: The first time that is mentioned the EQ-5D score should be referenced (ref 22), and in order to facilitate the comprehension for the reader, a table might show the 5 questionnaire items.

Page 8, line 135: The authors should explain the concept “cardiovascular disease” and if it includes risk factors for cardiovascular disease as hypercholesterolemia, hypertension...

3. Discussion

Page 11, line 209: I suggest change the word “when” by “if” since the results of vaccine efficacy and safety have not been published until now.

I suggest include a paragraph commenting expected results, potential problems and weaknesses of the study design.

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.