Reviewer’s report

Title: Patterns and Determinants of COPD-related Healthcare Utilization by Severity of Airway Obstruction in Korea

Version: 2 Date: 2 May 2013

Reviewer: Douglas Mapel

Reviewer’s report:

The stated purpose of this article is to “analyze patterns and identify determinants of healthcare utilization in COPD patients according to the severity of airflow obstruction.”

Patients with COPD and spirometry confirming airflow obstruction were identified among participants in the Korean national health and nutrition survey: 897 (13.4%) of 6,663 eligible individuals demonstrated an obstructive airflow pattern and were included in the final data analysis. Only 244 (27.2%) of these 897 patients were found in the utilization database of the healthcare system, and they were assessed based on severity of airflow obstruction.

I do not have any major concerns – the study design is relatively simple and clearly articulated, and the results support the conclusions.

Major Revisions

The very low proportion (27.2%) of healthcare use among the 897 with proven airflow obstruction merits better description of those who did not have healthcare use. Were the non-users substantially younger, had fewer respiratory symptoms, or other clinical features that would help indicate how many of these were undiagnosed and/or untreated COPD cases?

Minor Essential Revisions

The conclusions are not summarized until the 5th paragraph of the discussion section. Readers usually look to the very first paragraph of the discussion section for a paragraph summarizing the conclusions of the article with specific references to the objectives or hypotheses of the project. Please move that paragraph.

A clear statement of the inclusion & exclusion criteria is needed. Did you allow patients to also have a diagnosis of asthma? If so, please describe the percent of asthma patients in Table 1.

Second paragraph of discussion – “The present study showed that the prevalence of COPD based on PFTs was 13.4%.” The study showed that the
prevalence of airflow obstruction was 13.4%. It is likely that most of these have an FEV1/FVC ratio <0.7, but normal FEV1. Furthermore, they are also likely to be asymptomatic, and at least 1/3 are never-smokers. Therefore, I recommend revising this paragraph. Direct comparisons to the percent with undiagnosed airflow obstruction in the US NHANES III would be useful.

Figure 2 – The units in these figures are very difficult to interpret. For example, in section A, does this mean that 67.7% of all healthcare visits were in the severe cohort? How many total visits did the cohort have? The figures plus their associated legend need to be self-explanatory.

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