Reviewer's report

Title: Quality of care for older adults with chronic obstructive pulmonary disease and asthma based on comparisons to practice guidelines and smoking status

Version: 3 Date: 14 April 2008

Reviewer: R J Halbert

Reviewer's report:

Major Compulsory Revisions

1) The paper contains a “strong possibility that there are missing data” as mentioned in my original review. The most glaring issue (as mentioned in my original review) is the discrepancy between short-acting beta-agonists (SABAs) and supplemental oxygen. In my opinion, the methods described are likely to have missed SABA prescriptions, as these patients often take these medications for granted, and often do not consider them as part of their “prescription medications”. As such they are likely to be missed on many surveys. I do not know how likely this is for the authors’ dataset, since they have not explored this question in any detail, despite some clarification of the data collection methodology. As the receipt of SABA medication is crucial to several of the stated study aims, and is an essential tenet upon which the conclusions are based, it should be addressed prior to publication.

Minor Essential Revisions

2) I believe the authors have placed the decimal point too far to the left in Tables 1 & 2. For example, in Table 1, column 2, I believe they mean that 61% of adults with no respiratory disease were females (rather than 0.61%, as written).

3) The authors have not fully addressed the issue of denominators for physician visits and days in hospital. Denominators should include the number of patients as well as the time period covered. In Table 2, for example, column 2 tells me that older adults with obstructive respiratory diseases have 2.76 days in hospital. The footnote tells me that this represents one calendar year. However, I am not sure whether this is represents a mean of 2.76 days per patient per year, 2.76 days per 100 patients per year (as implied for spirometry, pulmonology visits, and emergency room visits on the lines above), or some other denominator. In order to compare these results with any other published results, denominators are required. This is especially important for events that may occur more than once within a given time period. Since pulmonologist visits and emergency room visits commonly occur more than once per year as well, the authors should clarify these as well. In my experience, it is common to report events per 1,000 patients per year, or per 100 patients per year for more common events. If the authors are enumerating patients rather than events (as seems to be the case with spirometry examinations [text page 9]), then percent of patients per year is
appropriate.

4) The verb tense problems remain. It is fairly standard in biomedical journals to present results in the past tense, suggesting that these data were recorded in the past. To provide a single example, in the first full paragraph on page 9, the first sentence should read, “… older adults with one of these conditions were more likely to have an annual income…”

Discretionary Revisions

5) My main criticism was that the paper mixes epidemiology, healthcare utilization, and guideline adherence into a single report. This is confusing to the reader, and makes for a diffuse discussion. The authors have clarified their objectives, but I still count no fewer than 4 main objectives (in the abstract) or as many as 5-6 objectives (page 4). In my opinion, this is 2 - 3 objectives too many. The authors clearly do not want to restructure the paper to focus on fewer objectives. However, in light of the BMC policy of “publishing all scientifically sound research” this does not represent an overwhelming impediment to publication.

6) The paper includes material in the “Results” that would normally be placed in the “Discussion” section. For example, in the first paragraph of the Results (page 8), the authors state that their finding, “… may suggest that more adults with asthma are being treated as COPD patients.” I have placed this in “Discretionary revisions” due to the unique nature of this journal. In the other journals for which I serve as a reviewer, this would be a compulsory condition of acceptance.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I have not received any funding from groups likely to benefit from this paper. However, I currently serve as a paid consultant to the pharmaceutical industry, including some that sell respiratory medications. Also, I have in the past 5 years served as a consultant (paid and unpaid) to groups developing or revising respiratory guidelines.

I do not believe these relationships represent a conflict of interest.