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: 2 Date: 11 February 2008

Reviewer: Brian Smith

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Overall, this paper is a useful contribution to the current literature, as it highlights the considerable gap between current clinical practice, and guideline recommendations. The finding that Xanthines are still in common use, while there is under-use of ICS, SABA's, smoking cessation, spirometry etc, is particularly important.

The authors use available databases, and combine the data, in a novel manner to demonstrate a gap between guidelines and actual practice, in a well written paper.

Some points that can be addressed by "minor essential revisions":

They claim that undertreatment leads to increased cost due to exacerbations, although COPD total overall costs are complex, and some reference to, for example, outreach nursing care for COPD, would indicate that more comprehensive care does not necessarily reduce total costs, once unmet needs and co-morbidities are better managed, and should be clarified. The oversampling of subjects aged over 85 require more explanation, and readers unfamiliar with Medicare would be assisted by some brief contextual information - eg what about of non-medicare health services?

The results section starts off with changing prevalence of COPD from 1992 to 2003 - although this was not one of the a priori objectives, and there is little discussion later of possible coding practice shifts, or raised awareness.

We are told that 22% of subjects "have cancer", although this is of limited value without some additional clinical information - excised minor skin cancers, past history of cancer, current evidence of cancer...?

There is also considerable repetition of results between the text and the tables.

How comprehensive are the medication data - eg is it possible that some subjects are receiving vaccination or other interventions via a pathway that will not be detected by the methods of this paper.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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.