Reviewer’s report

Title: Risk factors of hospitalization and readmission of patients with COPD in Hong Kong population: Analysis of hospital admission records

Version: 1 Date: 25 January 2011

Reviewer: Shu-Kay Ng

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Major Compulsory Revisions:

1) Methods (3rd paragraph): Can the authors provide some reasons for unplanned readmissions? What is the reference (those are not classified as unplanned readmission); do they include first admission and planned readmission? Why are unplanned readmissions important to the public healthcare system (relative to the reference)? This is relevant to the second objective of the study.

2) Methods (last paragraph): Can the authors describe how risk factors are chosen? In particular, datasets obtained from admission records of hospital computer system often contain many variables. But the study considers only several risk factors. It is appropriate to justify why those specific risk factors are considered in the study.

3) Data Analysis (1st paragraph): Which univariate method is used to assess the association between the unplanned readmission and independent variables? In the multivariate analyses, how potential factors are determined?

4) Results (Table 2): comment on the practical importance of the findings. The adjusted OR’s are not particularly large and significance may be achieved due to very large sample sizes.

5) Results (Table 3): model assumptions should be tested (to the minimum, normality assumption for ALOS in ANOVA and ANOCVA should be tested). In addition, a graphical presentation of ALOS may be helpful. Comment also the practical importance of the findings, e.g. is it practical important for a difference in mean ALOS of 0.38 days.

6) Discussion (2nd paragraph): A potential confounding effect is identified. It could be the factor “smoking” rather than gender that affects unplanned readmission of COPD. Unfortunately, I suppose patient’s smoking status is not recorded in the computer system.

7) Discussion: Limitations of the study are not stated.

Minor Essential Revisions:
8) Background (4th paragraph): Is it possible to include COPD admissions to private hospitals as well? What is the percentage of COPD admissions to private hospitals? Is there any difference in characteristics between these two groups?

9) Results (last paragraph): The hospitalization cost reported is a crude estimate.

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

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