Reviewer’s report

Title: Mortality in patients with COPD exacerbations attending emergency departments

Version: 1 Date: 23 December 2013

Reviewer: Nicolas Roche

Reviewer’s report:

This prospective multicenter study assessed prognostic factors of in-hospital, one week and one month post-discharge death in patients admitted for COPD exacerbations.

Using results of multivariate analyses, the authors produce a continuous and categorical DeCOPD score based on age, baseline dyspnea level, use of LTOT or LT-NIV, altered mental status and use of inspiratory accessory muscles on arrival. The AU-ROC for this score was high, 0.84, and higher than the predictive values of FEV1 % predicted and current GOLD classification.

Arterial blood gases did not improve the predictive value of the model.

The authors appropriately use a derivation and a validation sample with large sample sizes. There were only rather few missing data.

Major revisions

1. Since data files appear to be quite complete, the authors could test the yield of other biological factors such as those that were used for the Pneumonia Severity Index. They could also test their score against others that include biological values such as the COPD–specific DECAF score (Steer Thorax 2012) and the generic BAP-65 score (ref 8 of their paper), both of which have shown acceptable prognostic value in previous studies.

2. Since arterial blood gases did not add anything to the proposed clinical scores, the authors could compare the predictive value of their score with other purely clinical scores (ref 20 of their paper).

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

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I have no competing interests