Reviewer's report

Title: Enhancement of CURB65 score with proadrenomedullin (CURB65-A) for outcome prediction in lower respiratory tract infections: Derivation of a clinical algorithm

Version: 1 Date: 14 November 2010

Reviewer: James D Chalmers

Reviewer's report:

The authors have demonstrated that pro-adrenomedullin enhances prediction of adverse outcome in LRTI by the CURB65 score. In general the study is well performed, the cohort is appropriate and the results interesting.

Major compulsory revisions

It is suggested that the authors used standardised ICU admission criteria, but the ICU admission criteria in the methods do not make sense, or correspond to the results- It is suggested that patients with a score >2 CURB65 points would be admitted to ICU, but then only 7.6% of the cohort were admitted to ICU when 20% of the cohort had scores >2- either these standardised criteria were not implemented or were not followed- can the authors explain?

This is important as ICU admission is part of the outcome that CURB65 is supposed to predict. Using CURB65 as part of a standardised ICU admission criteria will artificially increase its predictive value.

Minor essential revisions

Empyema is not defined in the methods but is included as an end-point

Discretionary revisions

Introduction- i would disagree with the statement that CURB65 has inferior prognostic accuracy to other scores- a recent meta-analysis showed no difference in overall test performance and it really depends on how you define “prognostic accuracy”.

The word yet is not necessary on lines 11 and 12 of the introduction

It is not strictly true to say it has not been tested in non-CAP LRTI- see Chang et al Respirology 2010 sep 30 Epub ahead of print (uses CURB65 in COPD) and Howell MD et al Acad Emerg Med 2007; 14(8);709-14- validation in infection.

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

Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare i have no competing interests