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: 4 January 2011

Reviewer: Gavin Barlow

Reviewer's report:

The article is well presented and with a few exceptions highlighted below is in good English.

Major Compulsory Revisions

1. You have presented observational data that shows the potential for proADM to add something to the CURB65 score with respect to clinical decision making, but, as far as I can see (and I apologise if I have missed something), no comparative data are presented showing that the addition of proADM to CURB65 statistically significantly improves classical test performance characteristics (I presume it does, but it would be nice to see these data). Some data are presented in Table 2 (i.e. AUC of CURB65 and proADM for adverse events and mortality), but I think readers would value some expansion of this, for example, AUC of CURB65-proADM for adverse events and mortality (and statistical comparisons with either/or used alone) and other classical performance characteristics.

2. Table 3 - I think it would be useful to expand this to include the same data for CURB65 and pro-ADM used alone (and in combination as is currently presented). As above, this would provide readers with more data allowing comparison of the proposed score with each of the components used alone.

Minor Essential Revisions

1. The following sentences do not make sense (to me!): a) P4 ProADM is one of the prototype “hormokines” which have characteristics as well of hormones as of cytokines and are…; b) P11 …while daily also decisions have to take into account other adverse outcomes…

2. In the paragraph discussing weaknesses, I think it is important to more overtly point out that this is not a validation study. CURB65-proADM needs to be prospectively validated in another cohort of patients and/or, as you do point out, shown to add something to clinical practice in an intervention study.

3. In my own hospital, many of the low CURB65/low proADM patients cannot go home due to social (or similar) reasons. In fact, many are admitted because they (and society!) cannot cope with a relatively minor illness at home (i.e. admitted...
more for nursing than medical reasons). I suspect the situation is better in Switzerland, but I think this problem should be more overtly discussed than currently (i.e. that the potential for discharging patients may be less well achieved than might be expected because of such reasons).

**Level of interest:** An article of importance in its field

**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 declare that I have no competing interests'