Reviewer's report

Title: Physiological-social score (PMEWS) vs. CURB-65 to triage pandemic influenza: a comparative validation study using community-acquired pneumonia as a proxy

Version: 2 Date: 30 January 2007

Reviewer: Alistair W Stewart

Reviewer's report:

General

I've two concerns about this manuscript.

1. Is the AUC measure appropriate for assessing a tool to triage clinic attendees?

   a. The AUC being greater for PMEWS than for CURB-65 (for admission) says that on average that those who are truly cases have a higher probability of being predicted to be cases than do those who are truly non-cases. It says nothing about the absolute level of prediction.

   b. In the situation where this tool is being recommended to be used, the cost of sending a true case away is very high. The consequence of sending a true case away is, for the subject, high but also it is also very high for the community as the condition is highly contagious. I would have thought a more important assessment of the value of the tool was the specificity when the sensitivity was very high.

   The authors need to think about the measure which is most appropriate for the circumstance and discuss this.

2. All the results given in this paper are based on a situation far removed from what will happen in a pandemic influenza outbreak. This is acknowledged by the authors. However, there needs to be further discussion on how the tool might work when the proportion that should be triaged will be much greater than reported here. In the example reported, less than one third of the subjects were not admitted but in the situation where the tools is being proposed, the proportion being assessed who do not have the condition will be very much larger (as can be seen in the Dutch data reported in the introduction). In the example, the mean age was nearly 71 but in a pandemic situation the mean age could be substantially different from this, what effect could this have? Most of the physiological measures change with age.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. The authors need to think about the measure which is most appropriate for the circumstance and discuss this.

2. Further discussion is necessary on how the proposed measure might behave in situations far removed from those studied in this example.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Table One is very poorly constructed. Each item (eg Age less than 65, socially isolated etc) does not need its complementary part as this is redundant given that the total number of patients is given in the heading. It would be informative to include the percentage though (also redundant but helpful for the reader).

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Discretionary Revisions (which the author can choose to ignore)
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.

Declaration of competing interests:
'I declare that I have no competing interests'