Reviewer's report

Title: Viral Etiology of Hospitalized Children with Severe Pneumonia in the Philippines

Version: 5 Date: 14 September 2011

Reviewer: cristina O'Callaghan-Gordo

Reviewer's report:

Major Compulsory Revisions
1. Methods, study patients, paragraph 1: It is not clear from this paragraph which patients were enrolled in the study. Were all children with clinical severe pneumonia (according to IMCI guidelines) offered participation in the study regardless to whether they were visited in the emergency room or hospitalized?
2. Methods, detection of viruses: Were nasoparingeal swabs also stored at 4°C? Or only transported at this temperature? How long were nasoparingeal swabs stored before PCR was conducted?
3. Methods, detection of viruses: Were negative controls included in each PCR? Which other measures were taken to avoid cross-contamination between samples?
4. Results, patient’s profiles: 224 children refused to participate. Do authors have information on these children? Were they systematically different from children who participated in the study? What were the main reasons for refusing to participate? Comment on potential introduction of selection bias in the discussion.
5. Results, associated risk with viral pathogens, 2nd paragraph, 2nd sentence: Presenting percentages of “fatal outcome” among virus-positive cases and virus-negative cases is more informative than just presenting the numbers of virus-positive cases and virus-negative cases. Present percentages rather than numbers in the entire paragraph (for all comparisons conducted).
6. Table 4: Present percentages of fatal outcome also among negative cases (i.e. number of children with fatal outcome among FluA negative cases).
7. Discussion, paragraph 1 and 2: Authors should be cautious when they use expressions like “causative agents” since, as they comment later on the discussion, detection of a virus do not necessarily indicate that the virus is the cause of pneumonia.

Minor Essential Revisions
1. Background, first paragraph: Millennium Development Goal 4 (instead of Goals 4)
2. Results, patient’s profiles: The percentage of children enrolled in the study is not a “rate”. Please amend that.
3. Methods, patient information: Please use “signs and symptoms” rather than “physical findings”.

4. Methods, patient information: Could the authors provide examples of outcomes included in the category “others”?

5. Methods, statistical analysis: Do the authors mean “univariate logistic regression” when they say “single logistic regression”?

6. Results (all the section): Authors should be consistent in the way they present results (i.e. number in the text and percentage between brackets or vice versa, but always the same). It is also useful to see the denominator (i.e. 2.2% (18/819).

7. Results, detection of viruses: From the third sentence onwards, the paragraph is difficult to follow. Present the number of total virus (single and multiple infections) separately from the number of single or multiple detections. Results from RSV are incomplete: Only the percentage of samples with RSV detected is provided, but not the actual number.

8. Results, seasonality of the viruses: The 4th sentence of the paragraph (“Monthly distributions of single...”) is not clear.

9. Results, associated risk with viral pathogens, 2nd paragraph: In my opinion, statements like “difference was not significant” should be removed.

10. Results, seasonality of the viruses, 5th sentence: Figure 2 does not correspond to information provided in the text.

11. Results, seasonality of the viruses, last sentence: Authors could provide more details when talking about seasonality of HRVs.

12. Results, associated risk with viral pathogens, 1st paragraph: The 5th sentence of the paragraph (“For HCoV-OC43...”) should be more specific. Do the authors mean that all children with HCoV detected died during admission?

13. Results, associated risk with viral pathogens: Include 95% confidence interval when presenting OR in the text.

14. Table 1: Include interquartile range of median age and median time interval between onset and visit.

15. Table 1: Change the word “value” to “percentage”.

16. Table 4: Check spelling of footnote (“dified”).

17. Discussion, paragraph 2, last sentence: This conclusion cannot be drawn from the study findings. References supporting this idea should be provided.

18. Discussion, paragraph 3: As previously mentioned, please note that proportion of HRV detected in not a “rate”. Please amend this.

19. Discussion, paragraph 6: Review literature referring to sensitivity of blood culture. It has been reported that blood culture can detect about one third of bacterial pneumonia cases.

20. Discussion, paragraph 7: Do not use the expression “detection rates” to refer to percentage of influenza viruses detected.
Discretionary revisions

1. Background, first paragraph: Change first sentence of the paragraph as it is redundant.

2. Methods, study site: Figure 1 could be submitted as “online content” as is not essential for the understanding of the paper.

3. Methods, study patients, paragraph 2: A reference could be included after the sentence “The antibiotics were prescribed based on the guidelines of the Philippines Pediatric Society”.

4. Figure 2 could be submitted as “online content” as is not essential for the understanding of the paper and similar information can be taken from table 1.

5. Table 1: Total number of children enrolled in the study could be included.

6. Table 2: Information about Adv could be presented in the main text, rather than as a footnote. Moreover, authors could indicated the overall number of Adv detected in all cases and specify the number of single infections only in those cases where single infections were detected.

7. Table 4: Change the heading “positive for single/multiple viruses” to “positive for single or multiple viruses”.

8. Table 4: In my opinion, presenting risk and OR in the same table is confusing. I would present either risks and risk ratios or odds and OR.

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

Quality of written English: Not suitable for publication unless extensively edited

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