Reviewer’s report

Title: Viral etiologies of lower respiratory tract infections among young children in an Egyptian children’s hospital using three different laboratory methodologies

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Reviewer: Shobha Broor

Reviewer’s report:

Major revisions:

1. What definition for LRTI was used? Were the IMCI criteria used for classification of lower respiratory tract infection, fever is not a criteria for defining LRTI, the criteria described for LRTI in the paper i.e. difficulty in breathing, chest in-drawing, and inability to feed are all criteria of severe disease and these children are usually admitted to the hospital, further was respiratory rate measured for these children?

Please provide definition of LRTI used in the study

2. For each virus before the % the number positives should be given, Figure 1 can be deleted as this can be described in text figure does not provide any additional information. In fact if a total row is added in table 2 at the end, the same information can be compiled in table 2 and figure 1 can be omitted.

3. Figure 2 is not well representing the facts, this figure is showing how many cases of each virus infection were co-infections, the % is from the total positivity for that virus, thus in a graph it gives a wrong impression about the % prevalence for each virus. This data can also be presented in a table giving the % prevalence for the virus and then how many of these were co-infections.

4. Figures 3 is all jumbled up this should be a bar graph for each virus and for each month further if the numbers are very few then data should be represented in numbers rather than %. In the line graph also some of the colours of the lines are very similar and thus not easy to decipher.

5. Figure 4 is totally wrong this not a trend that it should be represented in a line graph. The comparative data for each method should have been given in a two by two table with sensitivity and specificity.

Minor revisions:

1. I am surprised that all children with LRTI were enrolled from the out patients department that would exclude all children with severe LRTI as they are usually admitted to the hospital.

2. Were all children seen in the OPD with LRTI enrolled in the study if not what was the criteria for enrollment?

3. The mean and median age of the children should have been given along with M: F ratio.
4. Page 4 prevalence of respiratory viruses among patients: Respiratory viruses were detected in how many children in total by all methods? only % is given.

5. It is strange to note that the sensitivity of each method (fig. 5) increased on day 21-28 or was similar to day 0-3. The authors have tried to give some explanation for this in discussion but the figure gives a wrong impression to the reader.

6. The legends to the figures are not explanatory and are very brief.

**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 have no scientific or financial competing interest with the authors of this manuscript.