Reviewer's report

Title: Clinical outcomes of children with acute asthma and pneumonia in Mulago hospital, Uganda: a prospective study

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Reviewer: Maria Francesca Patria

Reviewer's report:

This manuscript describes the clinical outcome of acute asthma, pneumonia and a combination of asthma and pneumonia in a paediatric emergency unit from a low-income country.

This study is interesting but many points need to be taken into account in order to make it clearer.

Major revisions

Row 60: the concept is not correct and has to be specified: there are gold standards for asthma and pneumonia diagnosis, although it is appreciated that they may be difficult to apply in a low income country, as you define Uganda.

Row 87: In the BTS guidelines bacterial pneumonia should be considered in children aged up to 3 years when there is fever of >38.5°C. Viral pneumonia can occur in the absence of fever.

Row 125: Mortality should be included among the primary outcome measures.

Row 128: I am afraid the reference n° 24 is not acceptable, as it is by all evidence, an internal document. Moreover the definition of oxygen saturation normalization is reported below. It is better to remove the entire sentence from “(92%) “ to the full stop. Remove the reference (24).

Row 133: it is better to report the definitions used in the previous study, because the authors claim to have no gold standard for the diagnosis

Row 166: the reference n° 28 is not acceptable, as it is by all evidence, an internal document.

Row 166: did all wheezing patient received sistemic steroids? All asthma guidelines modulate the therapy on the basis of clinical symptoms. Specify this point.

Row 168: see above for the pneumonia definition. Remove reference 28.

Rows: 228-233: this consideration should be inserted in the discussion

Row 257-258: in the text the authors describe the following variables: “combined asthma and bacterial pneumonia” and “asthma syndrome”. However in the figure
the variable are “asthma syndrome” and “pneumonia”

Minor revisions

As a whole the text is clear, but the text of the article would have benefited from a more careful review.

Examples and recommended amendments are reported below.

I would change the order of the sentences in the abstract's background: Little attention has been paid to asthma in ‘under-fives’ in Sub-Saharan Africa. In ‘under-fives’, acute asthma and pneumonia have similar clinical presentation and most children with acute respiratory symptoms are diagnosed with pneumonia according to the WHO criteria. The mortality associated with acute respiratory diseases in Uganda is high but is improving, dropping from 24% in 2004 to 11.9% in 2012. We describe the immediate clinical outcomes of children with acute asthma and pneumonia and document factors associated with prolonged hospitalization and mortality.

Row 54: the authors have forgotten “asthma” after “acute”
Row 65: double space between “only” and “19.8%”
Row 66: missing space between “pneumonia” and “(4)”
Row 73: missing space between “therapy” and“(8-10)”
Row 87: remove “and” before “fast”
Row 90: missing space between “mortality” and “(22)”
Row 94: it is more effective to write: “clinical outcome of children with asthma, pneumonia or combined asthma and pneumonia”
Row 126: remove the comma before “mortality”
Row 128: the full stop has to be put after “(24)”
Row 142: missing space between “days” and “(16)”
Row 166: missing verb after “intravenous hydrocortisone”
Row 181: it is better to write: Statistical analysis
Row 184: missing space between “pneumonia” and “(29)”
Row 193: multicollinearity instead of multi-colinearility
Row 207: add the number of patients and remove “the majority”
Row 218: add the number (22/614)
double space between “+” and “bronchiolitis”

add “figure 1”

double space between “(16.3%)” and “and”

remove the comma after “and”

remove “and” before fever.

it is better to write: severe acute malnutrition, hypoxemia (SaO2 < 92%), fever on admission and age < 12 months old were variables significantly associated to prolonged hospitalization

write: diagnosing and treating or diagnosis and treatment

add “recent” before “study”

missing space between “mortality” and “(9)”

missing space between “effectively” and “(29)”

missing space between “immunity” and “(32)”

double space between “8” and “30”

missing space between “ingestion” and “(16)”

missing space between “Geneva” and “2004”

BTS instead of Society BT

WHO instead of Organization WH

it is not an acceptable reference

missing space between “Geneva” and “2005”

the reference is not acceptable. There are hospital internal guidelines explained in the methods

there is a layout problem: the figures do not follow the titles

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