Author's response to reviews

Title: Factors associated with asthma among under-fives in Mulago Hospital Kampala Uganda: a cross sectional study.

Authors:

Rebecca Nantanda (rnantanda@gmail.com)
Marianne S Ostergaard (moster@sund.ku.dk)
James K Tumwine (kabaleimc@gmail.com)
Grace Ndeezi (gndeezi@gmail.com)

Version: 3 Date: 3 September 2013

Author's response to reviews:

Reviewer's report
Title: Factors associated with asthma among under-fives in Mulago Hospital Kampala Uganda: a cross sectional study.
Version: 2 Date: 21 July 2013
Reviewer: Rebecca Rosenberg
Reviewer's report:
The authors incorporated and revised the manuscript to a great degree.

Comment: The abstract can be shortened, especially in methods.
Response: Thank you very much for this comment. The abstract has been shortened.
We have deleted details about the study site, which is available in the methods section.
We have also reviewed the results section and included only key findings on the burden of, and factors associated with asthma among children less than five years.

Comment: The introduction and text throughout would benefit from dropping introductory qualifiers at the beginning of each sentence (such as "Henceforth," "However," "Furthermore" which make it difficult to read).
Response: Thank you very much for this important observation. We have revised the entire text and improved on the language by removing most of the introductory qualifiers. We have only left a few which are absolutely necessary.

Comments: The discussion could use a concise introductory paragraph including overall conclusions of both hypotheses before proceeding to interpret each.
Page 13 has a typo - incomplete sentence ending with "in Mulago". There is a lack of a reference in the middle of page 15.

Be consistent when mentioning wheeze, in terms of audible or "history of" v auscultated; it is not clear at some points.

I'm not going to pursue it but the PPV of the RSV DFA dependents on the pretest probability and I'm going to assume there is some seasonality to RSV in Uganda.

Response: Thank you so much for these very important comments and observations.

An introductory paragraph to the discussion has been inserted. It provides an overview of findings in context of the study objectives. Specifically, we have highlighted the fact that genetic factors and socioeconomic status were associated with asthma, as well as bronchiolitis in this study sample. We also postulate that both asthma and bronchiolitis may have common aetiological and risk factors, and the need for further research.

The introductory sentence in the discussion section which had a typing error has been corrected.

The missing reference has also been inserted (ref 4).

The section in the discussion (study definitions- page 17) page that focuses on wheeze has been revised. In this study, audible wheeze refers to the wheeze that is/was heard by the caretaker whereas auscultatory wheeze refers to that wheeze which is heard by a health worker on auscultation of the lungs. These terms have been clarified.

Comment: Table 2 should include breakdown of age groups between 2-12 months, 12+-24months, and 24-59months. Also, what is the opposite of urban? Rural? Is there no in between? specify. Table 2 is really your Traditional table 1 and should include all the variables such as allergy, maternal history, etc, to get a sense of the prevalence in the sample.

Tables 3 and 4 need better row labels (takes a minute to know if it is total n or a percentage). Instead of genetic factors would use the term "patient" or "subject" or "personal history "factors. I actually think percentages would be more useful for people rather than listing n, because then we have to do the math.

Lastly there is no need to consider bronchiolitis and asthma in children over 24months. This analysis should only include infants 24months or 12 months and younger. In most world literature bronchiolitis is not considered after age 24mo. So the analysis, while appreciated, isn't as relevant.

Response: Thank you so much for these comments.

Further analysis has been performed and the age groups disaggregated into three categories; less than 12 months, 12-24 months and above 24 months. The majority of the study participants were aged less than 12 months and few of them were more than 2 years. The details have been provided in table 2.
In this study, children from the capital city, municipalities and town councils in Uganda were collectively referred to as coming from “urban setting” whereas and the rest were from rural settings. This was adapted from the definitions used in the Uganda Demographic and Health Survey(1).

Table 2 has also been revised to include the proportions of children who had history of some of the risk factors for asthma. Overall, the results show low proportions of children with risk factors for asthma and/or bronchiolitis. The results showing statistical significance of the association between various factors and asthma/bronchiolitis are provided in tables 3-5.

All tables have been revised to show the percentages rather than absolute figures.

The analysis for factors associated with bronchiolitis has been revised to include only children who were age 24 months and below. The results show that patient factors like allergy in patient and gender were strongly associated with bronchiolitis in this study sample.

Level of interest: An article of importance in its field
Quality of written English: Acceptable
Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests:
I declare I have no competing interests.
References

Reviewer’s report
Title: Factors associated with asthma among under-fives in Mulago Hospital Kampala Uganda: a cross sectional study.
Version: 2 Date: 30 July 2013
Reviewer: Paul Mullan
Reviewer’s report:
Comment: All major and minor revisions were addressed in the comments in their report.
The only response that I thought was less strongly stated was the case definition for asthma in that so many modifications were made to a established (GINA) guideline. That said, I understand that definitions do need to be modified at times due to local documentation and resource limitations.

Thank you so much for this comment. We made modifications to the GINA guidelines for the following reasons
1. Age group:
   a) Our study was focusing on children less than five years. We appreciated that it
   would be difficult for children less than five years to objectively understand and
   describe the symptom of “chest tightness”. We could not use it as part of the
   case definition for asthma because it would provide quite subjective responses.
   
   b) We did not perform spirometry or peak flow meters because it is difficult to
   perform these tests in young children and obtain objective results.

2. Study setting: The study was done in a low-income country with a high burden
   of pneumonia. The clinical presentation of asthma and pneumonia are very
   similar in our setting, particularly in children less than five years of age. Hence,
   we decided to use chest x-rays, in addition to clinical history and signs, to try and
   differentiate asthma from pneumonia.

   We acknowledge that the modifications may have led to some errors. We have
   discussed the limitations to the case definitions under the section on study
   limitations.

   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 declare that I have no competing interests