Author’s response to reviews

Title: Poor Quality Data Challenges Conclusion and Decision Making: Timely Analysis of Measles Confirmed and Suspected Cases Line List in Southern Nation’s Nationalities’ and People Region, Ethiopia

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➢ Original title (PUBH-D-16-03111) was modified to include conclusion

General

Before 2015, the study region had limited access to proficient measles laboratory and samples from suspected cases were tested at central (national) laboratory for outbreak confirmation. In a district of about 100,000 population, measles outbreak was considered when 3 or more cases were confirmed within a month as per national guideline. After confirming epidemic, the region used the clinical classification scheme (cases were diagnosed based on clinical manifestation and epidemiological linkage to confirmed case within a district). The epidemic was confirmed per every district and response was taken. Note that the objective of this study was to show vaccination status and the delay in seeking health care of these cases, not to show trend over time or analyze and describe all cases. Most surveillance data was collected manually through phone call or fax and then compiled. Some were missing, some difficult to read etc… So, taking sample and inferring was found economical. Sample of 2132 was analyzed. When samples were extracted, lab result was not collected. But when reviewers commented to show confirmed and epidemiologically linked cases, we go back to original data and collected lab result using serial number (code) given to cases. 94 (4.4%) cases were lab confirmed and others were epidemiologically linked.

Reviewer #1: Again - this must be reviewed for consistent grammar. Please have it edited. Its not poorly written, but still needs some revisions for it to be published.

- Accepted; Modifications made
Introduction

Lines 22 - need citation for measles as leading cause of death

- Accepted; Cited and second sentence reorganized

Lines 28 can be rephrased to something like estimated measles incidence was 6.52 per 100,000 in 2013

- Accepted and modified

Lines 30 measles was the 6th cause of under five hospital admission

- Accepted and modified but the word hospital was not added as it can include health center admission

Explain the mortality reduction phase or at least cite it; Again clinical classification scheme is not defined adequately. And what is low levels of measles incidence? This number should be stated

- Accepted; modified and cited

- low levels of measles incidence is <5 measles cases per 1000000 population and countries working to achieve this are in mortality reduction phase or simply area where measles is endemic (endemic mean occurrences of cases for ≥ 12 months)

- clinical classification scheme – cases are diagnosed based on clinical manifestation (but this doesn’t mean cases are not totally tested; to confirm epidemic, the first 5-10 cases are tested and after confirming epidemic, cases are classified based on clinical sign/symptoms and by epidemiological linking)

  • Clinically confirmed: A case that meets the clinical case definition (Any person in whom a clinician suspects measles infection, or Any person with fever and maculopapular rash (i.e. non-vesicular) and cough, coryza (i.e. runny nose) or conjunctivitis (i.e. red eyes)

  • Discarded: A suspect case that does not meet the clinical case definition

Methods

Lines 15 - 17 revise to --- line lists in September 2014

- Accepted and modified

Lines 28-30 not sure what you are talking about with Woreda

- Accepted and modified

- Woreda is equivalent name of district in the region, Ethiopia

Case definition paragraph needs to be edited for grammar

- Accepted and modified (re-written)

Lines 53-56 sentence doesn't make sense

- Accepted and modified

- analyzing measles vaccination status for rubella cases has no meaning, so excluded

Results

Need to be edited

- Accepted

- Almost re-done; Lab result added, variables were re-categorized and analyzed

Discussions

Page 5 lines 38-41 what do you mean supplementary vaccination by campaign CAN be given - if there is a malnutrition outbreak, then a campaign will be implemented?

- No! If there is measles outbreak, supplementary vaccination can be given. Supplementary vaccination can also be given if there are few cases (case build) and malnutrition. Existence of confirmed case is mandatory.

Page 5 lines 44-50 not sure what you are trying to say here--- what is high vaccine coverage? 80%? 95%? And then second part of the paragraph doesn't really make sense

- Accepted

- High coverage ≥95%,

- Paragraph re-written and merged with next paragraph

What is the point of table 2 and 3? What are you trying to convey? Table 4 is much better at conveying the overall message

- Accepted
- Table 2 and 3 merged; now Table 2 (shows admission, hospitalization)

Can you test the difference in proportions to see if there is a difference?

- Did all possible tests but non were significant

Discussion should be organized as follows

Reiterate the main point - people are not vaccinated! 60 is very low

Then go into why that maybe

Limitations

Conclusions

- Accepted

- But 60 is high, our conclusion is why and how this much vaccinated people got infected?? Why it did not protect them?

Revise the English grammar

- Accepted; revisions made

Reviewer #3:

Title = Capitalize main words like "...Status, Delay ....).

- Accepted and modified

Differentiate suspected and confirmed cases (like of 2132 cases this much were confirmed by Lab, epi-linkage, clinical ...)

- Accepted; added

Explanation should be positive. Instead of saying "One third of cases 717 (33.6%) visited health facilities after three or more days of onset of clinical signs/symptoms..." say 2/3 of cases visited health facilities within three days ..."

- Accepted and modified
You said with a median of 2 days. How 2 days be a median for days greater than 3 days?

- No! There were people who visited on the same day, on the next day, after two days and after a week. So, 2 can be a median.

Do not forget as there was not regional measles lab before May 2015.

- Yes, but samples were tested at Ethiopian Public Health Institute Laboratory

You are concerned about delay, what about those did not visit health facility. (Your retrospective study is not representative of population awareness).

- That needs other research

Your total cases were 2132, but you talk about 2263 (106%) cases in your results of page 4 line 48.

- Sorry! Did not get that!

In the table please add column and row total for each variable classification

- Accepted and added