Author's response to reviews

Title: An Evaluation of Reporting Timeliness of Public Health Surveillance Systems for Infectious Diseases

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PDF covering letter
Co-author Responses to Comments from Nkuchia M’ikanatha

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Major Compulsory Revisions:

Comment #1:
The authors should give the rationale for focusing on multi-state outbreaks as well as the reasons for their choice of both published reports and NNDSS data.

Response #1:
The literature review provides a context for the general topic of surveillance system evaluation – how has it been done? – and provides better support for our recommendations regarding standardizing methods for evaluation of timeliness to support comparison across studies. We then evaluated the NNDSS reporting timeliness in the context of the findings from the review – how should our evaluation findings be presented to illustrate a standard approach to reporting timeliness evaluation? In that context, we stated that we were evaluating the national infectious disease surveillance goal that was most ‘stringent’ regarding timeliness – the potential use of NNDSS for the identification of multistate outbreaks which is possible in a national surveillance system because of the aggregation of data across multiple jurisdictions. We found that, for that purpose, NNDSS data are, in general, not timely enough – both due to reporting lag and state-specific reporting variability. We clarify our rationale in our revision of the Background on p. 4.

Comment #2: While the authors provide the method they used to search for papers, the number of papers they found is missing in the results. The search key word combinations used could also help readers of this paper.

Response #2: The key words are presented in the Methods section. We felt it was redundant to present the key word combinations since they can be “built” from the key words listed and their inclusion would add detail and length to the paper that is not necessary. Eight papers were identified which met all of our inclusion criteria. We felt that including the specifics of each key word search was excessive.

Comment #3: What is the rationale for using incubation period and for the selection of 30 days in the case of hepatitis A?

Response #3: We are using the incubation period as a surrogate measure for the period of infectivity. We’ve included the following sentence in the Methods to address this issue: “Incubation periods were used as a surrogate measure for period of communicability which is critical to consider when implementing effective, disease-specific prevention and control measures.” Chin’s “Control of Communicable Diseases Manual,” is our data
source; it cites the average incubation period for hepatitis A is listed as being 28-30 days. We chose 30 days as the estimate.

Comment #4: Data presented on page 8 second paragraph beginning with “A total 72,293 (26.4%) belongs to the results.

Response #4: The data presented on page 8 was moved from the Methods section into the Results section.

Comment #5: The comment on page 12 second paragraph starting with “In general, for the same data type…” belongs to the discussion.

Response #5: We intended that statement to be a summary of our results; to clarify, we deleted the ‘In general’ phrase.

Comment #6: On page 13 under discussion, the statement starting with “Public health programs conducting surveillance should….,” is a recommendation that should either be restated or deleted.

Response #6: It is not clear what the reviewer’s rationale is for requesting that this sentence be restated or revised. However, we did modify the sentence: “Public health programs should periodically assess timeliness of specific steps in the surveillance system process to ensure that the objectives of the surveillance system are being met.”

Comment #7: The recommendation starting on the first paragraph of page 14 should be reexamined to ensure that it is within the scope of the current paper.

Response #7: We deleted this paragraph.

Comment #8: On page 15, second paragraph sentence starting with “Acute hepatitis A surveillance data…” should be revised or deleted. Aberration detection methods raise flags but do not detect outbreaks, which must be done through verification of data and case follow-up.

Response #8: We deleted the statement in question and revised the discussion of this issue for clarification.

Comment #9: While Effler et al. (Ref 18) demonstrated improvement of timeliness of cases reported to Hawaii Health Department, their (study) cannot support the interpretation given on page 16, paragraph 2.

Response #9: We’ve deleted the reference to citation #18 in the second paragraph on page 16 and revised the last sentence in this paragraph to read: “In addition, the use of automated electronic laboratory reporting to enhance infectious disease case reporting may have contributed to increased timeliness.”
Comment #10: The conclusions given on page 19 should be more focused on the results and interpretation of the data in the current paper.

Response #10: We’ve modified the conclusions to address the reviewer’s comments.

Minor Essential Revisions:

Comment #11: In the abstract under conclusion delete “to” before helpful.
Response #11: Done

Comment #12: Background needs to be reduced.
Response #12: We have shortened the Background in response to the reviewer’s comments.

Comment #13: Under the methods second paragraph the sentence beginning with “Studies without” can be deleted either inclusion or exclusion criteria would be adequate.
Response #13: Done.

Comment #14: Under acknowledgement, it is important to mention the NNDSS reporting health jurisdiction or mention the 50 states, NYC and Washington DC.
Response #14: Done.
Co-author Responses to Comments from James Gibson

**Title:** An Evaluation of Reporting Timeliness of Public Health Surveillance Systems for Infectious Diseases

**Minor Essential Revisions**

Comment #1: Page 3, bottom paragraph, second sentence, add something like "its assessment" after "of factors and...." to help the sentence make sense.

Response #1: Done.

**Discretionary Revisions**

Comment #1: A problem with assessing reporting timeliness at the national level is that access to key details to define to reporting lag period, such as just when the disease had its onset, and when the medical system first detected it, are usually missing, yet are key to an accurate determination of reporting lag. Thus it might be worth pointing out more clearly that (apparently) many cases of disease reports had to be excluded from the analysis because of missing values for these, and the large number of exclusions might have biased the results in Table 3.

Response #1: We’ve revised the last sentence in the paragraph that starts “The findings in this study are subject to several limitations” to this: “Lastly, 72,293 (26.4%) cases were excluded from our analysis because the information contained in data base would not permit calculation of timeliness and this may have affected the results of this study.”

Comment #2: While not vital to the purpose of this paper, it might be worth pointing out that in figure 1 the intervals 2 and 3 include several other key necessary steps that strongly influence reporting lag: In particular the lag caused by investigation of the initial report to verify if it fits the case definition, and the delay in reporting from the medical care system to public health, both lags that hold potential to improve reporting timeliness.

Responses #2: We modified Figure 1 to include a major new step: “Public health system verification/investigation of health event report” and modified the Discussion and conclusion to emphasize the importance of identifying and specifically addressing the surveillance processes that contribute to reporting delay.