Reviewer’s report

Title: Assessment of two complementary influenza surveillance systems: Sentinel primary care Influenza-like Illness versus severe hospitalized laboratory-confirmed influenza using the moving epidemic method

Version: 2 Date: 22 May 2019

Reviewer: Reviewer 2

Reviewer's report:
PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?
No - there are minor issues

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?
No - there are minor issues

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?
Yes - experiments and analyses were performed appropriately

STATISTICS - Is the use of statistics in the manuscript appropriate?
Not sure - I am not able to assess the statistics in this study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?
Yes - the author's interpretation is reasonable

OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?
Probably - with minor revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: This manuscript aimed at comparing two existing surveillance systems for ILI and Influenza-associated hospitalized-patient. Although methodology could be revised for a better understanding, the overall objective of this manuscript is reached. Authors demonstrated that these two systems are complementary and useful to monitor influenza activity. Use of the MEM methods seems adequate at least in Spain to estimate threshold for the two systems. Nevertheless, I have some concerns that should be addressed by authors.

REQUESTED REVISIONS:
I'm confused. If it is the first 2 ILI patients, we can't really say "random swab"? Please correct your sentence.

Page 5-6: Can authors explain better the SHLCI system. If hospital only report lab-confirmed flu cases, do they also report syndromic case (eq. SARI)? It is indeed difficult to estimate the rate of FLU among total hospitalization or at least among patient with SARI. It is really confusing the use of SHLCI based on laboratory-confirmed influenza and the SHLCI case definition. What are "clinical features compatible with influenza"?

I somehow understand the idea, but the text really needs some rewording for reader to understand. I supposed that the entry point for patient is the equivalent of ILI case definition then with at least one severity criteria (pneumonia, ARDS, etc…), and if they are tested positive for Flu then they rae considered as SHLCI?

I have some concern regarding parameter used to calculate threshold. Indeed, authors consider just the number of cases (either for ILI, Flu A positive, etc..) and not the proportion of ILI among total visit and rate of Flu positive among specimen tested. Using weekly counts of ILI or Flu cases means that the system relies on sites/clinician that must consistently notify cases. It is maybe the case in Catalonia, but authors should mention discuss that aspect (in particular, specificity and sensitivity).

I don't think that authors should mention the term prediction. Indeed, I think that using MEM is appropriate to establish threshold not really to predict. To me, parameters/indicators taken as well as methodology used do not provide any insight into prediction. Maybe authors are using prediction in a wrong manner.

minor comments:
Legend Figure 1: Please use official naming for viruses A(H1N1) instead of AnH1N1.
Figure 2 to 4: Authors should show the legend for the different threshold and titles for axes.

Note: This reviewer report can be downloaded - see attached pdf file.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.
I recommend additional statistical review

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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Please complete a declaration of competing interests, considering the following questions:

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