Author's response to reviews

Title: Burden of influenza, healthcare seeking behaviour and hygiene measures during the A(H1N1)2009 pandemic in France: a population based study

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Author's response to reviews: see over
"Burden of influenza, healthcare seeking behaviour and hygiene measures during the A(H1N1)2009 pandemic in France: a population based study"

Dear Ms Audrey Ann Reyes and Dr. Danielle Ompad,

Please find enclosed the manuscript referenced above, which has been revised taking into account the reviewers comments. We would like to submit this revised paper for publication as a research article in BMC Public Health.

As you will see, all revisions have been considered. These changes are explained in a separate document where a specific response is given to each individual comment. For more readability, changes in the revised manuscript appear in red.

We hope that these changes will satisfy the reviewers and look forward seeing the paper published in BMC Public Health.
Thank you for your consideration.
Yours sincerely.

Sophie Vaux, PharmD

Reviewer: Winfred Wu
Reviewer’s report:

Major Compulsory Revisions
1. In the Results, the authors should present the demographics of the respondents to the overall survey and comment on whether there were any major differences between the demographics of the survey respondents and the overall population the sample represents.

All results presented in the manuscript took into account the (random) sampling design components and sampling weights were adjusted by age, gender, region, household size and size of town population for each respondent. Therefore we decided not to present the description of the sample which was representative in terms of gender, region and town size, and as expected children under five years of age were overrepresented. If required we can included an additional table presenting the demographics of the respondents but we don’t believe that would be very informative.

Minor Essential Revisions

1. In parts of the abstract and manuscript, the authors use the terms self-defined influenza and influenza interchangeably. The authors should be more specific when referring to any data obtained from this analysis as related to self-defined influenza, given that no virologic testing was performed to definitively identify whether influenza virus was an actual underlying cause of these self-defined influenza cases.

We agree. The term of self-defined influenza has been used throughout the manuscript.

2. In the Results/Estimated incidence of influenza section, the authors should report on the number of self-defined influenza cases that met the more specific
ILI case definition.

This information has been added. “Taking into account the symptoms described, 71 episodes of self-defined influenza (66.5%) met the ILI case definition, suggesting 5.5 million episodes of ILI occurred in France in 2009-2010.”

3. In the Results/Description of cases section, the authors should report on the total number of cases that were no longer symptomatic at the time of interview.

This information has been added. “It was estimated that 64.8% (CI 95% 54.0 – 74.3%) of the cases were not symptomatic anymore at the time of the interview. The mean duration of illness of these cases was 6.7 days (CI 95% 5.4 – 8.0 days).”

4. In the Results/Healthcare seeking behaviour section, the authors should clarify in the 3rd paragraph whether the main reasons for consultation were drawn from the overall number of cases with self-defined influenza, or the subset with symptoms that matched the ILI case definition.

This information has been clarified. “The main reasons for consultation of self-defined influenza cases...” (No differences were observed among the main reasons for consultation of self-defined cases and cases that met the ILI case definition).

5. For Figure 1, it is not clear if the data on “Incidence of consultations for influenza-like illness” corresponds to subset of self-defined influenza cases from the survey, or if these data correspond to the monthly incidence from the French Sentinel Network. If the former, the authors should also include the trend data from the French Sentinel Network into this Figure as well. If the latter, the Figure legend should be updated to clarify this.

The figure legend has been clarified; the data correspond to the monthly incidence estimated from the French Sentinel Network.

Title (section Figure Legend): “Figure 1 Incidence of self-defined influenza, consultations for influenza-like illness (Sentinel network) and consultations for self-defined influenza by study month, France, May 2009 to April 2010”

6. Figure 2 should include either a Figure title or else more descriptive label on the Y-axis to define what specific incidence is being reported [Minor issues not for publication]

Title (section Figure Legend): “Figure 2 Incidence of self-defined influenza by sex and age group, France, May 2009 to April 2010”

Discretionary Revisions
1. In the Methods section, it would be helpful to learn if individuals surveyed were given any guidance as to what defined having influenza, and if so, what that guidance was.

No guidance was given systematically, but if the respondent asked for more information the interviewer was allowed to mention that flu was expected, not a common cold. No symptom based definition was systematically given.

2. In the Results/Healthcare seeking behaviour section, the authors report on the proportion of self-defined influenza cases that consulted a physician (corresponding to the data in Table 2). In the Results (Estimated incidence of influenza) and Discussion, authors then report on the similarity in trends between the survey and the French Sentinel Network. The authors should also report on the healthcare seeking behavior of the subset of self-defined influenza cases that met the ILI definition employed within the French Sentinel Network as this data point more directly relates to what proportion of ILI cases in the community are not being accounted for within the sentinel network.

This information has been added. “It was estimated that 70.1% (CI95% 54.7 – 81.9) of the self-defined cases that met the ILI case definition consulted a physician.”

Reviewer: Allison Aiello

Reviewer’s report:
This manuscript provides important information regarding pandemic preparedness and the use of non-pharmaceutical measures for preventing influenza transmission. Although the design is a cross-sectional phone survey, it has been conducted in a rigorous manner.
There is a methodological issue regarding the case definition that has not been addressed in this paper. The issue of fever - how it was measured and whether it was appropriate as a criteria for influenza like illness should be discussed. Indeed, there are some studies that suggest that cough rather than fever should be a required symptom of influenza. Fever may not appear in all cases of influenza and varies depending on age. Therefore, the authors should consider adding supporting references that support the criteria that they used for influenza like illness.

No symptom based case definition was used for the self-defined influenza cases. The symptom based ILI case definition (fever and myalgia with respiratory symptoms) was only used in order to compare the estimations from our study with the estimations from the French Sentinel Network. Therefore our ILI case definition was as similar as possible to the definition used by this Network. This case definition combines systemic symptoms with respiratory symptoms, which are also used for the European ILI case definition (ECDC definition)
As mentioned by the reviewer fever may not appear in all cases of influenza, 25% of the self-defined cases in our survey did not mention fever as a symptom. However, as we collected self-defined influenza cases without biological or even practitioner’s confirmation, we do not have reliable information about how the fever was measured.