Author's response to reviews

Title: Comparative age distribution of influenza morbidity and mortality during seasonal influenza epidemics and the 2009 H1N1 pandemic.

Authors:

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Fabrice Carrat (carrat@u707.jussieu.fr)

Version: 12 Date: 26 May 2010

Author's response to reviews: see over
Dear Ms Rajabi,

Thank you for your interest in our work. We are pleased to submit a revised manuscript to *BMC Infectious Diseases* with the latest comments:

- We have specified the data source in the Pandemic influenza subsection of the Methods.
- We have changed the word “rate” by “ratio” in the terms “relative illness rate” and “relative mortality rate” accordingly.
- To be clearer, we have modified age-related morbidity in "age distribution of morbidity" and age-related mortality in "age distribution of mortality", where appropriate.
- We extended the time period for the 2009 H1N1 pandemic in the US as suggested by Romina Paula Libster: we presented analysis for all the pandemic period not only for the first wave of pandemic.
- We now provide the absolute numbers of each dataset used for the calculation of the Relative Illness Ratio and the Relative Mortality Ratio.

Please find following our reply to the James Fielding and Romina Paula Libster.

We look forward to hearing from you.
Sincerely yours,

F Carrat, M Lemaitre
Reviewer's report

Title: Comparative age distribution of influenza morbidity and mortality during seasonal influenza epidemics and the 2009 H1N1 pandemic.

Version: 10 Date: 14 May 2010

Reviewer: James Fielding

Reviewer's report:

This paper has compared age-specific relative morbidity and mortality rates from two seasonal influenza epidemics of H1N1 and H3N2 to those of the H1N1 (2009) pandemic in the USA and France. The paper is a substantial revision on an earlier version and I am satisfied that all concerns raised in my previous review have been sufficiently addressed. I commend the authors on producing a clear, focused, concise and well-supported article in which the limitations have been sufficiently discussed.

Authors

We thank the reviewer for these general comments.

I only suggest several minor essential revisions which are as follows:

1. Use of the word "rate" in the terms "relative illness rate" and "relative mortality rate" should be changed to "ratio" because they are used and defined in the article as ratios.

Authors:

We have changed the word "rate" by "ratio" in the terms "relative illness rate" and "relative mortality rate" accordingly. We apologize for this mistake.

2. The "RMR" acronym in the Results subsection of the Abstract should be spelt out in full (i.e. relative mortality ratio).

Authors:

To avoid confusion, since the RMR was not defined in the Methods subsection of the Abstract, we have removed this sentence.

3. In the Mortality data --> Pandemic influenza subsection of the Methods, I presume that 2004/2005 mortality data refers to all-cause mortality and not mortality due to influenza in 2009? In this
subsection the authors also need to specify the source of data for influenza mortality in 2009 in both the USA and France.

Authors:

We have rephrased the paragraph. To be clearer, in the revised manuscript, the method section is subdivided in five subsections: Periods, Influenza data, Demographic data, Ratios, Statistical analysis.

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.
Reviewer's report

Title: Comparative age distribution of influenza morbidity and mortality during seasonal influenza epidemics and the 2009 H1N1 pandemic.

Version: 10 Date: 14 May 2010

Reviewer: Romina Paula Libster

Reviewer's report:

This article is very interesting from a global perspective as it seeks to compare the age distribution of influenza morbidity and mortality during various years in two different countries. Although most of the comments of the reviewers have been adequately addressed, markedly enhancing the manuscript, there are still some areas that need to be addressed.

Authors :

We thank the reviewer for this general comment.

Major Compulsory Revisions:

1) The absolute numbers required to calculate the ratios should be presented.

Authors :

We now provide the absolute numbers of each data set used for the calculation of ratios. The age distribution of morbidity due to seasonal influenza were obtained from the report of 18,839 (1988-89) and 27,054 (1989-90) cases in France, 6,000 (1978-79) and 59,785 (1989-90) cases in the US. Pandemic age-distribution were obtained from 11,485 (France) and 658,078 (US) cases. Influenza mortality ranged between 309 (France) to 6317 (US) across countries and periods. These numbers have been added in the manuscript as they are used to calculate the age-distributions (figure legends). However we do not believe that the numerator and the denominator of each ratio in addition to the numbers described above would provide useful information, but would complicate the reading of the paper.

2) The time period from April to July only includes the first wave of the pandemic.

The authors should consider adding data from the entire pandemic.

Authors :

We thank the reviewer for this pertinent remark.
The analysis has redone by considering a period from April 2009 to January 2010, and findings were similar.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests