Author's response to reviews

Title: Syndromic Surveillance and heat wave morbidity: a pilot study based on emergency departments in France

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Author's response to reviews:

December 23rd, 2008

To Dr Hans Zauner Senior Assistant Editor of BMC-series journals

Dear Editor,

Enclosed please find a revised copy of the manuscript entitled, " Syndromic Surveillance of heat wave morbidity: a pilot study based on emergency departments in France" that we had formally submitting to BMC Medical Informatics and Decision Making for publication. We truly appreciated the comments of the reviewers which helped us to improve our paper.

We add to this letter a complete answer point by point to all reviewers' comments.

We look forward reading from you. Thank you kindly for your consideration.

Yours truly,

Loïc Josseran, MD, MPH

Reviewer: Sari Kovats

Reviewer's report:

Are the methods appropriate and well described?

Study design is relatively simple - are most sophisticated approach would have been better, e.g. to look at day of week effects, and other hot periods.

We agree with the reviewer, the study design is simple. But historical data are
very limited (this surveillance was launched in 2004 and only one heat wave was recorded) and therefore we did not have the possibility to develop a specific model for the analysis. It is why our choice was to conduct a descriptive study which got us the possibility to make hypothesis likely to improve prevention for weak population in case of new heat wave.

Are the data sound?
Data are appropriate but the time period is too limited to make robust conclusions.
We agree with the reviewer, the time period is limited. But since the surveillance has been launched in 2004, only one heat wave has been recorded. We added in the discussion section this point as a limit.

Are the discussion and conclusions well balanced and adequately supported by the data?
Discussions and conclusions slightly overstate the results.
Sections have been modified in order to follow this recommendation.

Are limitations of the work clearly stated?
Would prefer more discussion of the limitations of the analysis.
Following the recommendation of the reviewer, we added several points about limitation of our study in the discussion section.

- Minor Essential Revisions
More discussion is needed about the limitations of this analysis and the wider implications of the results. The authors place too much emphasis on the limited number of "syndromes" that were found to be raised during the heat wave alert period. The possible over-diagnosis by doctors, aware that a heat wave has been declared, is not considered.
Sections have been modified in order to follow the recommendation of the reviewer.

It would be good to compare increases in visits during hot weather than an alert was not declared.
We agree with the reviewer. It would be very interesting to compare the number of visits during hot days when an alert was not declared.
However, there are two difficulties to answer this question. The first one is that the study is only based on the 2006 summer, because of a lack of historical data including other previous heat periods (in 2003 for example). The surveillance system based on emergency data was developed after the 2003 crisis and set up in 2004. During the summers in 2004, 2005 and 2007 temperatures were close to the usual temperatures, without high values of temperatures.

The second difficulty consists in the definition of a “hot day”. We have chosen to consider the national definition of hot days in the national heat/health watch warning system, in order to facilitate comparison of results in different national
studies about the 2006 heat wave. However, the thresholds used to define a “hot
day” were based on the mortality-temperature relationship. It would be necessary
to determined thresholds related to the morbidity-temperature relationship. That
could highlight “hot days” when official alert is not declared.

The determination of such threshold needs to realise a temporal analysis of the
morbidity-temperature relationship, including the seasonality and day-of-week
effects. This temporal analyse would also allow to provide complementary results
to this descriptive study. We have scheduled to implement this analysis, since we
have 5 summer periods from 2004 to 2008, including one heat event in 2006.

Abstract - Second line of first section - This sentence is not clear.
The text has been modified in order to clarify this point;

Page 5. Some further clarity if required before describing the early warning
system at effective- in case it is interpreted as meaning effective in preventing
mortality, when the authors mean effective in forecasting the heat wave.
The text has been modified in order to clarify this point;

Reviewer: Anna Paldy
Reviewer's report:
There is only one little correction that should be made:
In table 4 there is a numbering in the headings of the columns and there is a
legend with different numbering. It should be harmonised.
The table has been modified in order to correct this point;