Reviewer's report

Title: Early warning detection of heat wave morbidity using syndromic surveillance in emergency departments.

Version: 1 Date: 31 July 2008

Reviewer: Julie Pavlin

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Major Compulsory Revisions

Recheck statistics or numbers for hypoglycemia in Table 2 - how could a change in daily mean number of visits from 7.3 to 0.7 not be statistically significant? Are the numbers wrong?

Minor Essential Revisions

4th sentence in "definitions of heat wave and alert period" - the phrase "...for each French administrative department and stand for each department." needs to be reworded.

Remove repeated data regarding daily mean number of hospitalizations for nonelderly vs. elderly in the first paragraph of results.

Last sentence of results. Is this incomplete? "during ONAP compareD to OFAP" but then just gives a percentage for elderly and younger adults - where is the comparison? If it didn't change between ONAP and OFAP, then you should state that and just give the one percentage.

Rephrase sentence in 3rd paragraph of discussion: "As reported by others, cardiovascular mortality increases during a heat wave." By saying "it is known that" - means it is really true, yet yours' and others’ data refute it.

Discretionary Revisions

It would be nice in the background to have a few more sentences on the national heat wave health alert system. You state that it worked and was effective for early warning - how early, what was changed because of it, etc.? And how is the syndromic surveillance portion of this system constructed (so that we can compare this system to your proposed refined system)?

Please define "soon" at the end of the second paragraph of the results - one day, two days? It really isn't that readily apparent in the figure.

May want to add in a 7 day moving average line in the figure to demonstrate more clearly the increase in both temp and number of visits in fig 1.

You don't use HWDS abbreviation in figure 1 - although you probably should -
instead of just labeling the purple line "Indicator" you could call it HWDS Indicator, which would be a better description.

Of course, the weakness in almost all syndromic surveillance manuscripts is the "so what" factor. It would be good to strengthen your discussion by adding in a little on how it is better than just looking at temperature increases (which seems obvious with heat injuries). Can tie in to expanded background on the currently existing system and how your refinement of codes, etc. can improve that even more.

**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.