Reviewer's report

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

**Version:** 1  **Date:** 18 July 2008

**Reviewer:** Anna Paldy

**Reviewer's report:**

General opinion:
The topic of the paper is very important, the structure, illustration, presentation of the results is according to international standards. The applied statistical method is appropriate.

There are suggestions for minor essential revisions as listed further.

- Minor Essential Revisions

**Definition of syndromes and age groups and statistical analysis**

I suggest to describe the studied age groups as adults younger than 75 years (<75) and 75 years and older (>75). This description should be used consequently in the text and in the tables. Although the impact is bigger in the elder group, I suggest to rearrange the tables in this grouping.

**Symptoms definition:** the authors use the expression „malaise” in the text and tables. The ICD-10 codes are given for this item. As it contains three different codes, it is advisable to give the official definitions belonging to the three different codes in table 1.

Further down in the paragraph: An indicator based on this group is presented in Figure 1 and is compared with the national mean temperature.

**Table 2**
In the headings I suggest to add daily mean number

**Table 3**
I suggest to change the columns: first the younger age group, than the elder. Please correct the description of age groups as suggested earlier

**Table 4**
As the numbers and proportions of the ONAP period is of greater importance, I suggest putting the asterisk indicating the significant differences to this column. In the headings please use consequently the definition of age groups

**Fig 1** I suppose there is a typing error in the title: Evaluation (instead of evolution) should be the correct term
Discussion

Page 9, 2nd par:
The authors stated that the initial exposure to high ambient temperature has a direct impact on health with temperature peaks in mid June and the first days of July. Thus the full effects of a heat wave only appear 3-4 days after it has begun. I do not feel a logical connection with the impact of early heat waves and the lag effect. Please explain this assumption a bit more thoroughly.

Further, more explanation is desirable how the preventive measures helped this adaptation, bearing in mind that a 3-day lag effect was also observed in 2003, before the national heat wave plan was introduced.

In par 3 you mentioned that „Also in agreement with other findings (14, 21) our results show that hot weather does not affect cardiovascular morbidity”. There is a publication of Schwartz et al (2004.) reporting an association between hot weather and hospital admission due to cardiovascular morbidity. I suggest to consider to cite this contradictory result as well. 

Page 10 par 3 In this par you discussed the possible effect of „heat islands”. You supposed that the results you found are valid for both large and small cities. This statement would need further explanation. Please consider this remark.

Further you mention: since the complete automation of data transmission is crucial, not all emergency departments record all of the information per visit which creates an information deficit.

If you mention this problem, I would advise to give some descriptive data, how big was the information deficit in your database. Of course this descriptive data should be included in the „Result” part of the paper. Here you need to refer to this data.

Level of interest: An article of importance in its field

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