Reviewer’s report

Title: Effect of ambient temperature on emergency department visits in Shanghai, China: a time series study

Version: 1 Date: 29 May 2014

Reviewer: Zhiwei Xu

Reviewer’s report:

This is a decent manuscript looking at the impact of temperature on EDVs in Shanghai, China. More than 20 million records have been collected and the results are well interpreted. However, several changes need to be made prior to publication.

Major Compulsory Revisions:

Background
1. Reference 3 does not add too much to the Introduction. Suggest you to remove it.
2. Paragraph 2- “Thus non-fatal…… high temperatures.”: It needs to be referenced (Ye et al., Ambient temperature and morbidity: a review of epidemiological evidence, 2012 EHP).
3. Paragraph 3- You should highlight the uniqueness of Shanghai between “Few Chinese cities ….morbidity outcomes” and “We therefore performed…..in Shanghai, the largest city in China.”

Methods
1. The length of the lag period you chose should be better clarified. Have you tested “how long the lagged effect of temperature on EDVs was” before choosing the lag period?
2. What is the reason behind you controlling for wind speed in the model? Why PM2.5-10 rather than PM2.5 was chosen in this study?

Results
Age stratified analysis of the effects of ambient temperature-“the effects of heat were greater for persons aged <45 years than those aged 45-64 years.”: This result worth a thorough discussion.

Minor Essential Revisions:

Methods
1. Data analysis paragraph 2- “First, we utilized……and other confounders”: Please clarify what are “other confounders”.
2. The full name of DMT should be mentioned when it appears for the first time, and SO2 and NO2 were not well-spelled in this section.

Discussion
1. Paragraph 1- “Although the relationship between ambient temperature and ED visits had not previously been evaluated”: Please be more judicious when using this kind of statement. Xu et al. have published a paper looking at temperature and EDVs in Brisbane (Xu et al., 2014, Environmental Research).

**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:**

No competing interest declared.