Reviewer's report

Title: Effect of meteorological variables on the incidence of Hand, foot, and mouth disease in children: a time-series analysis in Guangzhou, China

Version: 2 Date: 27 December 2012

Reviewer: Liang Lu

Reviewer's report:

1. The author should give more reasons for choosing children as the study population.
2. And why choosing weekly data for the analysis?
3. It is usually to include public holiday as a confounding factoring in time series analysis based on daily observations, but this study was a weekly scale analysis, I wonder how the author defined the holiday in the analysis, which was not described in the manuscript.
4. It is appropriate to include influenza in the model, but the definition is not clear by “the influenza period was used as an influenza indicator.”, what do the authors mean by “period”?
5. The study further examined for subgroups by age, I wonder what is the criterion for dividing age groups, e.g., why choose “0-2”, to my understanding, children with 0-1 years old should be different from 1-2 in daily activity, which should affect the disease transmission.
6. In Figure 1, there was a surprising increase in wind speed, to me, it is absolutely abnormal, would the authors please double check their data?
7. Again in Figure 1, it seemed obvious increased in the years of 2010 and 2011, which, to some extent, might be due to data quality; would the author please clarify this concern?
8. The definition of the patient was mainly based on clinical symptoms, did the author try to do a sensitivity analysis based on those lab-confirmed patients? And how much of the patients were lab-confirmed?

Minor comments:

1. In Abstract, “Over the last decade, Asian countries have encountered frequent and widespread hand, foot, and mouth disease (HFMD) outbreaks occurred predominantly among children.” This sentence is grammatically wrong.
2. In Abstract, “This study provides quantitative evidence that the incidence of HFMD cases in children were associated with high average temperature and relative humidity.”, what is “incidence of HFMD cases”, as the outcome variable in the model is count of HFMD, so I wonder how comes incidence?

Level of interest: An article of importance in its field
Quality of written English: Needs some language corrections before being published

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.