Reviewer's report

Title: Predicting the Start Week of Respiratory Syncytial Virus Outbreaks using Real Time Weather Variables

Version: 1 Date: 11 June 2010

Reviewer: Gordana Mlinaric-Galinovic

Reviewer's report:

Major Compulsory Revisions
General and basic remark:
The first half of the study period was not covered with specific RSV-diagnostics, so the bronchiolitis-cases from that period could be caused by other respiratory viruses. Human metapneumovirus usually proceed or follow the RSV-outbreak (please see the paper: Aberle SW at al, Pediatr Infect Dis J 2008, 27: 1065.) So, how the authors could be sure that bronchiolitis or any other acute respiratory disease is caused by RSV without detecting it?
Also, climate factors correlate significantly with the number of RSV cases identified only in the larger seasons, which suggests that the biennial cycle is likely to continue regardless of meteorological conditions (Virology Journal. 2008; 5(1):18).

Minor Essential Revisions
Central European RSV two-year cycle, which was repeated every 23-25 months, is comprised of one larger and one smaller season. Thus, after the appearance of a major/larger RSV epidemic, a minor/smaller one follows 14-16 months later, and then another major epidemic 8-10 months later.

2. The study group age was not mentioned in Methods.

Discretionary Revisions
In Methods, RSV-diagnosis; paragraph 1; should stay: laboratory confirmation of RSV by viral culture or DFA or /and PCR.

Finally, it certainly be useful to have the RSV-outbreak prediction model, and I would encourage further work on that topic. Knowledge of biennial or monophase annual pattern should be useful in predicting the onset of RSV outbreaks in
particular country, and would facilitate planning for the prevention and control of RSV infections in the region.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

'I declare that I have no competing interests' below.