Reviewer's report

Title: Assessing secondary attack rates among household contacts at the beginning of the influenza A (H1N1) pandemic in Ontario, Canada, April-June 2009: A prospective, observational study.

Version: 1 Date: 6 January 2011

Reviewer: Saranya Sridhar

Reviewer's report:

The authors of this study have elegantly utilized the public health response system in Ontario, Canada to investigate transmissibility of the pandemic H1N1 strain during the first wave of the 2009 pandemic. The authors report an 8%-17% secondary attack rate in household contacts of laboratory-confirmed pH1N1 cases and provide evidence for increased transmissibility in children below 16 years of age.

This report adds to the growing body of published data on the epidemiological parameters of the pH1N1 strain and therefore is an important addition to the literature.

Major compulsory revisions:

1. In table 1, the authors tabulate the demographic characteristics of the primary cases and household contacts. It would be useful to also have the demographic data and especially 2008/9 seasonal influenza vaccination status for the secondary cases.

2. One of the important features of the 2009 pandemic was the age distribution of cases and deaths. While the authors have categorized age group into above and below 16 years of age to demonstrate a significant difference, it would be important to provide the data for different age groups (<5,5-16, 17-25,25-40,40-65,>65). While the numbers in these different age groups may be too small to allow accurate statistical comparisons, nevertheless, the raw data will be important. The authors can either have a separate table or report the significant result (<16 years vs >16 years) in the main body of the text.

3. The authors should report whether there was any clustering of secondary cases in a household, if that data is available. Multiple cases in a household with differences in time of symptom onset may inflate estimates of secondary attack rate because of multiple transmission cycles.

4. The authors report a mean of 3 household contacts per case. Clustering of secondary cases in households should be mentioned here as well.

Discretionary revisions

1. Was there any difference in the serial interval for secondary cases that were ILI compared to those with ARI.
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests.