Reviewer's report

Title: Analysis of influenza transmission in the households of primary and junior high school students during the 2012/13 influenza season in Odate, Japan

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Reviewer: Benjamin Cowling

Reviewer's report:

This is an interesting report of influenza transmission in households in the post-pandemic era.

Major comments:

1. I am not convinced that authors' logistic regression and serial interval modeling approach is appropriate to determine factors affecting transmission. It would be more conventional to use a transmission model such as published by Cauchemez 2004 Stat Med or based on Longini's work. The current approach does not account for transmission dynamics and the conclusions may be erroneous.

In the accelerated failure time model, is it assumed that all household contacts will be infected at some time, or were a proportion allowed to be immune? I would like to see some predictions from the model for example of the SAR after 7 days, 14 days and 28 days, and how those predictions compare to the empirical data.

In addition, the way in which factors affect the SI may not be directly interpretable as increased or decreased transmissibility

Level of interest: An article whose findings are important to those with closely related research interests

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 interests