Reviewer’s report

Title: Seroconversion and asymptomatic infections during oseltamivir prophylaxis against Influenza A H1N1 2009

Version: 2 Date: 16 April 2010

Reviewer: Elena Govorkova

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Post-exposure oseltamivir prophylaxis for close contacts such as household members or as seasonal prophylaxis in the community was shown to be effective in preventing clinical influenza in healthy adults. The current manuscript described the results of evaluation of the number of asymptomatic influenza infections which occurred during oseltamivir post-exposure prophylaxis and after cessation of prophylaxis. The study was performed in 3 outbreaks in Singapore military between 22 June and 16 July 2009.

Major Compulsory Revisions:

1. The findings that 3.5% seroconversion occurred in participants who were RT-PCR negative required additional experimental evidence. RT-PCT is a very sensitive method and the antibodies can rise only in response to influenza virus infection. Additional tests must be conducted with sero-positive (but RT-PCR negative samples) to confirm these findings. The authors must analyze the samples in virus neutralization assay in MDCK cells or Western Blot or ELISA.

2. Description of materials and methods lack essential experiments details. Description of results required clarifications.

Minor Essential Revisions:

1. The authors are using not appropriate expressions for some of the study elements. For example “serological infection”. The authors determined “serological confirmation of influenza infection”. The authors must modify the Abstract and text of the manuscript accordingly. It is also not correct to use “non-infectious seroconversion”. Development of specific antibodies must be in response to influenza virus infection and this expression must be corrected.

2. Abstract - indicate that HA gene primers were used for RT-RCR. Indicate the prophylaxis oseltamivir regimen (75 mg once daily). What is the major conclusion from these results – to recommend oseltamivir post-exposure prophylaxis or not?

3. Methods – details of the experiments must be provided, e.g. composition of the transport medium, virus purification, virus inactivation, primers for RT-PCR, cell culture for virus isolation, control samples for HI assay. “Swab-positive cases” is not correct expression. The authors meant “virus-positive samples”? The abbreviations must be spell out, e.g. SWH1 Forward/Reverse primer set; IZP-A/California/7/2009. What is the level of detection in RT-PCR used in the study?
4. Results – all subtitles in the results section are confusing. What does it mean “seroconversion during outbreaks”? The title “antibody titers with and without prophylaxis” must be change into “antibody titers during and after completion of oseltamivir prophylaxis”. The description of results is unclear.

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

**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