Reviewer’s report

Title: The Changing Enterovirus 71 Seroepidemiology and Solid Herd Immunity against Poliomyelitis among Children in Singapore: Nature versus Nurture?

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Reviewer: Luan-Yin Y Chang

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Overall comment
The survey involved prospective collection of 1200 residual sera from Singapore residents aged 1-17 years in 2 hospitals. The overall EV71 antibody prevalence was 27% (95% CI: 25—30%). It increased significantly from 14% in children aged 1-6 years to 28% in 7-12 year olds, and 39% in 13-17 year olds. A high prevalence of poliovirus antibody of 92% (95% CI: 91—94%) was observed.

Major Compulsory Revision
1. Study population
The study sample is from the collection of residual sera following the completion of routine biochemical investigations by diagnostic laboratories in KK Women’s and Children’s Hospital and NUH. The sera were from patients aged between 1-17 years attending inpatient services or day surgery collected. This way of sera collection is not ideal and would raise a lot of questions. For example, will the diseases or conditions of patients affect the results of EV71 antibody titers? Or there were some selection bias because they were patients rather than the general population.

2. Comparison between this study (2008) and the previous study (in 1996/1997): was the method the same and the study populations similar? It’s difficult to compare if the characteristics of the tow populations were different

Minor Essential Revisions
1. Why did the authors do both polio and EV71 seroprevalence for the same population? The rationale was not clear.

Level of interest: An article of limited interest

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'