Reviewer’s report

Title: Deficiency in immunity to poliovirus type 3: A lurking danger?

Version: 2 Date: 20 September 2011

Reviewer: K O’Reilly

Reviewer’s report:

Overall comments.

The research is worthwhile and should be published. I think there are some interesting observations that have still to be untangled, but should be done by the authors to ensure their research is given due credit.

The writing style is quite clunky, I would recommend having a colleague read through it who has a better command of formal English and grammar, as is required with publishing peer-reviewed research in English language journals. The style is too informal for me; referring to the polio eradication programme as a ‘happy-go-lucky situation’ and referring to an “inwards” view’ will be too much for most readers.

Specific comments

1. What I find interesting about the sero-prevalence is that the PV3 prevalence reduces much more than PV1 or PV2. What are the hypothesised reasons for this? My understanding is that children are currently vaccinated with IPV, that contains all three polioviruses? Has the formulation or even the brand changed during the study? However, judging by the age-distribution of your 2010 cohort, you have a mixture of people that as children would have been vaccinated with OPV or IPV. For example people over 30 in 2010 would have been <2 years of age in 1980. This is before the switch from OPV to IPV. Perhaps analysing your data with this in mind may explain your observations. Age-specific analysis of this kind of data is very important.

2. Do you have records of the routine coverage going back to when these cohorts were born? It would be interesting to compare the coverage achieved and the current sero-prevalence.

3. Please observe the criteria for writing research articles for the journal you have submitted to.

4. Please observe how you refer to abbreviations. I understand that each should be in full when you first use them.

5. Objective should not have a separate heading, and results and conclusion should be separate

6. Referring to a range of sero-prevalences with 95%CI is inappropriate

7. Use epidemiological terminology when referring to a study population.
‘Collective’ is not the correct term. Paralyzing ‘courses’ is not the correct term.
8. Statistical tests should be specified concisely and without confusion. This is not done here.
9. Sero-prevalence is not a rate.
10. The figures are not good. At least use a box-plot to represent your data.
11. A non-significant test is not represented by a figure. It is represented by a statistical test.
12. There are more sero-prevalence studies than you have cited. Whilst there aren’t many, I disagree with your comment that they are ‘barely available’. See,


AU Luchs, et al Monitoring of poliovirus neutralizing antibodies in Sao Paulo State,


13. Your conclusion is not about your study – what have we learnt from the study?
14. You need to describe your cohort population better. Are they only tested for PV? Do you know anything about their nationality, for example?

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

Quality of written English: Not suitable for publication unless extensively edited

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

Declaration of competing interests:

I am a researcher at Imperial College, funded by the WHO to research the epidemiology and control of poliomyelitis. I am not personally involved in any sero-prevalence studies, or have any financial interests related to this study.