Reviewer’s report

Title: Planning for globally coordinated cessation of bivalent oral poliovirus vaccine: Risks of non-synchronous cessation and unauthorized oral poliovirus vaccine use

Version: 0 Date: 22 Sep 2017

Reviewer: Itamar Grotto

Reviewer's report:

1. The switch from bOPV to mOPV1, could be a good policy decision, and mentioned in the discussion, with reference to the fact that the last case of WPV3 was identified in 2012. Did you consider modelling this switch, and then further switch to total cessation? This could be interesting and may support decision-making process on OPV cessation. 2. Those the model take into account the possibility of intervention (outbreak control) when cVDV start circulating? This option of intervention may be with mOPV1, mOPV2 (which has not been registrated yet), mOPV3(?), bOPV and tOPV. This kind of a model may address the question regarding the required emergency stockpile of different OPV vaccine. The status of recent bOPV cessation may be used to test the effect on CVDV2 development and compare it to previous models for validation of the models applied in the current study. Please consider mentioning that in the discussion.4. A unique area to model unsynchronized OPV cessation may be explored in Israel. While Israel stopped the use of tOPV in 2005, the adjacent Palestinian Authority (PA) continued to use OPV. This unsynchronized situation changed in 2013 when Israel added bOPV to its vaccination schedule due to an event of silent WPV1 transmission identified in swage samples. The program synchronized again on the PA switched to bOPV according to the global decision. During the 8 years of desynchronization, we did not observe related cVDV development. Those this fit to the described model?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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