

Review of: "Relevance of Medical Ethics in Public Health: Case Study of Polio Eradication"

Ibrahim Dadari¹

¹ UNICEF

Potential competing interests: No potential competing interests to declare.

Relevance of Medical Ethics in Public Health: Case Study of Polio Eradication – Peer Review

Overall comments

This is a great attempt at highlighting the importance and relevance of medical ethics in public health using the polio eradication initiative as a case study. This kind of discourse is useful in strengthening evidence-based public health decision making. Authors pulled information from the literature and provide their understanding and interpretation of the evidence to support their assertions. The way the paper is written hints to a possible lopsidedness in the way evidence and data are presented; authors have failed to provide very concise and easy to understand description of evidence and also providing contexts to which decisions or certain evidence were written or presented e.g OPV efficacy in India which was not presented well in the paper giving a distorted notion. Paper also did have some brazen assumptions which aren't backed by evidence for instance using 80% coverage for vaccination coverage as a benchmark for population immunity against the disease. It is my opinion that this paper be revised to provide more explicit interpretation of the facts and additional contexts to evidence used. The reader who may not be vast in the field of vaccinology may not understand some of the assertions as will need further clarity. Some of my observations are listed below:

- Define the reader what is the difference between health care and public health?
- Why did the GPEI and partners decide OPV be used in developing country contexts? Can the authors please explain the pros and cons, as well as the gradual sustainable shift from OPV to IPV as part of the end game strategy?
- Some evidence on vaccine efficacy used in the paper were not well interpreted. Authors need to clarify interpretation in proper context.
- The authors need to define and acknowledge the concepts and potential of primary and secondary vaccine failures.
- WHO position paper March 2016 did not mention nostril transmission of WPV, this is a misrepresentation of facts
- Overall the introduction will need some background on the benefits of vaccines including the return on investment.
- Some concise info on why we are eradicating polio and which disease had been eradicated and how it was done.
- What are polio vaccines and which ones are being used by different countries and why. How has those vaccine resulted in a massive decline in the number of AFPs vis-a-viz the emergence of cVDPVs and VAPPs.
- AEFIs are of five categories ranging from the mildest to the most serious of AEFIs? This should be properly described in the paper. Not all AEFIs are attributable to the vaccine itself so this has to be made clear.
- To justify any comparative analysis of OPV and IPV vaccines, it is crucial to provide a concise description of the merits

and demerits of each of the two vaccines, and could be the rationale why Sabin was chosen by the GPEI and global health community over Salk in the initial push against polio.

- Your distinction of medical vs public health ethics is blurry needing clarification.
- Suggest you replace the quotations with sound peer-reviewed publications and not just quotes from individuals, alternatively you can use the quotes to buttress points confirmed by peer-reviewed publications.
- A proper context analysis should inform conclusions ie would polio cases have dropped significantly particularly in LMICs with the use of IPV in contrast to OPV? OPV provides positive vaccination externalities as against IPV which only protects the individual. It is likely that the level of country elimination of the polio virus wouldn't have been achieved with the sole use of IPV in LMICs? You'll need to provide robust peer reviewed evidence to buttress your points and demonstrate the converse of the current situation. Using case studies and examples from advanced health systems will not do justice to the subject.
- "...monitored diligently": most country health systems do not have the robust surveillance systems to monitor polio diligently and this point also needs to be buttressed when making a case: AFP surveillance.
- Vaccine efficacy vs effectiveness
- This statement is not referenced "...showed that it would be a mistake to expect to eradicate wild polioviruses in TLIC - particularly types 1 and 3, since VE was very low against them. We suspected some hidden reason why exclusive use of tOPV became GPEI's deliberate choice." Such weighty statements will need robust peer-reviewed evidence to justify.
- Inactivated vs salk vaccines