

# Innovative delivery strategies for oral cholera vaccine

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Rapid use of oral cholera vaccines (OCV) have been shown to improve outbreak prevention and control. Heat-stability of OCVs and effectiveness of one dose provide additional opportunities to identify innovative delivery strategies. Here, we discuss additional delivery strategies and estimates of the effectiveness (VE) of one dose of Shanchol<sup>®</sup> when used in response to epidemics.

A single dose OCV Shanchol<sup>®</sup> was offered to all persons older than 1 year living in targeted areas or belonging to the identified high-risk groups in Juba, South Sudan and Lusaka, Zambia in response to outbreaks. To estimate short-term direct and total effectiveness of one-dose OCV, we conducted matched case-control and case-cohort studies respectively. We enrolled cholera case-subjects, matched control-individuals and a cohort comprised of a spatially representative sample of the population of Juba and Lusaka.

Estimates of the total vaccine protection from Juba are provided in this abstract and preliminary estimates of the direct vaccine protection from Lusaka will be discussed in the oral presentation. For the estimation of total VE we enrolled 34 cholera case-subjects and 898 cohort members in Juba. The unadjusted total single-dose VE was 79.5% (95% CI 59.9-100) and after adjusting for potential confounders, 89.6% (95%CI 75.3-100.0) in Juba study.

The high short-term effectiveness of Shanchol<sup>®</sup> increases possibilities to conduct timely outbreak response using OCV. This high effectiveness allows for the possibility of more flexible delivery strategies. Flexible dosing intervals combined with use of the vaccine in controlled temperature chain or even out of the cold chain will be critical to ensure that OCVs are offered to the most vulnerable.

High short-term effectiveness of one dose of oral cholera vaccine allows for innovative delivery strategies. Flexible dosing intervals combined with use of the vaccine in controlled temperature chain or even out of the cold chain can help ensure that OCVs are offered to the most vulnerable.