

Cholera dynamics and impact of preventive vaccine in endemic zones of DRC, 2021-2026

Eve Rahbé, Epicentre, France

Context

In the context of cholera resurgence, the Oral Cholera Vaccine (OCV) constitutes an important control strategy. Preventive OCV campaigns are now deployed, especially in endemic areas such as in the Democratic Republic of the Congo (DRC). Impact of these campaigns should be assessed to better design future vaccination strategies.

Methods

Since 2021, a multi-study project was put in place in two sites in the DRC: Goma (urban) and Bukama (rural). Using various study designs, the project collects data at the patient (clinical surveillance within cholera treatment units) or community level (vaccine coverage surveys). This unique setting allows for the temporal and geographical comparison of cholera dynamics and vaccine campaigns.

Results

In Goma, OCV coverage level was estimated at 65% [61.7-68.2] in 2024 following a 1-dose campaign. In Bukama, a 2-doses campaign in 2022 reached 89.3% [88.3-90.3] coverage during the 1st round. Over 2021-2026, 28'630 and 2'684 suspected cholera cases were included in Goma and Bukama, respectively. At individual level, preliminary results show that vaccination status was significantly protective of laboratory-confirmed cholera in both contexts. In Goma, massive internal population displacements at the end of 2022 were followed by two epidemic peaks at the beginning of 2023 and 2024. Camps were identified as the main epidemic driver in the city, and OCV impact remains unclear at populational level. In Bukama, there was a strong seasonal pattern to cholera incidence; preventive vaccination was effective in preventing future outbreaks, but only under optimal conditions.

Conclusion

Early results in these two cholera endemic sites in the DRC provide elements to guide the implementation of future vaccination campaigns. For instance, targeting incoming displaced population might be relevant in contexts such as Goma. Additional analyses, such as the estimation of vaccine effectiveness, will help consolidate preliminary findings and further help design efficient control strategies.

This project evaluates the impact of preventive OCV campaigns in cholera endemic areas of the DRC and offers elements to guide vaccination strategies specific to urban or rural contexts.