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Novel vaccine delivery strategies in mobile fishing communities: An oral cholera vaccination campaign around Lake Chilwa, Malawi

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Background: Malawi is prone to cholera, particularly area of Lake Chilwa, home to nearly 750,000 people living around Lake Chilwa, which include mobile fishermen. To preempt future outbreaks, which occur during fishing season, the Ministry of Health (MOH), in collaboration with partners planned a preventive mass-vaccination campaign, targeting 80,000 people with a two-dose oral cholera vaccine. While preparations for vaccination campaigns were underway, Malawi started registering cholera cases on the Lake Chilwa. 670 cases were reported. In response to outbreak, MOH with partners adapted plans and conducted a reactive vaccination campaign to control outbreak. As fishermen are thought to be key players in cholera transmission, novel off-label strategies were used to deliver the vaccine.

Methods: MOH requested 160,000 OCV doses from WHO to vaccinate the affected population. The first round was done from 16-20 February, 2016, and was delivered through fixed and mobile vaccination posts. For those living in floating homes, the second dose was provided at the same as the first along with instructions on how and when to consume the dose. A second round was conducted from 8-10 March and mobile and fixed point vaccination stations were used in the communities around the shore. On the islands, due to limited access, vaccine was provided to the head of each household with enough for all individuals one year and older to take at home within 24-hours. The head of household was provided instruction on how to take the vaccine.

Results: Overall, all 80,000 doses were used in first round, and 60,240 of the doses were used in the second-dose round. The vaccine was accepted by all the communities. We found that in highly mobile populations, self-administration of the second dose, whether by providing it at the same time as the first dose, or providing to heads of households, may be a useful strategy to ensure high coverage.

Conclusion: This has highlighted the first large-scale OCV mass campaign conducted in the mobile population of fishermen. The novel second strategies used for delivering the second dose of OCV proved feasible and acceptable by hard to reach mobile fishermen communities but more work needs to be done to assess the effectiveness of two-doses delivered in this manner, this provides practical lessons for local adaptation of OCV strategies in Malawi and beyond.

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