

Summary of the WHO Position Paper on Cholera vaccines: WHO position paper – August 2017

This position paper published in August 2017 replaces the WHO position paper on cholera vaccines published in March 2010. It incorporates recent developments in the field of cholera and provides revised guidance on the target populations for immunization.

Background

Cholera is a rapidly dehydrating diarrhoeal disease caused by ingestion of toxin-producing strains of serogroup O1, or less commonly, serogroup O139, of the bacterium *Vibrio cholerae* (*V.cholerae*). The disease is spread mainly by faecal contamination of water and food and is closely linked to poor sanitation and lack of clean drinking water. Approximately 1.3 billion people are at risk of cholera in endemic countries. An estimated 2.86 million cholera cases (uncertainty range 1.3 m – 4.0 m) occur annually in endemic countries. Among these cases, there are an estimated 95 000 deaths (uncertainty range: 21 000 – 143 000). About half of the cholera cases and deaths are estimated to occur in children ≤5 years of age, but any age group may be affected.

Rapid rehydration constitutes the primary treatment for cholera. Improving access to clean potable water, adequate sanitation, and promotion of good water, sanitation and hygiene (WaSH) practices, remain the mainstay of prevention of both endemic cholera and cholera outbreaks. Cholera vaccination is a complementary cholera prevention and control measure, which can be implemented in the short-to-medium term, while access to other primary prevention measures such as safe water and sanitation improve globally

Two types of oral cholera vaccines (OCVs) are currently available internationally for global use¹: (i) WC-rBS, killed whole cell monovalent (O1) vaccines with a recombinant B subunit of cholera toxin (Dukoral®) and (ii) WC, killed modified whole cell bivalent (O1 and O139) vaccines without the B subunit (Shanchol™, Euvichol® and mORCVAX™). The 3 WC vaccines are based on the same cholera strains.

WHO position

Cholera prevention and control should be a priority in areas at risk for cholera or where endemic cholera is present. Given the current availability of killed whole-cell OCVs and data on their safety, efficacy, field effectiveness, feasibility, impact and acceptability in cholera-affected populations, these vaccines should be used in areas with endemic cholera, in humanitarian crises with high risk of cholera, and during cholera outbreaks. The vaccines should always be used in conjunction with other cholera prevention and control strategies. Vaccination should not disrupt the provision of other high priority health interventions to control or prevent cholera outbreaks.

Equitable access to the OCV stockpiles, for emergency use and for use in endemic settings, should be ensured for populations exposed to the risk of cholera

In all settings, a series of criteria should be considered to guide the decision to vaccinate:

- The risk of cholera among the targeted populations and the risk of geographic spread;
- The programmatic capacity to cover as many persons as possible who are eligible to receive the vaccine and living in the targeted area (e.g. those aged ≥1 or 2 years, depending on the vaccine used);
- Implementation of previous OCV campaigns. Cholera vaccination should not be carried out if a campaign has been conducted in the previous 3 years in the same population, unless justified by continuous transmission resulting from inadequate vaccine coverage during the previous campaign and/or substantial population movements.

¹ An oral live attenuated single-dose vaccine (CVD 103-HgR) was marketed and then discontinued for commercial reasons in 2003. Following transfer of rights to another company the vaccine, Vaxchora™, was re-developed and produced and is approved in the USA only for use in adults aged 18–64 years travelling to cholera-affected areas.

In accordance with the manufacturers' stipulations, for primary immunization OCVs should be administered orally using the intervals and age-restrictions for which the specific vaccines are licensed. Where there is continued risk of *V. cholerae* infection, revaccination is recommended. Cholera vaccines can be co-administered with other injectable or orally administered vaccines (e.g. OPV).

Control of endemic cholera

In cholera-endemic countries, vaccination of the entire population (throughout a country regardless of risk) is usually not warranted. Vaccination policies and strategies should be guided by an assessment of the risk of cholera and targeted to cholera hotspots.

Control of cholera outbreaks

Appropriate treatment of people with cholera, implementation of clean water and sanitation and community mobilization should remain the principal control measures during ongoing epidemics. Cholera vaccination should be considered to help prevent the spread of current outbreaks to new areas. The decision to implement vaccination should be taken only after a thorough investigation of the current and historical epidemiological situation and a clear identification of geographical areas and populations to be targeted, as well as assessment of the feasibility of organizing a vaccination campaign.

Cholera control in humanitarian emergencies

During humanitarian emergencies with a risk of cholera, but without a current cholera outbreak, vaccination with OCV should be considered as an additional preparedness measure for outbreak prevention, depending on the local infrastructure (capacity to organize a vaccination campaign).

Special populations

Pregnant and lactating women and HIV-infected individuals should be included in OCV campaigns. OCV should be considered for travellers and emergency and relief workers at high risk, especially those who are likely to be directly exposed to cholera patients or to contaminated food or water, particularly in areas with poor access to health-care facilities.