CHOLERA VACCINES: Conclusions and recommendations of the October 2009 Meeting of SAGE
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SAGE reached the following conclusions and made the following recommendations.

Cholera control should be a priority in areas with endemic cholera, since cholera outbreaks can disrupt health systems.

Given the availability of 2 oral cholera vaccines (one prequalified and the other pending prequalification) and new data on their efficacy, field effectiveness, feasibility and acceptance in cholera-affected populations, immunization with these vaccines should be used in areas where the disease is endemic and should be considered for use in areas at risk for outbreaks in conjunction with other prevention and control strategies. Vaccination should not disrupt the provision of other high priority health interventions to control or prevent cholera outbreaks. Vaccines provide a short-term effect that can be implemented for immediate response while the longer term intervention of water and sanitation improvements, that involve large investments, should always be put into place.

Control of endemic cholera
Specific cholera vaccination strategies about whether, when, where and how to vaccinate should not be pre-scribed to countries since the appropriate strategies will differ by country, depending on the epidemiological pattern of cholera, the capacities of the immunization programme and health system, and other local factors.

SAGE accepted the ad hoc working group’s suggestions that countries consider the following options for strategies to control endemic cholera through vaccination.

a) Scope of vaccination: In cholera-endemic countries, vaccination of the entire population is not warranted. Rather, vaccination should be targeted at high-risk areas and population groups.

b) Where to vaccinate: Vaccination should be targeted at areas where 2 of the following criteria have been met: (i) culture-confirmed cholera has been detected in at least 3 of the past 5 years; (ii) an incidence rate of cholera of at least 1/1000 population in any of these years has been recorded; (iii) if population-based incidence rates are not available, high-risk areas or groups have been identified using information collected from local public health officials.

c) Groups to target for vaccination: Although all age groups are vulnerable to cholera, priority should be given to high-risk groups if resources are limited. In situations where funding is limited, the primary targets for vaccination should be preschool-aged and school-aged children. Other groups that are especially vulnerable to severe disease and for which vaccines are not contraindicated can also be targeted, such as pregnant women and people infected with HIV. Countries should also consider vaccinating older age groups if funding is available. There is no reason to expect toxicity when killed cholera vaccines are used in pregnant women.

d) Vaccine-delivery strategies: Periodic mass vaccination campaigns are usually the most practical option for delivering oral cholera vaccines. Schools, religious institutions and other community settings can be appropriate venues for vaccination campaigns. Incorporating cholera vaccination into routine vaccination schedules can be an alternative or complementary to mass vaccination campaigns (for instance, to reach young children between campaigns).

e) Frequency of vaccination: Since the documented duration of significant protection for oral cholera vaccines is 2 years, it is recommended that initial vaccination with 2 doses be followed
by revaccination every second year. Once data on the longer-term efficacy of oral cholera vaccines become available, the recommended interval between initial and booster vaccinations could be extended.

Control of cholera outbreaks
Pre-emptive vaccination should be considered by local health authorities to help prevent potential outbreaks or the spread of current outbreaks to new areas.

The need for predictive risk-assessment tools to help countries determine when pre-emptive vaccination should be used is urgent; these tools should be developed and field-tested as soon as possible.

Given the emergence of recent, large and prolonged outbreaks (for example, in Angola and Zimbabwe), reactive vaccination could be considered by local health authorities as an additional control measure; this could be implemented if the local infrastructure will support it after a thorough investigation of the current and historical epidemiological situation has been completed and geographical areas to be targeted have been clearly identified. The feasibility and impact of vaccination in halting ongoing outbreaks should be documented and the findings widely disseminated.

Providing appropriate treatment to people with cholera, implementing water and sanitation interventions, and mobilizing communities should remain the mainstay control measures during ongoing epidemics.

Pre-emptive or reactive vaccination should cover as many people eligible to receive the vaccine as possible (for example, children aged ≥1 or 2 years, depending on the vaccine) and should be conducted as quickly as possible.

While specific cholera surveillance studies are not recommended for every country and setting, it is strongly recommended that surveillance of microbiologically confirmed cases of cholera be instituted (for example, via regional or subregional networks) to determine the burden of disease and impact of vaccination and other interventions.

SAGE agreed that cholera vaccines need to be placed on the priority list for WHO prequalification so that the newly licensed low-cost Shanchol vaccine (Shantha Biotechnics Ltd., India), developed specifically for use in cholera-affected countries, could be accepted for review and if successful join Dukoral (SBL Vaccine, Sweden) on WHO’s list of prequalified cholera vaccines. The prequalification of Shanchol and other cholera vaccines in the future would remove a major roadblock to the increased use of oral vaccines in developing countries.