



Cholera - *Vibrio cholerae* infection

2010 Haiti Cholera Outbreak and CDC Response

Cholera Verified

On October 19, 2010, the Haitian Ministry of Public Health and Population (MSPP) was notified of a sudden increase in patients with acute watery diarrhea and dehydration. On October 21, the “*Laboratoire National de Sante Publique*” (National Public Health Laboratory) confirmed *V. cholerae* serogroup O1, biotype Ogawa, and the outbreak of cholera was publicly announced on October 22 ¹⁻⁴.

The rapid spread of cholera in Haiti sparked one of the best coordinated and documented responses to a cholera outbreak in modern public health ⁵. Because the outbreak was spreading rapidly and the initial case-fatality rate was high—meaning a high proportion of patients were dying—the Haitian Ministry of Public Health and Population and the U.S. government initially focused on five immediate priorities:

1. Prevent deaths in health facilities by distributing treatment supplies and providing clinical training
2. Prevent deaths in communities by supplying oral rehydration solution (ORS) sachets to homes and urging ill people to seek care quickly
3. Prevent disease spread by promoting point-of-use water treatment and safe storage in the home, handwashing, and proper sewage disposal
4. Conduct field investigations to define risk factors and guide prevention strategies
5. Establish a national cholera surveillance system to monitor spread of disease

The top priority of any public health response is to save lives and control the spread of disease.

Coordination of Response

CDC's response to the outbreak was coordinated through its Emergency Operations Center in Atlanta, Georgia, and CDC experts across the agency were deployed to Haiti and the Dominican Republic to provide in-country assistance. Among those involved in the response were medical officers, epidemiologists, laboratory scientists, environmental health specialists, communication specialists, public health advisors, planners, information technology specialists, and support staff. The [Division of Global HIV and TB](#), which opened CDC's first office in Haiti in 2002 to support the Government of Haiti in addressing its HIV/AIDS epidemic, was critical in the coordination of the response.

Rapid Response

Within days, the Haitian Ministry of Public Health and Population (MSPP), with technical assistance from CDC and its partners, established a national surveillance system to track cases of the disease. MSPP, CDC, and partners quickly developed cholera treatment and prevention materials and trained more than 500 health care workers across the country. The number of workers trained swelled to more than 10,000 a few months into the outbreak.

U.S. government agencies including CDC helped to leverage in-country resources, most notably the President's Emergency Plan for AIDS Relief (PEPFAR) and non-governmental organizations, to increase the number of cholera treatment centers and oral rehydration points. These efforts helped reduce the initial mortality rate (number of patients dying) from nearly 4% of all cases to less than 1%, saving an estimated 7,000 lives.

Within the first week of the outbreak, MSPP and CDC quickly provided Haitian news outlets with [five basic prevention messages](#) [PDF – 2 pages] advising Haitians how to protect themselves from cholera. These messages were quickly supported with instructions on how to treat cholera and other forms of acute watery diarrhea by preparing and providing oral rehydration solution to all people early in the course of their illness; [diagnosis and testing guidelines](#); [clinical presentation and management guidance](#); and [healthcare provider training materials](#). CDC translated materials into French, Haitian Creole, and Spanish.

Community Health Workers

Community health workers (CHWs) play an essential role in providing healthcare services and education at the community level, particularly in rural areas. In collaboration with MSPP, CDC quickly developed [CHW training materials](#) on cholera education and prevention and trained 24 master trainers from MSPP and partners representing all 10 departments of Haiti. Master trainers then trained more than 1,100 CHWs using CDC materials from March to June 2011. This training, which emphasized that “no one need die from diarrheal disease,” contributed to building Haitian capacity in managing cholera.

Water, Sanitation, and Hygiene

Other key elements of the response included CDC efforts to improve water, sanitation, and hygiene throughout the country. CDC, working with UNICEF and Haiti’s National Department of Drinking Water and Sanitation, helped establish water chlorination programs to increase access to safe water for drinking, handwashing, and cleaning. CDC and partners also conducted water testing for *V. cholerae*⁶ and provided water storage vessels, soap, and large quantities of emergency water treatment supplies for homes and piped water systems.

But as evidenced by the cholera outbreak, much remains to be done in Haiti. Cholera will ultimately be controlled when municipal and rural water systems separate drinking water from sewage as was done in countries in Latin America after the 1991 cholera epidemic⁷.

References



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- Global Water, Sanitation, and Hygiene (WASH)
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