



## Eliminating cholera in Haiti

Haiti has declared the country cholera-free; however, the effects of the epidemic remain. Sophie Cousins reports.

When Jean Clair, aged 41, woke with nausea and vomiting in late 2010, he knew all too well what was wrong. The last thing he remembers is waking with an intravenous drip in each arm. He survived, but his mother, who was one of the first to contract the disease several months earlier, was not as fortunate. “When cholera started in Haiti, no one knew what it was—it was only something I’d read about in books”, Clair said. “People were dying, and we didn’t know why.”

While the UN would go on to deny responsibility for 6 years, the outbreak of cholera that swept across the Caribbean country just months after a devastating earthquake was traced back to Nepali peacekeepers who were part of the UN Stabilization Mission in Haiti, also known by its French acronym MINUSTAH, which operated from 2004 to 2017. Cholera is endemic in Nepal, but the UN did not test Nepali peacekeepers for the disease. When they got sick, waste flowed freely into the Artibonite River, which thousands of Haitians use for drinking, washing, and bathing, and which irrigates rice

paddies across the Central Plateau. The outbreak spread rapidly across the country, infecting almost 10% of the population and killing 10 000 people.

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Today, the blue and white buildings of the MINUSTAH compound on the edge of the Méyé River sit abandoned, and so does the cholera treatment centre in the town of Mirebalais, just a few minutes’ drive from the compound, 60 km from Port-au-Prince.

In February, 2022, Haiti’s Prime Minister Ariel Henry declared the country free of cholera, more than a decade after the disease had swept through the mountains, into villages, towns, and cities.

As per WHO’s standards, a country can be declared cholera-free 3 years after its last confirmed case; the last laboratory confirmed cases were in

February, 2019. The last recorded death was Feb 7, 2019. WHO will now examine Haiti’s scientific evidence to confirm that transmission has been interrupted and the elimination of cholera can be declared.

At the Haiti Technical Conference on Cholera Elimination in mid-February, the UN Deputy Secretary-General Amina Mohammed told the audience that Haiti “will be the first country in modern times to [eliminate cholera] following a large-scale outbreak. Haiti’s efforts have made it an example for the world”.

Cholera hit 10 months after the earthquake and, by then, more than a million people were still living in overcrowded displaced persons’ camps, many without adequate sanitation. Furthermore, tropical storm Tomas arrived 4 weeks later, flooding Haiti, and helping spread the disease to all ten provinces. Catastrophe upon catastrophe coupled with a struggling, underfunded health system resulted in disaster.

How has Haiti gone from experiencing one of the largest outbreaks in modern history to essentially eliminating the disease? In early 2013, after a few years of haphazard, uncoordinated efforts to tackle the disease, the government launched the National Plan for Cholera Elimination (2013–22), which aimed to improve access to drinking water for more than 85% of the population, access to sanitation for more than 90% of the population, and access to health care for more than 80% of the population. It aimed to do so by providing potable water, sanitation, and promoting hygiene. *The Lancet* spoke with ten cholera survivors who said that there have been no improvements in access to safe



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water and sanitation in their villages in the past decade. According to experts who helped to bring down the number of cholera cases in Haiti, these interventions were important in halting the outbreak, but they suggest that the deployment of rapid response teams in 2014 was the real breakthrough.

Jean Hugues Henrys from Université Quisqueya in Port-au-Prince played a pivotal role in the development of the alert-response strategy as a cabinet member of the Ministry of Health at the time. “The fight against cholera was my cause from the start”, he said. “Extinguish the outbreaks from the start in order to prevent their extension is a strategy well known to firefighters and applied in the field to the fight against an epidemic. It is undeniable that this strategy was decisive...in the fight against cholera in Haiti.”

The strategy aimed to rapidly detect local outbreaks and send one of the 60 rapid response teams, largely composed of non-governmental organisation staff including UNICEF and Ministry of Health staff, to households and neighbours of people with cholera.

The teams were deployed across the country to carry out preventive actions to halt the transmission of disease within 24–48 h of being alerted. The first intervention was at the household level, where teams would establish a barrier around the house where a suspected case was declared, which would then be extended to up to 200 m around the patient’s home.

Active case searches of neighbouring homes were carried out along with the distribution of cholera kits that contained oral dehydration salts (for treatment), water disinfection tablets (for clean water) and a bucket with a lid and tap (for safe drinking water storage), and education sessions on cholera prevention such as hand washing, and disinfection of homes. Nurses collected samples

while motorbike drivers transported the samples to laboratories. In a country which is described by the creole proverb, “beyond the mountains, more mountains”, this was no easy feat.

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If the disease was found to have spread in the community, more action would be taken. This included evaluating community water systems and drinking water sources to assess if they could be the source of contamination along with controlling chlorination levels in water systems and ensuring hygiene measures were taken in food preparation in public spaces. By identifying the source—which was often a well—the water could be treated, transmission could be halted, and lives could be saved. The teams sought every potential case of cholera and targeted public spaces such as bus stops, schools, and churches to educate people not just on prevention, but on the importance of seeking treatment early. Treatment is simple: people need to be rehydrated, but time is of the essence.

“This strategy was very effective”, said Jacques Boncy, Director of the National Public Health Laboratory. According to Ndiaga Seck, Head of Communications in Haiti for UNICEF, no cholera teams remain in the field today. “When COVID-19 hit some teams that we had in the field for cholera started helping but [then] the cholera grants expired...Even the NGOs we’ve partnered with, the people who worked on cholera [have] left.”

But not all believe this is the end of the road. “When I got the news about a ceremony held in Haiti about cholera elimination, I personally had some doubts about

the elimination process”, Jeannot Francois, who has worked as the director of the country’s vaccination programme, said from Canada. “In 2019, surveillance practically stopped on cholera so if you don’t search for it, you won’t find it. And then in 2020, all resources were redirected to COVID-19. My opinion is that we should do an independent study on cholera. We need more surveillance. I’m not sure if we’re in a situation of zero cases of cholera.”

Boncy said the Ministry of Health was undertaking a large environmental study targeting the main water sources in the country including rivers, lakes, and canals to test for *Vibrio cholerae*. If they find it, they will test and vaccinate everyone who lives around the water source along with treating the water. Although there is little evidence of the benefits of mass vaccination, targeted vaccination implemented early has proven effective.

“After 3 years of looking very closely and undertaking aggressive laboratory-based surveillance, we can say there’s no inter-human transmission of cholera in the country. But is it enough? There have been 10 000 deaths—but it’s not just deaths, hundreds of thousands of families have been affected by this”, Boncy said.

Clair is just one of thousands whose life was turned upside down by cholera—for him, Haiti’s cholera story will not be over until the UN compensates the victims financially. He continues to take the long, winding bus ride to Port-au-Prince to attend every protest and sit-in on the issue. “My mother was one of the first people to be infected. When she got sick, we just thought it was diarrhoea. She died an hour later.”

“Forgiveness doesn’t heal the sick”, Clair said, referring to the then UN Secretary-General Ban Ki-moon’s apology in 2016. “We want justice.”

*Sophie Cousins*