Which strategy: elimination or control?

After decades of absence, cholera appeared in Madagascar in 1999. An elimination strategy was put in place, which produced results. "Only twenty-seven cases [were] reported to WHO in 2002, five in 2003, and none thereafter. The disease left no epidemiological trace" (p. 228). Piarroux thought that the same could happen in Haiti, "under the right circumstances" (p. 220). His strategy was to block the transmission of the disease (p. 221). Based on his experience in Africa, he reasoned that the bacteria responsible for the epidemic "would not remain in Haitian waters once all human cases were eliminated" (p. 222), but this would require further research in order to be confirmed or not. Meanwhile, he called for "rapid case findings and treatment and encouraging health workers to treat cholera cases quickly and disinfect household environments – focusing on those should reduce or eliminate the threat of further transmission" (p. 229). This would however require a major upheaval in what had become the country’s response to the cholera outbreak, which mainly continued the routine health-care procedures that had been in place before the epidemic: "The quality of epidemiological surveillance had deteriorated and was no longer useful for organizing control activities. At the beginning of 2012, few data were being collected. Cholera was endemic and nascent but was only one rainy season away from regaining its destructive epidemic form" (p. 230).

Piarroux developed a strategy together with UNICEF and partners (MSF, the Red Cross, Oxfam, Partners in Health, Action Contre la Faim, Médecins du Monde, Solidarités, and Agence d’Aide à la Coopération Technique Et au Développement), which the Haitian government later adopted. This strategy gave the responsibility to health-care workers to "determine areas where the disease was rampant and stop local cholera transmission through public awareness and detection of new cases, followed by early treatment and chlorination of local drinking water. As part of this strategy water supply networks needed to be maintained and kept safe" (p. 231). To be effective, this plan had to be put in place during the dry season, "when the number of outbreaks to be controlled would be much lower" (p. 232). The ongoing program of control during the dry season would thereby target “active foci of the disease detected by a commune-specific surveillance system. Once cases diminished (as verified by microbiological testing), control actions could immediately provide access to clean water and free distribution of treatment products, including oral rehydration kits and antibiotics” (p. 235).

This approach yielded measurable results. By November 2013, “cholera had declined drastically… [to] a level… five times lower than the previous year’s dry season.” And between
July 2013 and June 2014, the decline in the number of cases reached almost 85% compared to the previous period (p. 239).

Yet, that wasn’t to be the last of it. Significantly, "the continuing program to eliminate cholera in Haiti reached a troublesome impasse in late 2014" (p. 249). Lack of cooperation between départements and "lack of attention had allowed cholera to find its way back to the capital city" (p. 249). Some NGOs "responsible for implementing the plan were not overly active, reluctant to intervene quickly, delegating to others, and lacking supervision. For their part, the Haitian mobile response teams were slow to engage in the battle alongside NGOs. Despite significant pledges from international donors, funds either didn’t arrive at their final destinations or were delayed by months…. Without a drastic change, the goal of local elimination would be missed"(p. 239).

Not everyone agreed initially with this strategy. "In 2013, the Haitian government, in collaboration with CDC, UNICEF, and PAHO, released its own ten-year plan to eliminate cholera in Haiti" (p. 221). This plan included improvements in the areas of water and sanitation, as well as "epidemiological surveillance, health promotion for behavior change, and care of infected persons in health institutions" (p. 221).

The cost of the ten-year program was estimated at $2.2 billion. The money had to be found. And not only money was needed, but governmental managerial capacity. According to the plan, “it is also just as important to invest at the government level in order to ensure that the Ministry of Public Health has the capacity to efficiently manage the health system on a national scale, as well as the local capacity to be able to supervise hospital and health clinic services that are handled by NGOs" (p. 222). It was a good plan. On paper. Frerichs recalls: "The reluctance of outside agencies to provide that kind of support, and the consequences, were well described by Jonathan Katz" (p. 222). In any event, “in January 2014, the UN announced a two-year plan to assist Haiti for the first fifth of its decade-long strategy to eliminate transmission of cholera…. Member nations were asked for $70 million to fund the plan – well short of the $448 million actually budgeted” (p. 222).

In addition to water and sanitation, vaccination was deemed necessary. Should it be mass vaccination or targeted vaccination? The answer to that question depended on one’s position as to the origin of cholera in Haiti.

If cholera were an "ever-present… monster, ready to strike if provoked by weather, an earthquake, or whatever," every person needed to be protected. So, mass vaccination would be required. If, however, it were “a foreign intruder whose survival in Haiti would require human amplification", a targeted vaccination would create human immunity blocking this amplification, which would facilitate eventual eradication (p. 223).

The WHO estimated that for the two required doses the cost per person would be $3.00 and then $1.50 every two years for the booster. In addition, access to refrigeration was needed. But "a few years later, these cost estimates would nearly double" (p. 223).

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