As cholera goes, so goes Haiti
The West’s poorest nation confronts a new disease

By Sam Kean, in Mirebalais, Haiti

A few meters away from where one of the worst cholera outbreaks in history started, several Haitian teenagers are enjoying a bath. Behind them looms the razor-wired U.N. compound from which cholera-laden sewage leaked into the nearby Meye stream in October 2010. But the teens splashing in the Meye today pay no attention, intent on washing clothes and scrubbing down a motorcycle. When asked if they fear cholera, they say no, because they’re not dirty people. Besides, what other choice for water do they have?

It’s the same scene all across Haiti. Every river, storm drain, and irrigation canal teems with people washing, drinking, defecating, and discarding trash. Unfortunately, the water’s temperature and salinity provide a perfect incubator for cholera bacteria, and a disease never recorded before in Haiti has now attacked 700,000 people and killed 8500.

Last year, Haitian health officials unveiled plans to eradicate cholera within 10 years. But given Haiti’s chronic problems, many observers are skeptical. “This cholera organism is well established in the Haitian environment and is likely there to stay,” says Daniele Lantagne, an environmental engineer at Tufts University in Medford, Massachusetts, who does relief work in Haiti and investigated the United Nations’ role in the outbreak.

The pessimism isn’t so much Haiti’s health care system. Many clinics there are primitive, yes—small and hot, with rusty IV stands and goats, chickens, and dogs wandering through the grounds. But the system has seen success in some areas recently, like limiting the spread of HIV and lymphatic filariasis.

The pessimism springs instead from Haiti’s continual lack of infrastructure. Really, cholera is simple to prevent. It spreads through contact with infected feces, “so you just need some form of separating poop from water and food,” says Louise Ivers, a physician with the Boston-based Partners In Health (PIH), a medical aid group. But almost every effort to improve access to latrines, sewers, and safe drinking water in the past century has failed.

Between 1995 and 2012, foreign governments and private groups provided $15 billion in aid to Haiti, including $815 million for health efforts and $313 million for water and sanitation projects. And yet, because of various chronic problems—including poverty, corruption, and government instability (Haiti had 13 governments between 1986 and 2002 alone)—most of the country still lacks basic infrastructure. The battle against cholera, then, is a microcosm of the larger, systematic problems that have made Haiti the poorest and most intractable nation in the Western Hemisphere.

Ironically, U.N. peacekeepers at the compound near Mirebalais introduced the disease. Some came from Nepal, where cholera is endemic, and although they showed no symptoms of cholera, genetic fingerprinting has matched the strain of cholera in Haiti to the strain prevalent in Southeast Asia. Witnesses also saw leaky sewage pipes within the compound. Haitian cholera victims and their families have recently filed a class-action suit against the United Nations in U.S. court, seeking compensation.

Once introduced, the disease exploded because of the lack of safe drinking water and toilets. In Caribbean nations overall, 80% of people have access to decent sanitation. The 2010 cholera outbreak also spread to the Dominican Republic, Haiti’s wealthier neighbor, but it suffered just 31,000 cases and 471 deaths, due to superior infrastructure. Nearby Cuba suffered 700 cases and three deaths.
In Haiti, though, access to some kind of toilets hovers near 20% and had been declining for years even before the earthquake struck. Within major cities, many people dispose of waste with “flying toilets,” plastic bags they hurl outdoors. In rural areas, where 10% of people have adequate sanitation, people often defecate in waterways like the Meye, and cholera—which causes explosive diarrhea—drove more people to use the river as a toilet. The Meye flows across Haiti’s central plateau and empties into the country’s largest river, the Artibonite. So cholera quickly spread from the interior to the coastal city of St. Marc, and from there it overran the country.

In city after city that October, sleepy health clinics were inundated with hundreds of victims per day, many of them carried in. (Victims can lose 20 liters of water daily, leaving them too dehydrated to walk.) Overwhelmed doctors—some of whom, Lantagne says, literally had no idea what cholera was—began stacking patients two to a bed, then on the floor. In some clinics, watery feces puddled on the ground.

Given the earthquake-cholera double whammy, many Haitian people feared the world was ending. Some stopped eating to avoid contaminated food and tied cloths around their stomachs to quell hunger pangs. One local health minister reportedly fled her clinic, too scared to enter. Even some voodoo priests—who normally insist on treating patients themselves—admitted they were powerless and directed people to proper doctors.

Aid groups like PIH immediately erected specialized cholera clinics with bleach hand- and shoe-washing stations; the smell of bleach still pervades the clinics. Digicel, Haiti’s ubiquitous cell phone company, also chipped in by bulldozing hills to make space for clinics. For most of 2011 and 2012, cholera levels remained high, up to 14,000 cases per week. But in 2013 the numbers dropped, and Haitian clinics now record about 290 cases per week; perhaps hundreds of others contract cholera but don’t seek treatment. While welcome, that drop introduced its own dilemmas. As the crisis waned, PIH and its affiliates said that raising money became harder. And while most cholera clinics now sit idle—rows of empty cots beneath huge tents—PIH cannot shut them down. Cholera levels tend to cycle, so the caseload could spike again during Haiti’s winter rainy season. Plus, even 290 cases per week makes Haiti’s the worst cholera outbreak in the world, Ivers notes.

WITH THE CRISIS SUBSIDING, the Haitian health ministry is trying to head off a recurrence. Jean-Renold Rejouit, the health commissioner for Haiti’s central plateau, says that in the past, his department could only respond to disasters, not prevent them. “We were acting as firemen,” he says. “We never had the chance to get ahead.” To finally get ahead, the government is seeking assistance for a 10-year, $2.2 billion plan to eliminate cholera, including $1.6 billion to improve water and sanitation. Foreign governments and charities have ponied up $222 million so far.

Some experts question the government’s approach, however. They see clean water and better sanitation as inextricably linked, but the Haitian government has starkly different ideas about addressing each. For water projects, which support whole communities, the government welcomes the help of aid groups. PIH recently managed a $2500 project to rebuild a concrete water station for one village and connect it, through several kilometers of pipes, to a natural spring and chlorination facility. Although the station is not exactly easy to access—the path to the station runs up steep slopes with no shade and plenty of boulders to stumble over—it cuts down the commute for safe water by 30 minutes for local families. That’s not insignificant when they make several trips each day, often with small children in tow or baskets of laundry atop their heads.

But the government does not want aid groups building latrines, which usually benefit just one family. Rather, it wants people to build their own latrines, to promote personal responsibility.

Liz Campa, a water and sanitation expert with Zanmi Lasante, a sister organization of PIH, agrees. “Communities in Haiti have the capacity to improve their environment,” she says. “Let them do it.” She adds that latrines cost much less than water stations. Even fancy latrines with metal sheeting and concrete bases run about $100, and the price drops if people use wood and palm fronds and dig the 3-meter pits themselves. Some native Haitians concur.
Jean Magloire, a health activist, faults many Haitians for squandering time and money playing dominos and the Haitian lottery instead of saving up for or digging latrines themselves.

Ivers, though, feels conflicted. She supports the mantra of responsibility. But when she relayed that line at a community meeting, she says people laughed: “They asked me, ‘How do we even get started?’ ” Half of all Haitians live on less than $1 per day, and goods, even food, are surprisingly expensive. Saving even $100 seems daunting.

Campa says PIH will make exceptions and build latrines for widows, people with AIDS, and other vulnerable groups. But for the most part it respects the government’s wishes and focuses instead on clinics, hygiene campaigns, and delivering cholera vaccines.

**PLANS TO IMPROVE WATER** and sanitation face other hurdles. Few aid groups—PIH being an exception—focus on much beyond relieving immediate needs. And while aid money is still flowing to Haiti, funds have a history of disappearing there. After the earthquake, the United States gave Haiti $2.25 billion in aid. But no one knows how $1.5 billion of that was spent, says Vij Ramachandran, a fellow at the Center for Global Development in Washington, D.C. Given Haiti’s history of corruption, she adds, at least some was probably stolen.

“Unless aid is invested in building local institutions and strengthening the government,” Ramachandran says, “you will not see any real change.”

Cultural habits can also slow efforts to improve public health. Women traditionally gather drinking water in Haiti, but because it’s women’s work, such chores often take low priority. At one fountain near Mirebalais, despite the quickly setting sun, women waited around with a dozen empty jugs while teenage boys washed their motorcycles. Bad hygiene habits also persist. Many Haitians say that cholera convinced them to start washing their hands after defecating and stop drinking irrigation water in the fields. But others admit they still don’t bother with such niceties.

Rejouit, the health commissioner, insists that Haiti can eradicate cholera. Other doctors remain pessimistic, especially near St.Marc and other hard-hit districts. Still others say they are hopeful, but they realize that hope is about all Haiti has ever had. One of them, Patrick Ulysse, a health coordinator for PIH, nodded at the prospect of a cholera-free Haiti. “I’m optimistic,” he said. He then paused and half-smiled: “I have to be.”

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**China tries to kick its salt habit**

A country with one of the world’s saltiest cuisines confronts its hypertension problem

By Mara Hvistendahl, in Shanghai, China

China has long had a love affair with salt. Since about 2200 B.C.E., when the country first produced it, salt has been an important preservative for vegetables and meats. Entire regional cuisines are described simply as “salty,” and individual dishes have monikers like “salt-and-pepper pork.” In Tibet, locals drink a salty yak butter tea in place of water.

All told, the average rural Chinese citizen consumes 12 grams of salt daily, according to the 2010 Global Burden of Disease study; the average American takes in 9 grams, while the daily maximum recommended by the World Health Organization (WHO) is 5 grams. “High salt intake is part of Chinese food culture,” says Wu Yangfeng, a cardiovascular specialist at the Peking University Clinical Research Institute who heads the George Institute for Global Health, China, in Beijing. It is also an acute health problem—but one that researchers believe can be tackled.

Salt is a major contributor to an alarming rise in hypertension in China’s rapidly aging population. Some 54% of Chinese adults aged 45 and older now have hypertension, according to the China Health and Retirement Longitudinal Study, among the highest rates in the world. Hypertension is a risk factor for stroke—the leading cause of death in rural China in 2010—and other cardiovascular diseases.

As the country develops, Chinese are also eating more meat and engaging in less physical activity, which drives the rise in hypertension and chronic disease. Those lifestyle factors are hard to combat, especially in a people tasting modern life for the first time. Meanwhile China’s overburdened health care system is ill-equipped to treat hypertension directly, given the legions of patients. An estimated 40 million Chinese aged 60 and over with the condition haven’t been diagnosed, and of those who have been, only a small proportion get their blood pressure under control. But researchers say reducing China’s salt consumption is feasible—and could have a major impact.

In fact, the country is an ideal place to try an intervention, says Bruce Neal, an epidemiologist with the George Institute for Global Health. Neal and his team in Shanghai are encouraging people to use less salt. They have distributed 100,000 salt proportioners, which dispense 6 grams of salt, and even salt for baking. (Salt is heavily used in Chinese cooking.)

By the end of January, according to lead researcher Ling Xu, China’s health ministry reported a 70% reduction in the use of the proportioners, and the Shanghai government reported a 20% reduction in the amount of salt. It’s too early to say whether this will translate to lower blood pressure, but population studies in China have shown a 3% reduction in salt can reduce population hypertension by 10%.

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Published by AAAS
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Sam Kean (September 11, 2014)
Science 345 (6202), 1266-1268. [doi: 10.1126/science.345.6202.1266]