A Surprise Inoculation against Cholera

After the cholera epidemic tore through Migori County in January–February 2015, Ministry of Public Health officials discovered a surprise—two communities in Rongo subcounty, the epicenter of the epidemic, experienced zero cases of cholera. Why did these two villages, Kauma and Kanyangiela, not present any cholera cases, and why were they seen as safe havens amidst a strong outbreak despite being initially considered areas of high risk? The Ministry of Health (MOH) sent a team of investigators to examine the situation.

The investigating team gathered some background information about the two villages. All the variables seemed similar to the neighboring villages, e.g., landscape, socio-economic status, literacy level, culture, religion, and lifestyle. However, the county and Rongo subcounty public health officers remarked that Kauma and Kanyangiela were among the first villages in Rongo that had embraced community-led total sanitation (CLTS) and attained open defecation free (ODF) status.

In 2012, the Government of Kenya initiated a campaign to end open defecation in Kenya. The purpose was to reduce diarrhea that could also curb the frequent cycle of cholera outbreaks in known hot spot counties. The Ministry of Public Health enlisted the support of multiple partners to engage in CLTS efforts across the country. WASHplus implemented a CLTS-plus (+) approach in 26 villages in Rongo subcounty.

With limited USAID Maternal and Child Health funding for sanitation, WASHplus worked with Kenya’s MOH in Rongo, Naivasha, and Langat subcounties to pilot CLTS+ interventions that promoted behavior change to improve sanitation uptake and emphasized inclusive sanitation in the targeted districts. Villagers were facilitated—through a triggering process—to appraise and analyze open defecation in the community and take their own actions to become an ODF community. The project also encouraged households to adopt an improved latrine at the outset. WASHplus trained MOH staff to train field practitioners to implement CLTS+ and inclusive interventions and follow up with the communities over time to promote ODF status.

Finally, WASHplus, in consultation with other partners, also supported the government to
Handwashing with soap or ash at critical times, like after latrine use, is one important way that individuals can protect themselves against cholera.

identify the most effective sanitation marketing options and promising practices to be developed and replicated across the country. Working with other stakeholders, WASHplus explored approaches to improve the uptake of quality latrines, based on the government's current minimum standards.

The investigators found that the two villages in Rongo subcounty have almost 90 percent latrine coverage, and everyone in the village uses a latrine and practices handwashing with soap or ash. Further, no signs of open defecation existed, unlike in the other villages where investigators found the practice to be rampant. Investigators conducted analyses that compared associations between different variables. Analyses detected three variables associated with reduced cholera cases: latrine usage, handwashing with soap after defecation, and household water treatment.

To further explore the association, the investigators conducted a focus group discussion with village elders in the two villages. The team asked several questions such as this one (in some cases the responses are translated):

What did your villages do differently from other villages that have cholera cases?

Mr. Charles Ouma, a village elder responded: “For us, we have protected ourselves and we cannot get cholera.”

Mama Joyce Achieng explained, “Our village members are enlightened, we don’t eat dirt, we have protected ourselves from cholera, typhoid, and dysentery.”

John, a school teacher noted that, “We are the ones who are protecting ourselves, who else? As mothers take their children to hospital for immunization to protect them from contracting diseases, we are all using latrines and washing our hands after defecation to protect ourselves from many diseases.”

The village elder concluded, “What we are doing is better than what we get from the hospital, because we are doing it ourselves and we are not getting sick.”

Cholera is a diarrheal disease characterized by profuse watery diarrhea, vomiting, and leg cramps caused by infection of the intestine with the bacterium Vibrio cholerae. Anyone is susceptible to the disease, and approximately 5 percent to 10 percent of infected persons will develop very severe disease six hours to five days after exposure to the bacteria. The loss of large amounts of fluids can rapidly lead to severe dehydration, and in the absence of adequate treatment, death can occur within hours. Cholera, a major challenge in most developing countries, occurs when people ingest feces of an infected person mainly through contaminated hands or drinking/eating contaminated water or food.

Research detected a reduction in cholera cases in communities that had been triggered with CLTS. Investigators have found that the hot spot counties have eliminated the disease from their jurisdictions. Becoming ODF, washing hands with soap or ash, and treating drinking water could be the single most important set of activities that households and communities can take to prevent cholera and other fecal-orally transmitted diseases such as typhoid and dysentery. It doesn’t cost much but the benefits are huge. Inoculate your community today.

Reported by Adam Mohamed Ali and Benjamin Murkomen, Division of Environmental Health, Ministry of Health, Kenya

About WASHplus
The WASHplus project supports healthy households and communities by creating and delivering interventions that lead to improvements in water, sanitation, and hygiene (WASH) and household air pollution (HAP). This multi-year project (2010-2016) was made possible with support from the American people delivered through the U.S. Agency for International Development’s (USAID) Bureau for Global Health and led by FHI 360 in partnership with CARE and Winrock International. The project uses at-scale programming approaches to reduce diarrheal diseases and acute respiratory infections, the two top killers of children under age 5 globally.