

From the classroom to the field: NCEZID Applied Epidemiology Training Helps Cholera Outbreak Response in Kenya



Kenyan epidemiologists in the Field Epidemiology and Laboratory Training Program were trained how to investigate outbreaks caused by foodborne, waterborne, and environmental diseases. After the training, they assisted in an investigation of a cholera outbreak.

Sometimes, the work of a global disease detective starts just hours after a training session ends. That was the case for a group of Kenyan Field Epidemiology and Laboratory Training Program (FELTP) residents in May 2017, when a Nairobi hospital reported an outbreak of suspected cholera among patients. Four of the patients had attended a wedding in Nairobi.

At the same time, about 30 minutes away, CDC was training Kenyan epidemiologists on how to investigate outbreaks caused by foodborne, waterborne, and environmental diseases. After the FELTP received approval from the Nairobi County Health Department to assist in the investigation, the trainees, equipped with their newly acquired skills and the patient questionnaires they developed, headed off to interview the wedding guests.

Sporadic cholera outbreaks have occurred in recent years throughout countries in East Africa, including Kenya. Early detection, confirmation of cases, and a timely and effective response are critical because cholera outbreaks can spread rapidly, causing many deaths. Adequate training of field staff who conduct these investigations is vital to preventing a serious public

health issue. CDC's Division of Foodborne, Waterborne, and Environmental Diseases (DFWED) develops training materials for global use that and reflect real response situations. Residents used those training materials to investigate the suspected cholera outbreak.

Investigators determined that cholera was the probable cause of illnesses, but could not definitively link the illnesses to any specific food or water. However, the FELTP residents determined that wedding guests who got sick were more likely to report they ate a prepared vegetable dish than guests who stayed healthy. Guests also reported poor food handling practices at the wedding dinner, such as food left out for a long time at unsafe temperatures before it was served to guests.

CDC has supported the Kenya program's practical infectious disease epidemiology workshops over the past several years. Workshops have focused on diseases spread through food and water, acute respiratory illness outbreaks, and vaccine-preventable diseases, including efforts to eradicate polio.

"In Kenya, the FELTP program has been an important means of building workforce capacity in public health field epidemiology since 2004," Kenya FELTP Resident Advisor Sara Lowther says.

Hands-on, infectious disease epidemiology training in Kenya not only has offered practical training during real response situations, but also has increased workforce capacity and equipped health officials with tools to prevent a few cases of illness from turning into a widespread outbreak. For this situation in Kenya, when cholera was suspected, tailored outbreak response training for cholera helped public health officials respond quickly. Quick responses to cholera outbreaks prove vital to areas susceptible to cholera because of reoccurring cholera outbreaks and the high potential of rapid spreading. This evidence is highlighted in the December 2017 Issue of Global Health Security Supplement. Quick responses to outbreaks have been proven to save lives and reduce cases of infection.

