

Headline **Training epidemic-fighter detectives**  
 Date **23 Sep 2010**  
 MediaTitle **Asia Wall Street Journal**  
 Section **Asian - Pacific News**  
 Journalist **N/A**  
 Frequency **Daily**  
 Circ / Read **80,750 / 282,625**

Language **English**  
 Page No **8**  
 Article Size **540 cm<sup>2</sup>**  
 Color **Black/white**  
 ADValue **12,318**  
 PRValue **36,955**



# 'Training epidemic-fighter detectives

*U.S.-funded program helps health workers in developing countries track disease and speed response to outbreaks*

By BETSY MCKAY

Nigeria, Vietnam and dozens of other countries are stepping up efforts to respond to disease threats, as epidemics add to the burden on their health-care systems and new pathogens spread around the globe.

To fight Nigeria's worst cholera epidemic in nearly two decades, an outbreak of lead poisoning that has killed more than 160 children, and an eruption of measles, officials are turning to public-health experts like Suleiman Haladu.

A veterinarian from northwestern Nigeria, Dr. Haladu is training to become an epidemiologist—a disease detective who probes the source of outbreaks and determines how widespread they are. He is in an on-the-job program partly funded by the U.S. Centers for Disease Control and Prevention and modeled on the Epidemic Intelligence Service, the CDC's two-year program whose officers helped to eradicate smallpox, identify HIV/AIDS, and pinpoint a deadly strain of *E. coli*.

Last spring, Nigeria's federal Ministry of Health dispatched Dr. Haladu and other budding epidemiologists to two remote villages to crack the case of how gold-mining practices had poisoned homes with lead. Now, four more officers are tracking down cholera cases, treating patients, and teaching villagers



Associated Press (2)

how to avoid contaminated water to stem an epidemic that has killed more than 1,000 people.

Countries are now required by international law to report certain outbreaks or public-health events and to upgrade their disease surveillance and response capabilities.

"We need to have more people on the ground so if we have outbreaks we have an immediate investigation," said Henry Akpan, the Nigerian health ministry's chief of epidemiology and health emergencies and response. He estimates that each of Nigeria's states now has only one trained epidemiologist; he aims to double that figure over the

next three years.

The Nigerian program, launched in 2008 with funding from the CDC and other organizations, also aims to strengthen laboratories and improve veterinary epidemiology, as new pathogens frequently jump from animals to humans. When a death from avian flu in 2007 showed the virus had been spreading in Nigeria undetected, "there was no capacity to address the problem; we had little understanding of the situation," recalled Dr. Haladu.

The CDC has established 35 programs since 1980, mostly in developing countries, with funding from

## Cracking the Case

Some of the outbreaks being tracked by epidemiologists-in-training

- Nigeria: Cholera epidemic that has led to more than 1,000 deaths
- Thailand: Pneumonia in mushroom-farm workers caused by fungi
- China: Investigation into melamine-contaminated infant formula
- Kyrgyzstan: Outbreak of HIV among children in Bishkek
- Ethiopia: Acute-diarrhea outbreak sickened 10,000 in Addis Ababa
- Ghana: Rabies outbreak
- Egypt: H5N1 and H1N1 flu-outbreak investigations
- Pakistan: Surveillance for viral hepatitis

Centers for Disease Control and Prevention

Left, a health worker in Ganjuwa, in Nigeria's rural Bauchi State, sprays a chlorine solution designed to kill cholera bacteria, watched by children below.

several U.S. government agencies and nongovernmental organizations, and has 11 more in the works. Participants investigated 216 outbreaks in 2009, from H1N1 flu outbreaks in Thai schools, prisons, and temples to HIV among children in Kyrgyzstan. Among the countries that are starting or have recently started programs are Iraq and Afghanistan. Haiti is under consideration too.

"It may be the single most important thing we do in global health," said CDC Director Thomas Frieden in an interview. "We're all very attuned to the shortage of doctors and nurses in developing countries," he said, but the shortage of epidemiologists and other public-health workers is even more acute given the impact they can have.

He is pushing for expansion of the program, estimating that at least one epidemiologist for every 200,000 people is needed to adequately measure disease threats. The CDC programs have produced about 2,200 graduates over 30 years. Had H1N1 flu been detected in Mexico two months earlier, a vaccine would have been ready before the largest peak of disease in the U.S. last fall, saving thousands of lives, he said.

In China, program officers have screened children to identify infant formula tainted with melamine, and traced 300 mysterious sudden deaths that occurred over three decades to a toxic mushroom. "We need about 80 new officers every year," said Bob Fontaine, a CDC epidemiologist running the program. He hopes to reach that goal by 2015; this November, 32 new officers will start, he said.

Vietnam, plagued by severe acute respiratory syndrome in 2003 and the world's second-highest number of H5N1 flu deaths since

that year, launched a new field epidemiology training program in 2008 with funding from the U.S. Agency for International Development, the World Health Organization and other groups. About 75% of the country's public-health workers lack training in epidemiology, according to Vice Minister for Health Trinh Quan Huan. "When an outbreak occurs, at the local level they do not have practical skills to collect data and respond," he said.

Pham Van Hau, an infectious-disease physician in central Vietnam, is studying possible links between dengue fever and climate. Other officers have investigated rabies prevention and transmission of flu viruses between humans, pigs and poultry in a rural community.

Participants in Kazakhstan, Uzbekistan, and three other former Soviet countries are learning to more quickly detect Ebola, anthrax and other potential bioterror agents, funded in part by the CDC and the U.S. Department of Defense.

In a program in Addis Ababa, Ethiopia, launched last year, Million Tumato and a colleague dug into police log books to document health risks from an increasing number of motor-vehicle accidents. But local officials don't always welcome investigations that might reveal outbreaks damaging to tourism or trade, Dr. Tumato found. When he uncovered a suspected case of cholera last year and turned it over to local health officials, they didn't follow up, he said.

The programs also are costly, involving extensive oversight and mentoring as officers spend most of their time outside the classroom. To meet growing demand, the CDC is promoting shorter courses for local or regional officials that focus on more basic data-collection skills.

