Emerging Infectious Diseases

The U.S. Role

U.S. global efforts to detect and contain emerging infectious diseases such as avian influenza and Ebola virus disease are led by the U.S. Centers for Disease Control and Prevention (CDC) and USAID. Working with the World Health Organization (WHO), the Food and Agriculture Organization (FAO), and partner countries, CDC and USAID have for decades worked to expand laboratory and epidemiologic capacity globally.

(continued on back)

Achievements

Emerging Pandemic Threats, a USAID program to build capacity in less-developed countries to respond to pathogens in animals before they jump to humans, has since 2009:

» Trained 2,500 government personnel, physicians, veterinarians, and technicians on biosafety, lab techniques, and outbreak investigation.

» Equipped and trained staff in 32 diagnostic laboratories to properly test wildlife samples for viruses. This led to the sampling of over 56,000 animals and the detection and genetic sequencing of 815 novel viruses.²

(continued on back)

Since 1980, the CDC (with USAID support) has worked with host countries to establish and/or support

55 Field Epidemiology Training Programs (FETPs)

serving 72 countries

that have graduated over

3,100 epidemiologists

—disease detectives who spot, investigate, and help contain disease outbreaks.¹
**Why it Matters**

The 1918-1919 global flu pandemic killed an estimated 50 million people; one study estimates that such a pandemic in 2004 would have killed 62 million, including 384,000 Americans.³

In the event of a new pandemic, disease warning systems such as those supported by CDC and USAID “could provide sufficient time for production and distribution of vaccines and antivirals to prevent much, if not most, of the mortality impact.”⁴

Disease surveillance remains weak in many countries, as demonstrated by Ebola’s rapid spread in Liberia, Sierra Leone and Guinea (which lack FETP’s). Nigeria’s FETP helped stop Ebola there – see story at right.⁵

**The U.S. Role (continued)**

CDC’s Field Epidemiology Training Programs (FETPs) build capacity in outbreak investigation, health surveillance, and management. USAID has advanced pandemic planning and built capacities for risk reduction and disease detection and response, including combatting dangerous pathogens in animals before they threaten humans.⁷

**Achievements (continued)**

USAID helped produce a 50% drop in avian influenza outbreaks in poultry in Indonesia between 2011 and 2012 with a similar decrease in human cases, when it partnered with Indonesian scientists and local vaccine manufacturers to develop poultry vaccines against avian influenza.⁸

Since 2004, CDC’s Global Disease Detection Program has worked with other governments and the World Health Organization to respond to 1,592 disease outbreaks, including those of Ebola and Marburg viruses.⁹

---

**Success Story:**

**Nfelterp Graduates Help Stop Ebola in Nigeria**¹⁰

The Nigeria Field Epidemiology and Laboratory Training Program (NFELTP) builds disease-response capacity with support from the U.S. CDC and USAID. One of its first graduates, Dr. Ndadiiniasi Endie Waziri, is now the Deputy Coordinator of Nigeria’s National Stop Transmission of Polio Program (NSTOP). When Ebola appeared in Nigeria’s capitol, Lagos, Dr. Waziri and NFELTP colleagues were at the heart of Nigeria’s response.

Lagos (pop. 21 million) is a crowded regional hub, so the potential for a devastating Ebola outbreak there was significant, with global implications.¹¹ A polio eradication operations center was immediately repurposed to the Ebola response, and Dr. Waziri and 100 of her NFELTP-trained colleagues began contact tracing so all those potentially exposed to Ebola could be found and monitored.¹²

“We mobilized residents and graduates of NFELTP ... already in the field” said Dr. Waziri. Thanks in part to the skills imparted to Dr. Waziri and her colleagues by the NFELTP, along with the efforts of the Nigerian Ministry of Health and others, on October 20, 2014, the World Health Organization – citing “world-class epidemiological detective work” – declared Nigeria officially free of Ebola.

---

**Endnotes**

1 “FY2015 Congressional Justification,” CDC, p. 395. Also, email, Dana Schneider, CDC to Ken Forsberg, InterAction, 12/8/14. World Health Organization has also supported this work.


10 Adapted from Cooke Gibbs, Ruth, “Profile on Dr. Ndadiiniasi Endie Waziri...” Updates from the Field, Winter 2014, Issue 17, U.S. CDC, Division of Global Health Protection, p. 3.
