



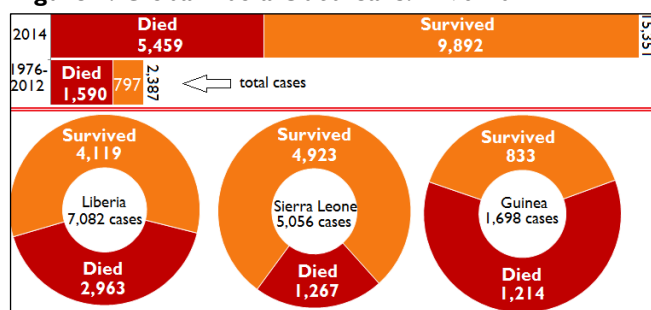
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# Ebola: 2014 Outbreak in West Africa

## Overview

In March 2014, an outbreak of Ebola Virus Disease (EVD) began in Guinea. It spread to Liberia in the same month and to Sierra Leone a month later. An EVD outbreak that began in Nigeria in July was contained in August. In that same month, a case was detected and contained in Senegal. Health officials are working to contain an outbreak that began in Mali in October. As of November 20, Mali has reported six cases, including five deaths. The current EVD outbreak is the largest, most persistent one ever documented, and is the first in West Africa. As of November 21, more than 15,000 people had contracted EVD and nearly 5,500 had died (**Figure 1**). Infection rates are declining in Liberia, are stable or rising in various parts of Guinea, and are accelerating in Sierra Leone.

**Figure 1. Global Ebola Outbreaks: 1976-2014**



**Source:** Created by Tiaji Salaam-Blyther based on WHO data.

There have been 20 medical evacuations of international medical workers to developed countries infected in Guinea, Liberia, or Sierra Leone (the “affected countries”), seven to the United States and 13 to Europe. Until October, all EVD cases outside of West Africa were among medical evacuees. In that month, the United States and Spain experienced their first secondary cases, which occurred in health workers who had cared for EVD patients.

Prior human EVD outbreaks occurred primarily in rural and forested areas of Central and East Africa. The current outbreak is occurring in both urban and rural areas. Its current size and rate of growth is widely viewed as a potential threat to other African countries and the world. Due to weak surveillance systems, there is uncertainty about the actual number of EVD cases in West Africa. The Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) both assert that EVD cases are underreported. Actual cases could be two to four times larger than reported, according to WHO.

**Transmission.** Fruit bats are the suspected natural reservoir of EVD in West Africa, where some people consume bats and other potentially infected forest animals. Humans can contract EVD when exposed to bodily fluids of infected animals and persons, or through contact with contaminated

surfaces or items (e.g., needles). Inter-human transmission is the primary source of infection in West Africa. During outbreaks, close associates of infected persons face a high risk of infection, as do health care and funeral workers. Asymptomatic patients are not contagious.

**Disease.** Symptoms typically include fever; weakness; head, joint, muscle, throat, and stomach aches; vomiting; diarrhea; and bleeding. Kidney and liver function may be impaired; white blood cell and platelet counts may drop; and shock and death may occur. The incubation period (the time between infection and the onset of symptoms) ranges between two and 21 days, but is usually 8 to 10 days. There is no cure for EVD, but EVD treatments and vaccines are being developed. Palliative care focuses on balancing fluids and electrolytes; maintaining blood pressure and access to oxygen; and treating complicating infections. Prompt treatment can extend survival prospects, but those in early EVD onset stages may delay seeking health care, since symptoms are akin to those of many common illnesses.

**Prevention.** In clinical settings, suspected EVD cases are isolated, health care workers (HCWs) wear personal protective equipment (PPE), and contaminated objects are sterilized. In communities, HCWs are working with community leaders to develop alternatives to cultural practices (e.g., funeral rites) that might spread EVD, as well as training safe burial teams.

## Responses

The Ebola outbreak has overwhelmed the governments of the affected countries, where it is exacerbating preexisting social, economic, development, and security challenges and creating new ones. Schools and many health facilities have been closed. Trade and other economic activity have been disrupted by road and border closures and domestic controls on population movements. These closures have interrupted access to food, income, and social and health services. Public skepticism about political leadership and state capacity is growing. International pledges of financial and medical support are increasing, but critics allege that the international response to date has been inadequate.

**International Response.** In September, the United Nations (U.N.) established the U.N. Mission for Ebola Emergency Response (UNMEER) to coordinate the international response to the outbreak. That month, the U.N. Security Council and General Assemblies held special meetings on Ebola at which member states were urged to expedite support for the affected countries and a U.N. integrated Ebola response plan. Implementing U.N. agencies include the WHO, which leads the U.N. health response.

The six-month, \$988 million U.N. plan is designed to halt the outbreak and mitigate related health and social impacts.

Roughly 60% of the funds would fund health programs and the balance would be used to address food insecurity, economic disruptions, and international response supply chain needs. As of November 14, 2014, the U.N. Office for the Coordination of Humanitarian Affairs reported, donors had committed more than \$1.2 billion to fight the Ebola outbreak and pledged to provide an additional \$910 million.

**U.S. Response.** The United States is the leading funder of the global Ebola response. As of November 21, combined U.S. Agency for International Development (USAID), CDC, State Department, and Department of Defense (DOD) funding for EVD responses in Africa totaled about \$640 million. This aid supports the goals and activities in West Africa and other areas of Africa listed below.

The U.S. Ebola strategy has four key goals: (1) control the outbreak, (2) mitigate second order impacts, (3) establish coherent leadership and operations, and (4) advance global health security. U.S. efforts focus primarily on Liberia, where U.S. investments appear to be contributing to declines in new EVD cases. Due to improved conditions in the country, DOD downgraded the number of ETUs to be built in Liberia from 17 to 10, and reduced the bed capacity of the facilities from 100 to 50.

The U.S. response to the Ebola outbreak is coordinated by the USAID. Key agencies play the following roles:

- State Department: Coordinates U.S. responses with affected country host governments, helps to provide public EVD prevention and awareness messaging, and ensures safe evacuation of U.S. government personnel.
- USAID: Oversees U.S. Ebola response, supports the creation of ETUs, provides outbreak response commodities (e.g., PPE), supplements affected countries for health worker salaries, and supports training for HCWs, burial teams, and community workers.
- CDC: Coordinates U.S. medical responses, develops protocol and best practices for Ebola care, trains airport screeners and HCWs, and supports Ebola control efforts, case tracing, EVD testing, and epidemiology.
- DOD: Constructs ETUs in Liberia, trains HCWs, and supports international and U.S. supply and logistics.

## Challenges

**Health System Constraints.** Poor conditions in health clinics, inadequate quantities of health staff and equipment, and EVD cases among HCWs have discouraged some of the ill from attending health clinics. Clinic closures and HCW shortages are also leaving people without health care. Health experts are particularly concerned about interruptions in vaccination campaigns and services for pregnant women. Maternal and child mortality rates in the affected countries are among the highest in the world. Most maternal and child deaths in these countries can be prevented with improved access to vaccines, prenatal care, and labor and delivery assistance.

**Inadequate Laboratory Capacity.** Efforts to contain the outbreak are encumbered by weak laboratory and surveillance systems, though the situation has improved.

Diagnosis backlogs are being eliminated, contributing to better targeting of treatment and freeing up capacity in ETUs. There are bed vacancies in some facilities in Liberia. On November 14, WHO reported that roughly 40% of suspected EVD cases in the country were scientifically confirmed, up from roughly 20% a month earlier. In Guinea and Sierra Leone, more than 80% of suspected EVD cases were confirmed through laboratory diagnosis.

**Local Response Challenges.** Affected countries have responded to the outbreak by pursuing the responses discussed above, but such efforts have faced multiple hindrances. Misinformation about EVD and mistrust of HCWs have led some communities to resist EVD tracking and treatment efforts and, in a few cases, to attack HCWs. Such factors, and fear of EVD-linked stigma, have prompted some ill persons to avoid health centers or to flee clinics while being treated, increasing EVD transmission risks. Social practices (e.g., familial care, socialization with infectious patients, and local funeral practices) and local customs have also contributed to failures to properly medically treat EVD, and to further EVD transmission.

**Containment.** The ongoing small outbreak in Mali has heightened concern that the outbreak may spread to other countries that lack the capacity to detect and respond to disease outbreaks. The Obama Administration has included funds in the Ebola emergency request for its Global Security Agenda, which aims to bolster pandemic preparedness and other health system capacities worldwide. Some countries are screening travelers arriving from the affected countries to detect EVD, and others may follow suit. Others have banned travel from the affected region.

## U.S. Policy and Congressional Actions

While on an October 25-30 visit to the affected countries, U.S. Ambassador to the U.N. Samantha Power, stressed the strength of U.S. support for the international EVD response and called on other countries to increase their support for the effort. Congress has held multiple hearings on Ebola and Members have introduced multiple Ebola-related bills and resolutions. The bills seek to strengthen measures to curtail EVD importation into the United States, or fund or otherwise support U.S. and international responses in the region. Congress has authorized several USAID and DOD reprogramming requests, including a \$750 million DOD request, and provided \$88 million to the Department of Health and Human Services (HHS) for CDC Ebola responses in Africa and EVD-related drug development under the FY2015 Continuing Appropriations Resolution (P.L. 113-164). On November 5, President Obama requested \$6.2 billion in emergency FY2015 appropriations to fund U.S. Ebola responses, of which \$3.02 billion would support overseas operations. Apart from funding matters, future issues for Congress may include whether U.S. and international responses in Africa are technically appropriate and effectively coordinated.

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