

## Board of Scientific Counselors, Office of Infectious Diseases

### Teleconference on November 20, 2014

A 1-hour open teleconference of the Board of Scientific Counselors (BSC), Office of Infectious Diseases (OID) was held on November 20, 2014, from 10:00–11:00 AM (EST) to update the board on current high-profile issues for CDC's infectious disease programs. Phone lines were open for BSC/OID members, CDC partners, and members of the public. A list of callers is included at the end of this report.

#### ➤ WELCOME AND UPDATES

BSC/OID Chair Ruth Berkelman, Rollins Professor, Emory University, called the meeting to order and was joined in welcoming participants by Rima Khabbaz, CDC Deputy Director for Infectious Diseases, and Robin Moseley, the BSC/OID Designated Federal Official. Dr. Berkelman welcomed Beth Marlowe, Assistant Director of Microbiology-Molecular Testing, Southern California Permanente Medical Group, Regional Reference Laboratories, who has joined the BSC/OID as the liaison representative from the Clinical Laboratory Improvement Advisory Committee (CLIAC), and Michael Mair, who participated on behalf of the BSC ex officio from the U.S. Food and Drug Administration (FDA).

Dr. Khabbaz gave the following updates from CDC's infectious disease national centers:

- **Personnel News.** Nancy Cox, Director of the Influenza Division in the National Center for Immunization and Respiratory Diseases (NCIRD), is retiring from CDC after more than 30 years of service. Under her leadership, CDC's influenza program grew from a small office into a globally recognized division with more than 300 staff. Dan Jernigan, Deputy Director of the Influenza Division, will serve as interim Division Director until a permanent director is identified.
- **CDC's Response to the West Africa Ebola Outbreak.** The ongoing response currently involves more than 1,000 staff CDC members, including Agency leadership, working in or out of CDC's Emergency Operations Center (EOC) and on domestic and international deployments.
- **The Budget.** The U.S. Government is currently funded under a Continuing Resolution that will expire on December 11. President Obama has requested \$6.2 billion in emergency funds to support the Ebola response. \$1.8 billion of the requested funds would support CDC activities to advance
  - Ebola preparedness in U.S. states and localities (e.g., diagnostic testing and hospital readiness)
  - The outbreak response in affected countries and neighboring countries
  - The Global Health Security agenda, including efforts to build public health infrastructure to detect and respond to Ebola and other emerging threats.

The Ebola response presents CDC with unprecedented challenges. Dr. Khabbaz stated that the Dec 10<sup>th</sup> in-person BSC meeting will include a discussion of issues arising from long-term outbreak response efforts.

#### ➤ CDC'S RESPONSE TO THE EBOLA OUTBREAK: UPDATE AND PARTNER ENGAGEMENT

Rita Helfand, Senior Advisor for Science, National Center for Emerging and Zoonotic Infectious Diseases (NCEZID), provided an overview of CDC's outbreak response activities over the past month.

**Affected Countries and Case Counts.** Although the Ebola outbreak came to international attention last March, it most likely began in late December 2013 or early January 2014. The outbreak was thought to be under control in May, but spread from Guinea into Liberia and Sierra Leone.

- As of November 14, there were 6,878 suspected/confirmed cases of Ebola in Liberia, with 2,812 deaths. Over the last few weeks, the outbreak has appeared to be slowing down in the capital city of Monrovia, where the number of cases is highest. In Sierra Leone the case count is 5,586, with 1,187 deaths, and the number of cases is still increasing. In Guinea, where the outbreak is continuing in fits and starts, the case count is 1,919, with 1,166 deaths.

- Two countries with imported cases—Senegal and Nigeria—were declared “Ebola-free” in October. Three recent cases have been confirmed in Mali, which shares a porous border with Guinea. CDC is assisting Mali’s Ministry of Health with case-finding and contact-tracing in an intensive effort to prevent further disease spread. There has also been 1 case of Ebola in Spain and several in the United States, including 4 people diagnosed in the United States and a few others flown in from West Africa for treatment.

**How did this happen?** Previous Ebola outbreaks occurred in remote areas in central Africa that have limited population mobility. For example, several locally contained Ebola outbreaks have occurred in the Democratic Republic of the Congo, including one that began in August 2014. In contrast, the ongoing spread of disease in West Africa—where Ebola had never been previously reported—is the result of multiple, contributing factors:

- The initial outbreak spread from rural Guinea to a well-traveled area where the Guinean border meets the borders of Liberia and Sierra Leone with a lot of mobility among populations. This area includes major roadways leading to the densely populated capital cities of Liberia (Monrovia) and Sierra Leone (Freetown)
- Guinea, Liberia, and Sierra Leone have over-burdened medical and public health systems, with insufficient staff, hospital beds, personal protective equipment (PPE), and medical supplies to meet routine healthcare needs
- Distrust of government workers—as well as outsiders—is common among some local communities in all three countries, due to decades of unrest and civil war. This has been a major challenge in Guinea.

Positive factors in facilitating the response include strong political commitment by West African governments and strong engagement by local healthcare workers, including many who work with Médecins Sans Frontières (MSF). Examples of successful containment of local disease clusters include an early intervention supported by the Firestone company in a company town near Monrovia.

**CDC’s Role.** The response effort coordinated by the CDC EOC is unprecedented in terms of size and likely duration. It involves 250–350 field staff (with about 170 deployed to West Africa at any given time), as well as 500–600 staff members in Atlanta. Special features of the response (as compared to past ones) include the creation of multiple liaison positions with response partners (see below) and intensive health promotion efforts to combat distrust and stigma, working in partnership with UNICEF, local community leaders, and other groups.

CDC field staff assist affected countries with disease surveillance, contact-tracing, data management, and diagnostics; assist neighboring countries with Ebola preparedness; and facilitate training of healthcare workers to provide safe care in non-Ebola Treatment Unit (ETU) healthcare facilities, which are a major site of Ebola transmission. CDC has also implemented a course at a training facility in Anniston, Alabama, to help train U.S. healthcare workers traveling to West Africa to provide safe care in ETUs. In addition, CDC works with airlines and airports to conduct exit screening from affected countries—as well as entry screening into the United States.

In addition to the focus on containment of cases in Mali, new developments over the last month include providing technical assistance at the district level in Liberia and development of a “stepped-wedge” protocol for use in a vaccine trial in Sierra Leone and an NIH randomized controlled trial in Liberia scheduled to begin in January.

Examples of the domestic response activities include

- Entry screening, conducted in partnership with the Department of Homeland Security (DHS). Travelers from affected countries are limited to arrival in five designated airports, where their temperatures are taken and they are provided with “CARE kits” containing educational materials, a thermometer, a 21-day log for recording twice-daily temperatures, and a laminated card with emergency phone numbers. Persons serving as “CARE Ambassadors” are being deployed to the airports to explain the importance of contacting health authorities as early as possible after symptoms occur and provide cell phones to travelers who lack them. The health department in each traveler’s destination state is informed about the traveler’s arrival so that the traveler can be monitored over the next 21 days.
- Helping U.S. hospitals be ready to provide safe care for Ebola patients, by sending out CDC Rapid Ebola Preparedness (REP) teams. Priority hospitals include facilities near airports and near West African diaspora communities.

- Updating guidance on hospital infection control, waste management, and other topics, as needed.

**Partnerships.** CDC has created liaison positions with a range of U.S. government partners, including the USAID Office of Foreign Disaster Assistance (USAID/OFDA), other HHS agencies, the Department of Defense (DoD), the Department of State, and multiple other federal offices. The CDC Office of the Director also maintains close contact with the White House, the National Security Council, and the White House Office of Science and Technology Policy.

Other CDC response partners include

- Team B, a group of external experts convened to provide consultation on technical questions (e.g., about the potential for airborne transmission, the safety of CDC staff, and prioritization of research activities)
- The CDC Foundation, which to date has raised \$40 million to support establishment of EOCs in affected countries and to provide items such as PPE, ambulances, and airport scanners
- Professional societies who review guidance documents and provide feedback on medical and public health issues (e.g., Association of State and Territorial Health Officials [ASTHO], National Association of County and City Health Officials [NACCHO], Council of State and Territorial Epidemiologists [CSTE], Association of Public Health Laboratories [APHL], Infectious Diseases Society of America [IDSA], American Medical Association [AMA], American Hospital Association [AHA], Association for Professionals in Infection Control and Epidemiology [APIC], and Society for Healthcare Epidemiology of America [SHEA])
- Private companies that manufacture PPE, vaccines, and rapid diagnostic tests
- Emory University Hospital, the University of Nebraska Medical Center, and other hospitals that have cared for Ebola patients in the United States.

## ➤ DISCUSSION

### Response Leadership

- CDC works closely with Ron Klain, the “Ebola Czar,” who is coordinating response activities across the U.S. government. CDC participates in calls with the HHS Secretary every morning, and the CDC Director has met with the President multiple times.
- The United Nations is coordinating the international response, via the UN Mission for Ebola Emergency Response (UNMEER). The World Health Organization (WHO) also plays a major role, through the Global Outbreak Alert and Response Network (GOARN), of which CDC is a founding partner.
- USAID/OFDA leads U.S. Disaster Assistance Response Teams (DARTs) in West Africa, providing assistance with response logistics and humanitarian aid, with CDC as the DART lead for public health and healthcare activities. CDC field staff report that collaboration among federal agencies is excellent.
- MSF provides leadership on clinical activities to combat Ebola. Although MSF has considerable clinical expertise in Ebola treatment, its capacity has been outstripped by the large number of cases. DoD is building additional ETUs in Liberia; the United Kingdom is building ETUs in Sierra Leone; and France is building ETUs in the forested regions of Guinea.

**Capacity-Building.** It was suggested that CDC engage the International Association of National Public Health Institutes (IANPHI) and build on response partnerships with ministries of health, the African Union, Field Epidemiology Training Programs, and other groups to build public health infrastructure in West African countries once the outbreak is over.

**Slums and Crowding.** The explosive spread of Ebola in West Africa was facilitated by its entry into crowded slums within a society fractured by poverty and civil war—ideal factors for amplifying outbreaks of emerging infectious diseases. Addressing these issues is a critical need.

**Volunteers.** USAID/OFDA continues to recruit medical professionals to work with nongovernmental partners to advance the outbreak response in West Africa (<http://www.usaid.gov/ebola/volunteers>). In addition to medical

professionals, volunteers with other needed skill sets could be recruited from universities through existing groups such as the Consortium of Universities for Global Health ([www.cugh.org/](http://www.cugh.org/)).

### **Non-Ebola Medical Care**

- Ebola transmission continues to occur in non-Ebola healthcare facilities, due to unrecognized cases of Ebola, sometimes leading to the closure of hospitals and clinics. Lack of routine healthcare services may result in deaths from treatable infections and other diseases.
- In addition to training healthcare workers to protect themselves while working in non-ETU healthcare facilities—which may also help keep hospitals open—CDC and partners are considering ways to improve detection and treatment of malaria, which is sometimes mistaken for Ebola.

### **Health Communications in the United States**

- The United States experienced an upswing in public fear in October when two nurses in Dallas caring for an Ebola patient contracted the illness, leading to calls for severe quarantine measures. However, the situation has improved because it is evident that Ebola has not spread further within the United States.
- The communications questions surrounding the disease are complex and problematic. It is important to explain what is known and what is unknown.

**Modeling.** Dr. Khabbaz reported that modeling efforts are underway to provide new numbers on the epidemic.

### **➤ PHONE LINES OPEN FOR QUESTIONS FROM CDC PARTNERS AND THE PUBLIC**

John Temte, BSC liaison representative from the Advisory Committee on Immunization Practices (ACIP) asked when a Biologics License Application (BLA) might be submitted to FDA to permit the use of an Ebola vaccine. BSC ex officio member Dr. Carole Heilman, NIH, responded that Ebola vaccines are most likely to be used under an FDA Emergency Use Authorization (EUA), which allows the expedited use of vaccines and drugs under emergency conditions. She noted that Phase 1 safety trials of two Ebola vaccines have been completed in healthy adults.

Dr. Temte also asked whether the coming dry season in West Africa may affect the outbreak, since previous Ebola outbreaks have occurred during rainy seasons. Dr. Khabbaz responded that the current Ebola outbreak is unlikely to be affected by the change in season, because it is being transmitted person-to-person within human communities.

### **➤ CLOSING REMARKS**

Dr. Berkelman thanked everyone for their attendance and participation.

The next in-person BSC meeting will be held on December 10<sup>th</sup>, with BSC workgroup meetings held beginning on December 8<sup>th</sup>. Background information, including OID Center updates, will be sent to BSC members before the December 10<sup>th</sup> meeting.

**BSC Member and CDC Staff Participants\***

***BSC Members***

Ruth Berkelman  
Jack Bennett  
Mike Brady  
Harry Chen  
Carole Heilman  
Beth Lautner  
Ruth Lynfield  
Michael Mair (*representing FDA on  
behalf of Steve Ostroff*)  
Beth Marlowe  
José Montero  
Scott Ratzan  
Lee Riley  
Susan Sharp  
Jill Taylor  
Jon Temte  
Judy Wasserheit  
Bob Weinstein

***CDC Staff***

Kim Distel  
Rita Helfand  
Niki Keiser  
Rima Khabbaz  
Alexandra Levitt  
Robin Moseley  
Kristin Pope  
Sarah Wiley

\*Callers also included individuals from OID partner organizations and members of the public.

*I hereby certify that to the best of my knowledge, the foregoing minutes of the proceedings of the teleconference of the Board of Scientific Counselors, Office of Infectious Diseases, on November 20, 2014, are accurate and complete.*

  /S/    
Ruth Berkelman, M.D.  
Chair, BSC, OID

  1/14/15    
Date