

Ebola as an Organizational Policy Challenge: A Brief Primer

The RTI Ebola Response Team

Introduction

The unprecedented outbreak of Ebola (now referred to as Ebola virus disease, or EVD) currently unfolding in West Africa has created challenges for not only the immediately affected countries but also for global organizations, including an emergent need to cope with the business ramifications of having potentially exposed personnel. Policies and procedures (P&Ps) may need to be clarified or created. We offer here a framework that can help guide that process, broadly organized into issues related to travel, the worksite (in countries not directly involved in the Ebola outbreak), and communication.

Background

Ebola virus was isolated from the first identified outbreak in Zaire (now the Democratic Republic of the Congo) in 1976.

Its structure makes it relatively fragile on environmental surfaces. The likely natural reservoir host is bats, which are widespread across Africa. While the bats are unaffected by the virus, infection carries high mortality for other species, including primates (both human and non-human). Index cases of human outbreaks are presumed to result from contact with infected animals (bites from or consumption of). Further cases result from human-to-human transmission (close contact with symptomatic individuals or those that have died, or exposure to their body fluids).

In the initial Zaire outbreak, 318 people were infected and 280 (88%) died; the maximum incubation period was 21 days.¹ Fever and massive hemorrhage with multiple organ failure and circulatory collapse were the hallmarks. As of December 2014, no drugs or vaccines have yet been approved for treatment or

Box 1. Epidemiologic risk factors to consider when evaluating a person for exposure to Ebola virus

High risk

- Percutaneous or mucous membrane exposure to blood or body fluids from a person with symptomatic EVD
- Exposure to blood or body fluids of a person with symptomatic EVD without appropriate personal protective equipment (PPE)
- Processing blood or body fluids of a person with symptomatic EVD without appropriate PPE or standard biosafety precautions
- Direct contact with a dead body without appropriate PPE in Guinea, Liberia, Sierra Leone, or Mali
- Having lived in the immediate household and provided direct care to a person with symptomatic EVD

Some risk

- In Guinea, Liberia, Sierra Leone, or Mali:
 - Direct contact using appropriate PPE with a person with symptomatic EVD or their body fluids
 - Any direct patient care in other health care settings
- Close contact (defined as being for a prolonged period of time while not wearing appropriate PPE within approximately 3 feet) in households, health care facilities, or community settings with a person with symptomatic EVD

Low (but not zero) risk

- Having been in Guinea, Liberia, Sierra Leone, or Mali within the past 21 days and having no known exposure

- Having brief contact (e.g., shaking hands), while not wearing PPE, with a person with EVD while the person was in the early stage of disease
- Brief proximity, such as being in the same room for a brief period of time with a person with symptomatic EVD
- In any country other than Guinea, Liberia, Sierra Leone, or Mali—direct contact while using appropriate PPE with a person with symptomatic EVD
- Having traveled on an aircraft with a person with symptomatic EVD

No identifiable risk

- Contact with an asymptomatic person who had contact with a person with EVD
- Contact with a person with EVD before they developed symptoms
- Having been more than 21 days previously in Guinea, Liberia, Sierra Leone, or Mali
- Having been in any other country and not having any other exposures as defined above
- Aircraft or ship crew members who stay on or in the immediate vicinity of their craft and have no direct community contact at any time while the craft is in Guinea, Liberia, Sierra Leone, or Mali

Source: US Centers for Disease Control and Prevention, Nov. 16, 2014⁸

prevention; patients are treated to manage symptoms. Every several years since 1989 outbreaks have recurred in rural locales, but they quickly burned out. However, the current epidemic in West Africa surpasses them all, with more than 14,000 cases and 5,177 deaths by November 24, 2014.² This outbreak has spread locally to include urban settings. Local customs (particularly funerary practices) and dense populations, combined with poor health care infrastructure, fed early exponential growth.³

Fortunately, by mid-November the number of new cases had fallen. We hope that the period of explosive spread is ending, but no country is safe in today's world of globe-spanning airline networks. Ebola was even imported to the United States, with cases of symptomatic EVD and limited local spread.⁴ The failure to correctly respond to one patient's first presentation and the subsequent transmission of Ebola to two nurses caring for him reflect at a minimum the failure of execution of P&Ps directed at preventing those specific occurrences. P&Ps alone are not enough: they must be communicated, understood, and practiced.

Copious bleeding is less common than in previous outbreaks, and unfortunately the most common presenting symptoms are nonspecific (fever, fatigue, nausea and vomiting, headache, and abdominal pain).⁵ Fortunately, Ebola is actually much less contagious than mumps (one-fifth as easily transmissible) or measles (one-ninth).⁶ The two US EVD patients who died were both very ill when medical treatment was initiated. Two deaths are few in contrast to the CDC estimates of 3,000 to 49,000 US deaths annually from seasonal influenza.⁷

CDC has recently promulgated epidemiologic risk factors for EVD exposure (Box 1). Based on these categories, CDC recommends the actions presented in Box 2. Active monitoring requires the state or local public health authority to check daily with potentially exposed individuals to assess for the presence of symptoms and fever (checked by the individual twice daily). Direct active monitoring requires that at least one of those daily assessments be performed in person by public health employees.

Policy Framework

As an international organization with employees and consultants traveling into, within, and out of Africa every day, RTI is confronted daily with operational issues that have required the clarification or development of numerous P&Ps. In November 2014, RTI had 485 employees in Africa, including more than 30 in Liberia and Guinea each. We offer here (p. 3) a framework that can help guide that P&P process for others, broadly organized into issues related to travel, the worksite (in countries not directly involved in the Ebola outbreak), and communication. This framework applies to asymptomatic

Box 2. Interim US guidance for monitoring and movement of persons who may have had exposure to Ebola virus disease

Symptomatic individuals

- Medical evaluation with appropriate infection control precautions

Asymptomatic high-risk individuals

- Direct active monitoring for 21 days after last potential exposure
- No travel on public conveyances—subject to controlled movement
- Non-congregative public activities while maintaining a 3-foot distance may be permitted

Asymptomatic individuals with some risk

- Direct active monitoring for 21 days after last potential exposure
- May consider additional restrictions based on individual situation

Asymptomatic low-risk individuals

- Active monitoring for 21 days after last potential exposure
 - Direct active monitoring for health care workers caring for Ebola patients, or individuals sitting on a plane within 3 feet of a person with symptomatic EVD

Source: US Centers for Disease Control and Prevention, Nov. 16, 2014⁹

individuals, as we assume that state and/or local public health officials will mandate the course of action for travelers with symptoms consistent with EVD.

Using this framework, RTI developed P&Ps to deal with Ebola issues. We will continue to actively monitor the international EVD situation as it evolves, review updated information from CDC and other relevant resources, and revise our policies as needed.

To ensure that staff are asymptomatic and do not present with any special Ebola risk factors, all individuals who have traveled from a country with ongoing outbreaks of EVD, such as Liberia, Guinea, Sierra Leone, or Mali, will be required to debrief upon their arrival with a member of RTI's International Security Team. In addition, employees planning travel to a country with ongoing outbreaks of EVD, such as Liberia, Guinea, Sierra Leone, or Mali—regardless of whether such travel is business or personal—will be required to notify RTI's International Security Team of such travel plans in advance. We are attempting to ensure that on their exit from these countries, employees' first leg of travel is to a non-African location, preferably London. RTI has a physical presence in England from which we may be able to offer support to a quarantined individual, and also English is the language that would be used in public health interactions (with individuals performing screening and health care workers, on forms, etc.).

Policy Framework

Travel-Related Issues

- Countries of concern—how are those determined, and how often is that evaluated? (e.g., <http://www.cdc.gov/travel/notices>)
- Category of traveler—does it matter? If so, to which subsequent issues does it apply?
 - ◆ Employee
 - ◆ Others (e.g., consultant, independent contractor, outsourced staff)
- Planning and permission:
 - ◆ For business purposes
 - ▶ How does the business identify potential travelers to these countries?
 - ▶ Is travel permitted? What are the relevant criteria and how and by whom is the decision made?
 - To the countries of concern (for those based elsewhere)
 - From the countries of concern (for local individuals there)
 - ▶ What if there is a contractual obligation to travel, but the individual does not want to go?
 - ▶ Are there special considerations on routing (e.g., preferred transit points for non-direct flights)?
 - ▶ How are travelers informed of the current issues affecting them?
 - Do travelers to these countries receive specific information (e.g., on EVD and risk avoidance, what to do if they become ill) or materials (e.g., international phones) pre-travel? If so, how are these chosen and/or created?
 - Do local individuals traveling from these countries receive materials (e.g., thermometers) or information specific to potential restrictions (e.g., mandatory testing, monitoring, quarantine) at their connecting points or destinations? If so, how are these chosen and/or created?
 - ◆ For personal reasons
 - ▶ Should these travelers be identified also? If so, how?
 - ▶ If business travel is not permitted, should personal travel be discouraged or, if possible, banned?
 - ▶ Should routing practices for business travelers be applied here as well?
 - ▶ Should preparatory materials for business travelers be given to these travelers as well?
- Quarantine—what support, if any, will you offer travelers if they are quarantined?
 - ◆ Within Africa
 - ◆ In Europe or Asia
 - ◆ In the United States

Worksite Issues

- Definition of categories of exposure risk for individuals traveling from countries of concern (refer to Box 1):
 - ◆ Will you modify these categories and/or the assignment of travelers to them (e.g., take a more restrictive stance on when an employee can return to work)? If so, what will be the process by which this will be done?
 - ◆ How often will these categories be reviewed?
- Regarding working offsite (e.g., telecommuting) for these travelers (Box 2):
 - ◆ For what period of time would this apply, and how and by whom would that be determined?
 - ◆ Will this be permitted for those who request it? Who will decide and on what basis?
 - ◆ Will this be offered to or requested of the travelers? If so, to which risk groups? How and by whom will this decision be made?
 - ◆ Will this be required of some subset of the travelers? If so, how and by whom will the decision be made?
 - ▶ What if working offsite is not possible (e.g., a laboratory technician)? Will the time be compensated?
- Regarding working onsite—what if coworkers do not want to work with these returning travelers?
 - ◆ What is the proximity issue—in the same office? Same floor? Same building? Same campus?
 - ◆ If working offsite is possible for these coworkers, will that be permitted? What will be the process for deciding?
 - ◆ If they cannot work remotely, can they nonetheless stay away? And if so, will this be paid or unpaid leave? By what criteria and by whom will this decision be made?
- Regarding a previously asymptomatic traveler who develops symptoms while onsite:
 - ◆ Whom do they tell?
 - ◆ What is the response?
 - ▶ How are the relevant public health officials notified, and how will the individual be evaluated or transported for evaluation?
 - ▶ What is done with coworkers in the immediate vicinity?
 - ▶ What is done to handle potential environmental contamination?
 - ▶ What is communicated to staff, and to which staff? Who decides?
 - ◆ What if a coworker suspects a returned traveler has symptoms, but the traveler has not self-reported them?
 - ▶ To whom is this reported?
 - ▶ What is the process to evaluate the claim?

continued

Policy Framework (continued)

Communication

- Information to communicate to your staff and business associates—possible examples:
 - ◆ Information about EVD (e.g., what it is, how it is contracted, precautions to take, FAQs)
 - ◆ Details about your relevant policies and procedures
 - ◆ Current information about screening and quarantine operations at connecting points, points of entry, and destinations
 - ◆ Whom to contact with questions or concerns
 - ◆ Where to direct media inquiries
 - ◆ Updates on ill or quarantined personnel
- Means of communication—possible examples:
 - ◆ Website (usual internal site, special internal site, public-facing website)
 - ◆ Email
 - ◆ Social media
 - ◆ Signage
- Identification of potential groups (e.g., contractors, employees in remote locations) who will require alternative routes of communication to be reached

These are challenging times for global organizations. Media coverage suggests that some individuals view Ebola as a force of mythic malevolence, when in fact infection control specialists have known for almost 40 years the procedures by which to manage it. By guiding our business actions in accordance with the science but with a sensibility to employee concerns, we hope to avoid implementing unnecessary procedures while still providing a work environment viewed as safe by all employees. RTI's Center for Communication Science is also partnering with CDC to address some of the myriad public perception challenges inherent with emergent global diseases like this one.¹⁰

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About the RTI Ebola Response Team

Reflecting the breadth of operational concerns, RTI's Ebola Response Team comprises members from our International Security, Communications, International Development, Corporate Counsel, Enterprise Risk Management, and Compensation groups, as well as our Chief Medical Officer: Willard E. Marsden Jr., Aurelia Fedenisn, Jennifer A. Greer, Jon Herstein, Maria K. Powers, J. Mark Sampson, E. Ward Sax, Kristen Vosburgh, Kevin F. Walsh, and Bradford B. Walters.

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