

## Ebola: Preparing for a Serious But Manageable Situation

Ebola is a severe and fast-growing illness concentrated in West Africa. According to the World Health Organization (WHO), it has a mortality rate of approximately 70 percent. The Centers for Disease Control and Prevention (CDC) report that the Ebola virus is transmitted among humans through either direct contact with the bodily fluids of an infected and symptomatic person, or via contact with contaminated objects, such as needles or syringes. (See the CDC Fact Sheet on Ebola at <http://www.cdc.gov/vhf/ebola/pdf/ebola-factsheet.pdf>.)

The likelihood of an Ebola pandemic remains low. However, in the wake of the first confirmed cases of Ebola in the U.S., healthcare facilities everywhere are preparing for a potential outbreak and reviewing their state of emergency readiness. With no approved vaccine and only experimental drugs currently available to combat the virus, the public is understandably alarmed. This edition of *AlertBulletin*® offers a plethora of risk management resources to help healthcare providers in every type of setting plan for, detect and safely treat Ebola.

### PLANNED RESPONSE

At this point, every healthcare organization should consider forming an Ebola response team. By including individuals from a broad range of disciplines – including infection control, occupational health, human resources, risk management, housekeeping, waste management, laboratory services, social work or crisis intervention, and nursing and medical staffs, among others – the response team will be positioned to craft a comprehensive, multidimensional disease containment strategy.

The response team is responsible for a variety of tasks, including assessing existing infection control capabilities, prioritizing necessary preparedness measures and achieving compliance with Ebola care guidelines. The following CDC checklists can aid the team in focusing and organizing its efforts:

- Checklist for Healthcare Coalitions for Ebola Preparedness, available at <http://www.cdc.gov/vhf/ebola/pdf/coalition-checklist-ebola-preparedness.pdf>.
- Detailed Emergency Medical Services (EMS) Checklist for Ebola Preparedness, available at <http://www.cdc.gov/vhf/ebola/pdf/ems-checklist-ebola-preparedness.pdf>.
- Detailed Hospital Checklist for Ebola Preparedness, available at <http://www.cdc.gov/vhf/ebola/pdf/hospital-checklist-ebola-preparedness.pdf>.

(See also the American Hospital Association's listing of Ebola Preparedness Resources, available at <http://www.aha.org/advocacy-issues/emergreadiness/ebola.shtml>.)

### EDUCATION AND TRAINING

By mandating inservice and hands-on training for all personnel who may have direct or indirect contact with Ebola patients, leaders can help ensure that frontline staff are aware of approved safety techniques and the latest measures for Ebola prevention and control. Educational and training sessions should include a documented evaluation of staff competencies in the following essential areas:

- Overview of Ebola symptoms, modes of transmission and clinical treatment
- Clinical indications for use of personal protective equipment (PPE)
- Donning and doffing of PPE
- Decontamination processes
- Hand hygiene
- Cleaning and disinfection of surfaces
- Handling of laboratory specimens
- Containment measures
- Handling and transporting of hazardous wastes
- Staffing contingency plans
- Visitor restrictions
- Health department reporting

PPE safety is a particularly pressing matter, due to staff unfamiliarity with its use. Training sessions should include thorough practice in donning and doffing PPE, and conclude with a documented competency test in all aspects of PPE utilization. In addition, protective equipment is often hot and bulky, leading to issues of stress, fatigue and consequent reduced performance. Organizational protocol should underscore the need to enhance safety and reduce potential errors by limiting time spent wearing PPE and, when possible, assigning pairs of staff members to tend to Ebola patients. Staff members' compliance with PPE protocol should be documented in the patient care record and care plan.

In addition to the resources noted elsewhere in this bulletin, the following CDC documents are available to assist healthcare organizations seeking to supplement existing educational programs or create new ones:

- Ebola Virus Disease Information for Clinicians in U.S. Healthcare Settings, available at <http://www.cdc.gov/vhf/ebola/hcp/clinician-information-us-healthcare-settings.html>.
- Guidance on Personal Protective Equipment to Be Used by Healthcare Workers During Management of Patients with Ebola Virus Disease in U.S. Hospitals, Including Procedures for Putting On (Donning) and Removing (Doffing), available at <http://www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html>.
- Guidelines for Safe Handling of Human Remains of Ebola Patients in U.S. Hospitals and Mortuaries, available at <http://www.cdc.gov/vhf/ebola/hcp/guidance-safe-handling-human-remains-ebola-patients-us-hospitals-mortuaries.html>.
- Poster: Sequence for Donning and Removing Personal Protective Equipment, available at <http://www.cdc.gov/HAI/pdfs/ppe/ppeposter1322.pdf>.

## DISEASE SURVEILLANCE

Standard procedures for initial screening and assessment of patients with Ebola-like symptoms (i.e., high fever, headache, joint and muscle aches, sore throat, weakness, stomach pain and lack of appetite) must first be adopted, then posted and circulated to frontline health workers, including emergency department (ED) personnel and staff in physician offices and urgent care/walk-in clinics. Symptomatic individuals who have recently visited affected West African countries should be treated as potential Ebola cases, until clinical testing proves otherwise.

The following CDC resources concern Ebola awareness, screening and testing:

- Case Definition for Ebola Virus Disease, available at <http://www.cdc.gov/vhf/ebola/hcp/case-definition.html>.
- Checklist for Patients Being Evaluated for Ebola Virus Disease in the United States, available at <http://www.cdc.gov/vhf/ebola/pdf/checklist-patients-evaluated-us-evd.pdf>.
- Ebola Virus Disease (Ebola): Algorithm for Evaluation of the Returned Traveler, available at <http://www.cdc.gov/vhf/ebola/pdf/ebola-algorithm.pdf>.
- Interim Guidance for Specimen Collection, Transport, Testing, and Submission for Persons Under Investigation for Ebola Virus Disease in the United States, available at <http://www.cdc.gov/vhf/ebola/hcp/interim-guidance-specimen-collection-submission-patients-suspected-infection-ebola.html>.
- What You Need to Know About Ebola, available at <http://www.cdc.gov/vhf/ebola/pdf/what-need-to-know-ebola.pdf>.

Hospitals and ambulatory care settings are encouraged to designate a professional with expertise in infection control as Ebola site manager, responsible for tracking the presence of suspected carriers, coordinating hospital admissions, following up with patients post-discharge and other critical tasks. The site manager is also charged with ensuring that triage providers, physician office staff, nursing leadership and inpatient clinical department leaders are familiar with the protocol for reporting suspected and confirmed cases of Ebola both internally and to local, state and national public health agencies. Such reports should contain at a minimum the following information: the number of cases, admission dates, patient characteristics (e.g., age, sex, underlying illnesses, complications), discharges, deaths and infected staff.

## COMMUNICATION

The possibility (however remote) of a pandemic may create a climate of fear and distrust among the public, which can only be allayed by timely and reliable communication. For this reason, it is necessary to formulate a detailed plan for disseminating Ebola-related news and information.

Begin by designating an organizational leader with strong communication skills (and, if possible, media experience) as spokesperson. He or she should be briefed frequently by department heads and immediately informed of any internal developments or breaking CDC Health Alert Network notifications. In the event of an Ebola outbreak, the spokesperson can issue public health advisories regarding such issues as Ebola symptoms, transmission and treatment, while also monitoring social media and responding to pertinent inquiries.

Effective two-way internal communication is equally important, ensuring that staff and leadership are aware of suspected and confirmed Ebola cases, staffing needs and bed capacity, as well as utilization rates and potential shortages of medications and supplies. All modes of communication should be employed, including face-to-face meetings, telephone hotlines, broadcast faxes, websites, social media, emergency call centers, posted signs and informational handouts.

The following CDC resources may be of use in developing Ebola-related risk communication strategies:

- Digital Press Kit: Ebola Outbreak-2014, at <http://www.cdc.gov/media/dpk/2014/dpk-ebola-outbreak.html>.
- Questions and Answers on Ebola, at <http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/qa.html>.

## TRIAGE AND CONTAINMENT

The following simple interventions, when undertaken during triage and assessment, can help reduce the likelihood of spreading infection:

- *Screen all patients for the presence of Ebola-associated symptoms*, using a standardized protocol for in-person screening or a telephone algorithm for outpatient inquiries. (A convenient screening card is available from the CDC at [www.cdc.gov/vhf/ebola/pdf/evd-screening-criteria.pdf](http://www.cdc.gov/vhf/ebola/pdf/evd-screening-criteria.pdf).)
- *Establish a separate entrance and waiting room for patients with suspicious symptoms*, and ask them if they have been in contact with an Ebola victim or traveled in an Ebola-stricken area. Physician offices and outpatient clinics that lack a secondary entrance should designate a room to isolate patients for fast-track triage and treatment.
- *If warranted, erect a temporary structure (such as a tent) for suspected Ebola patients seeking emergency treatment*, reserving the ED for all other patients.
- *Move suspected Ebola patients from triage into isolation units or outpatient treatment rooms* until diagnostic tests for Ebola virus are negative.
- *Admit all infected patients to a designated Ebola floor for inpatient care*, placing them in a single, closed-door room with private bath and appropriate signage indicating isolation status.

In addition, nurses, aides, physicians, contracted agency workers, chaplains, social workers, housekeeping staff and volunteers who come into contact with patients exhibiting Ebola-like symptoms must follow strict safety procedures. On October 20, 2014, the CDC issued revised guidelines, which are summarized in a fact sheet at <http://www.cdc.gov/media/releases/2014/fs1020-ebola-personal-protective-equipment.html>. The new protocol prohibits any skin exposure when PPE is worn.

The following procedures can significantly reduce risk:

- *Wear PPE when entering patient rooms*, including double gloves, mid-calf-length impermeable gowns or coveralls, respirators, disposable full-face shields, surgical hoods and mid-calf waterproof boot covers. Goggles are not recommended, as unlike single-use face shields, they do not provide complete skin coverage.
- *Require a trained monitor to actively observe and supervise each worker when putting on and taking off PPE* to ensure that no skin is exposed when fully suited and that protective garb is properly removed. (This involves preventing skin contact, marking visible areas of contamination and disinfecting these areas with an EPA-registered disinfectant.)
- *Cover the torso with a waterproof apron* that extends downward to the mid-calf area, if in contact with an Ebola patient who is vomiting or has diarrhea.
- *Designate an area for putting on and taking off PPE*, thus clearly separating clean and potentially contaminated areas.
- *Utilize dedicated patient care equipment*, adhering to manufacturers' instructions and hospital policies regarding safe usage and disinfection.

- *Comply with universal precautions* for sharps, bodily fluids and aerosol-generating procedures.
- *Follow EPA and related guidelines for handling and disposing of hazardous waste*, such as placing Ebola-tainted linens, discarded supplies and waste materials in sealed, puncture-resistant containers. (The CDC's Ebola Medical Waste Management guidelines are available at <http://www.cdc.gov/vhf/ebola/hcp/medical-waste-management.html>.)
- *Disinfect potentially contaminated surfaces and materials* with an EPA-registered disinfectant.

For additional infection control and containment measures, consult the CDC's Infection Prevention and Control Recommendations for Hospitalized Patients with Known or Suspected Ebola Virus Disease in U.S. Hospitals, posted at <http://www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html>.

For information specific to ambulatory settings, see the U.S. Department of Health and Human Services' Ebola Preparedness Considerations for Outpatient/Ambulatory Care Settings, available at <http://www.phe.gov/Preparedness/responders/ebola/Documents/ebola-preparedness-considerations.pdf>.

## VISITOR ACCESS/OVERCROWDING

To limit the spread of Ebola, healthcare organizations must create sound, strictly enforced policies regarding access by family members and others. Organizational protocol should clearly designate permitted visitors and ensure that they are properly identified and logged, while prohibiting non-essential visits. The following basic precautions can minimize the risk of transmission due to visitor traffic:

- *Post signs at facility entrances listing the symptoms of Ebola* and requesting that visitors with any of these conditions proceed to a designated area for evaluation.
- *Monitor all points of access to the facility*, checking visitors for Ebola-linked symptoms.
- *Place boxes of facial tissue, covered wastebaskets and hand gel sanitizers throughout the facility* to encourage appropriate cough/respiratory etiquette.
- *Remind visitors and others of the importance of thorough and frequent hand-washing*, using soap and water or an alcohol-based sanitizer.

At the peak of an outbreak, it may become necessary to temporarily close fully occupied facilities to new admissions or transfers, and to utilize patient beds elsewhere in the area. The following resources address the question of hospital surge capacity:

- Agency for Healthcare Research and Quality's Hospital Surge Model, available at <http://archive.ahrq.gov/prep/hospurgemodel/index.html>.
- The Joint Commission's "Surge Hospitals: Providing Safe Care During Emergencies," available at [http://www.jointcommission.org/assets/1/18/surge\\_hospital.pdf](http://www.jointcommission.org/assets/1/18/surge_hospital.pdf).

## SUPPLIES AND DISPOSAL

If an Ebola outbreak actually occurs, demand will skyrocket for certain protective and clinical supplies and equipment. To prevent a shortage, determine existing inventory and projected needs for the following items, among others:

- Temporary room barriers
- Hazmat suits
- Impermeable gowns and coveralls
- Gloves
- Waterproof shoe and boot covers
- Surgical hoods
- Disposable surgical and procedure masks
- Full-face shields
- N95 respirators
- Sanitizers and other hand hygiene supplies
- Facial tissue
- Central line kits
- Sealed and puncture-resistant waste and sharps containers
- Morgue packs
- Respiratory care equipment, including ventilators
- IV pumps
- Beds and stretchers

If the same types of items are procured from multiple vendors, make sure they are similar in make and design, in order to enhance consistency of use and minimize potential errors.

Waste management/disposal is another key issue, as illustrated by the following news stories:

- "DOT Issues Special Permit to Transport Ebola-contaminated Waste in Texas," *AHA News Now*, October 7, 2014, which is available at [http://www.ahanews.com/ahanews/jsp/display.jsp?dcrpath=AHANEWS/AHANewsNowArticle/data/ann\\_100714\\_Ebola&domain=AHANEWS](http://www.ahanews.com/ahanews/jsp/display.jsp?dcrpath=AHANEWS/AHANewsNowArticle/data/ann_100714_Ebola&domain=AHANEWS).
- "U.S. Hospitals Face Risks in Ebola Virus Waste Disposal," *Insurance Journal*, September 29, 2014, which is available at <http://www.insurancejournal.com/news/national/2014/09/29/341846.htm>.

Working in concert with legal counsel, consider negotiating in advance an agreement with one or more waste management vendors regarding disposal of Ebola-tainted materials.

While the threat of Ebola is real, it can be managed through comprehensive, team-based emergency planning efforts, supported by the easily accessible tools and information resources presented here. As always, CNA stands ready to aid our insureds in their risk management and emergency preparedness efforts.

## ADDITIONAL RESOURCES

The CDC has issued a variety of detailed, topical guidelines and updates to further assist organizations in preparing for a potential outbreak of Ebola:

- Ebola Update, available at <http://www.cdc.gov/vhf/ebola/index.html>.
- Guidance on Air Medical Transport for Patients with Ebola Virus Disease, available at <http://www.cdc.gov/vhf/ebola/hcp/guidance-air-medical-transport-patients.html>.
- Interim Guidance for Emergency Medical Services (EMS) Systems and 9-1-1 Public Service Answering Points (PSAPs) for Management of Patients with Known or Suspected Ebola Virus Disease in the United States, available at <http://www.cdc.gov/vhf/ebola/hcp/interim-guidance-emergency-medical-services-systems-911-public-safety-answering-points-management-patients-known-suspected-united-states.html>.
- Interim Guidance for Environmental Infection Control in Hospitals for Ebola Virus, available at <http://www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html>.
- Safe Management of Patients with Ebola Virus Disease in U.S. Hospitals, available at <http://www.cdc.gov/vhf/ebola/hcp/patient-management-us-hospitals.html>.

Also, see the WHO's Information Resources on Ebola Virus Disease, available at <http://www.who.int/csr/resources/publications/ebola/en/>, and the American College of Emergency Physicians' listing of Healthcare Resources for Suspected Ebola Cases, available at <http://www.acep.org/ebola/>.

## **Ebola and Senior Care**

The elderly are especially vulnerable to the Ebola virus, due to the effect of aging on the immune system. Nevertheless, aging services facility residents currently face a vastly greater risk of succumbing to airborne or foodborne illnesses such as influenza than to Ebola, which (as previously mentioned) is believed by medical experts to be transmitted only through direct contact with an infected and symptomatic individual. Thus, adherence to universal infection control precautions is the first and strongest line of defense against the contagion.

In the unlikely event of a domestic Ebola epidemic, the following measures can help enhance resident and staff safety:

- Draft an Ebola response plan reflecting resident characteristics and needs, staff requirements and available resources.
- Screen employees and visitors for possible Ebola signs before they enter the facility, and post a list of common Ebola symptoms near entrances.
- Establish a protocol to control visitor access, thereby limiting potential viral transmission.
- Arrange in advance for transfer of residents in need of Ebola-related treatment, coordinating with public health officials and nearby hospital administrators regarding locations and transport.

Media reports indicate that some aging services facilities are targeting African nationals for screening, and restricting them from contact with residents. It should be emphasized that Ebola screening protocols must apply equally to all staff members, and that no one should be stigmatized or discriminated against based on ethnicity or origin. If in the course of universal screening, an asymptomatic worker is found to have had unprotected exposure to Ebola, the potentially infected employee should undergo twice-daily fever checks during the 21-day quarantine period.

In the event that a vaccine against Ebola becomes available, it will possibly not be available in large quantities during the early phases of an outbreak. Therefore, it will be necessary to consider initiating a crisis vaccination program designed to:

- Prioritize residents by age, comorbid diagnoses and other set criteria.
- Train staff on rapid vaccination techniques.
- Alert staff to the dangers of vial misuse and cross-contamination of multi-use vials.
- Monitor and document adverse events.
- Track vaccine supply and administration.
- Convey the extent of vaccination coverage to public health authorities.

It is also advisable to create a protocol for storing and administering experimental antiviral medications – such as the antiviral drug brincidofovir, the antibody serum ZMapp and the gene-blocking agent TKM-Ebola – as these unproven medicines may be available only in relatively small quantities. The following advisories examine the complex issue of stockpiling antivirals:

- U.S. Department of Health and Human Services, “Considerations for Antiviral Drug Stockpiling by Employers in Preparation for an Influenza Pandemic,” at [http://www.flu.gov/planning-preparedness/business/antiviral\\_employer.pdf](http://www.flu.gov/planning-preparedness/business/antiviral_employer.pdf).
- The Centers for Disease Control and Prevention, “Stockpiling Antiviral Drugs for Pandemic Influenza: The Key Ethical Principles,” at <http://www.cdc.gov/od/science/integrity/phethics/ESdocuments.htm>.



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