# Table of Contents

Preface and Acknowledgement .................................................................................................................. 3
How to Use This Toolkit ........................................................................................................................... 4
Domains and Exercise Elements ............................................................................................................. 7
Appendix A: References ............................................................................................................................ 25
Appendix B: Acronyms ............................................................................................................................. 26
Appendix C: Consolidated Exercise Objectives and Deliverables ......................................................... 27
Appendix D: Members of the EVD/SPRN Planning Team and Advisory Group ................................. 33
Appendix E: Exercise Element Usage Tables ......................................................................................... 34
Preface

The 2014 Ebola Virus Disease (EVD) outbreak was the largest in history, affecting primarily West Africa but included multiple countries, including the United States (U.S.) and lasting through January 2016. To ensure the health care system in Michigan is ready to safely and successfully identify, isolate, assess, transport, and treat patients with Ebola or other special pathogens, the Michigan Department of Health and Human Services (MDHHS) continues to build the Special Pathogen Response Network (SPRN), strengthening the infrastructure established through the management of an EVD patient.

Throughout the remainder of this document, the EVD/SPRN Exercise Toolkit will be referred to as “Toolkit.” The Toolkit has been developed to support the planning and conducting of drills and exercises related to the prospect of EVD or another special pathogen that might pose a threat to the health of the community.

Acknowledgement

This Toolkit was developed with the advice and assistance of the members of the EVD/SPRN Planning Team and Advisory Group. The development of this Toolkit is supported by funding provided by the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC) and the Assistant Secretary for Preparedness and Response (ASPR), through Public Health and Hospital Emergency Preparedness (CFDA #93.074) award #3U90TP000528-04S1. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the U.S. Department of Health and Human Services.

The MDHHS would like to acknowledge all the people who helped create and develop the course and the toolkit for their expertise, dedication, and personal commitment (Appendix D).
How to Use This Toolkit

Healthcare Coalitions (HCCs), healthcare organizations, and partnering agencies are encouraged to create exercises using the scenarios and injects suggested in this Toolkit. It has been developed with a format from which items may be chosen, customized, and compiled to create the desired level of challenge for the exercise being constructed. The level of exercise may be adjusted by using the scenario elements and injects as springboards for discussion, simulation, or actual operational activities to suit the needs of discussion-based, functional, or full-scale exercises. This material may be adjusted and customized as desired to address specific exercise objectives and to make the structure and details of the exercise meaningful.

The draft CDC document “Assessment Tool for Ebola Treatment Centers and Assessment Hospitals” dated May 18, 2015 (v17) was used as an exercise objective and deliverable guidance document for the development of the Toolkit. The Assessment Tool for Ebola Treatment Centers and Assessment Hospitals included 12 domains for preparedness; Pre-hospital Transport Plans, Emergency Medical Services (EMS), and Emergency Department (ED) Preparedness which evolved into the Interim Guidance for Preparing Ebola Assessment Hospitals located at: http://www.cdc.gov/vhf/ebola/healthcare-us/preparing/assessment-hospitals.html

The Toolkit is organized using the concept of assessment domains for EVD/Special Pathogen preparedness. The brief summaries or examples provided for the domains in *blue italic text* are condensed information or snapshot explanation of these preparedness domains.

The complexity and scope of exercises may be adjusted progressively, exercising at a basic level initially, and increasing the complexity and scope in subsequent years and exercises. The goal of progressive exercising should be continuous organizational improvement.

Example of progressively expanding exercise scope:

- Year 1 - Workshop exercise with organization’s leadership; Personal Protective Equipment (PPE) drill
- Year 2 - Tabletop exercise using basic exercise elements with staff in roles relating to EVD/SPRN response, engaging with HCC partners; PPE drill
- Year 3 - Patient transport drill with EMS and Public Health partners
- Year 4 - Functional exercise with intermediate elements with EDs, EVD/SPRN designated care staff and HCC partners
- Year 5 - Full-scale exercise with advanced elements with HCC partners and community resources
Complexity Key

The suggested scenario elements or injects provided are identified with a suggested level of difficulty or complexity. The levels are color-coded as follows:

**Basic** (b): Applicable to initial exercises, basic complexity

**Intermediate** (i): Applicable to exercises subsequent to initial exercises, moderate complexity

**Advanced** (a): Applicable to higher complexity exercises, conducted after previous exercises of lesser complexity

**Highly Advanced** (h): Optional, extremely complex exercise scenario elements and injects designed to place high stress on clinical, operational, and administrative resources

For use in constructing exercises, the individual exercise elements are designated according to an identifier constructed as follows:

**First character (capital letter):** Domain (A-M)

**Second character (lower case letter):** Complexity (b-basic, i-intermediate, a-advanced or h-highly advanced)

**Third character (number):** Individual exercise element within that section

As an example, within the "B. Staffing of Patient Care Team" Domain, B.i.2 is the second intermediate-complexity exercise element.

Suggested Target Participant Sectors Key

While the assessment domains are primarily oriented toward hospitals, the ASPR requirements for funded exercises call for interagency participation with other emergency management sectors such as public health, HCCs, EMS and local emergency management. In this document, exercise scenario elements and injects are associated with suggested target sectors. The sectors are identified by **black bold italic text**.
Development of Exercise Objectives

Some suggested exercise objectives are provided in sections of the Toolkit. Objectives establish the performance goals by which the results of the exercise may be measured. Especially for drills, functional and full-scale exercises, using the SMART method to create objectives is very useful. The SMART acronym calls for objectives that are:

- Specific
- Measurable
- Achievable
- Results-focused
- Time-bound

Toolkit users may use the suggested objectives, and may add to the objectives or adjust the suggested objectives as called for by the type of exercise and the needs of the exercise partners. For operations-based exercises (e.g., drills, functional, full-scale) add time for completion criteria (e.g., “within xx minutes”) to the exercise objectives.
Domains and Exercise Elements

A. Pre-Hospital Transport Plans, EMS, ED Preparedness

Summary of domain: Transport by emergency medical services (EMS) presents unique challenges because of the uncontrolled nature of the work, the potential for resuscitation procedures being needed, enclosed space during transport, and a varying range of patient acuity. When preparing for and responding to persons under investigation (PUIs) for EVD, close coordination and frequent communications are important among 9-1-1 Public Safety Answering Points (PSAPs)—commonly known as 9-1-1 call centers, the EMS system, healthcare facilities, and the public health system.

The ED staff must evaluate whether or not a patient might have EVD. Staff members should follow the three steps within the “Identify, Isolate, and Inform” strategy. The CDC recommends that staff members screen all patients with travel histories, exposure, or clinical symptoms that might suggest the person could have EVD or another special pathogen.

Suggested Exercise Objectives:

1. Patient screening and isolation protocols.
2. Evaluate hospital plans for EMS transport of PUIs, known or suspect for EVD or other special pathogen patients.
3. Assess pre-hospital plans and protocols for all aspects of transporting a special pathogen patient, including screening and isolation, communications, PPE, post-transport follow-up, etc.
4. Evaluate plans for hospitals to work with designated EMS provider to accept and transfer the PUI or EVD patient to the designated care location.
5. Assess ED plans and protocols to screen and isolate patients based on risk factors.
7. Assess hospital protocols for specimen collection and processing.
8. Assess protocols for environmental infection prevention and control measures, equipment decontamination, and waste management for EMS and hospital clinical activities.

Suggested Exercise Deliverables:

1. Ensure organization has incorporated travel screening/algorithm protocols.
2. Written plans and protocols for PUI, EVD or other special pathogen patient transport.
3. Identification of a PUI or suspect EVD patient.
4. Procedures for PPE use by health care practitioners.
5. Procedures for specimen collection, handling and processing.
6. Protocols for infection prevention and control, use of disposable equipment, decontamination of reusable equipment, and waste management.

**Basic**

A.b.1: Mr. Williams, a person being monitored by the Local Health Department (LHD) based on travel history and risk factors, develops a fever, stomach pain, weakness, and diarrhea. Instead of following procedure and calling the LHD, the family has called 9-1-1 dispatch for transport to a hospital. Suggested target sectors: *EMS, Emergency Management, Public Health, Hospital Tiers 1, 2, 3, 4*

A.b.2: Ms. Miller, a person under Direct Active Monitoring consistent with the current Traveler Evaluation and Monitoring (TEAM) Protocol by the LHD based on travel history and risk factors develops a fever, malaise and diarrhea. The family has called 9-1-1 dispatch for transport to a hospital. Suggested target sectors: *EMS, Public Health, Hospital Tiers 1, 2, 3*

A.b.3: A patient self-presents at the ED, complaining of fever, vomiting, and diarrhea. The patient answers in the positive to travel to Guinea within the past 21 days, but denies contact with any known EVD cases. She admits to contact with a person believed to be ill with malaria. She has been under Active Monitoring by Public Health, but there is some question about her understanding of the requirements. Suggested target sectors: *Public Health, Hospital Tiers 1, 2, 3, 4*

A.b.4: Lab results for a patient being assessed at a Tier 3 hospital indicate a need for transfer and admission to a Tier 1 or Tier 2 hospital. Suggested target sectors: *EMS, Public Health, Hospital Tiers 1, 2 & 3*

**Intermediate**

A.i.1: Lab results for a patient being assessed at a Tier 3 hospital indicate a need for admission at a Tier 1 or Tier 2 hospital in another region. The transport is estimated to be 6.5 hours of driving time between the facilities. Suggested target sectors: *EMS, Public Health, Hospital Tiers 1, 2, 3*

A.i.2: During a long-distance transport, the patient expresses an urgent need to use a restroom. Suggested target sectors: *EMS, Public Health, Hospital Tiers 1, 2, 3, 4*

A.i.3: The EMS crew arrives to transport a patient with fever and severe gastrointestinal distress. While not divulged in the initial call for service, patient now admits she is a PUI, and has been under public health monitoring due to travel and contact history. Suggested target sectors: *EMS, Emergency Management, Public Health*

A.i.4: Local residents have heard about the transfer of a PUI to the area hospital and block the path of travel of the ambulance. Suggested target sectors: *EMS, Emergency Management, Public Health*
Advanced

A.a.1: The ambulance transporting a PUI is struck broadside by a pickup truck with a load of firewood that fails to stop at a stop sign. The ambulance is knocked onto its side. The patient is retained on the stretcher by the secured restraints, but attending staff are injured. The extent of the injuries is not immediately known. Following the collision and overturn, the patient has an emesis. Suggested target sectors: EMS, Emergency Management, Public Health

A.a.2: Mr. Stanley, a PUI with stomach pain, muscle aches, fever of 100.9°F and diarrhea becomes frustrated with procedures and delays in the ED, and announces he plans to leave against medical advice. The patient meets the criteria for a suspect EVD case, but lab results are not back yet. Staff and Administration begin efforts to convince the patient to remain, but he becomes increasingly belligerent, and continues to make preparations to leave. Suggested target sectors: Hospital Tiers 1, 2, 3, Emergency Management, Public Health

Highly Advanced

A.h.1: A strain of Middle East Respiratory Syndrome Coronavirus (MERS-CoV) emerged in China, suspected to be related to incidence of the illness on the Korean peninsula. The disease displays characteristics of airborne human-to-human transmission. The clinical progression of recent cases demonstrates an increasing trend toward Acute Respiratory Distress Syndrome (ARDS). Two suspect cases have arisen in the community, related to international travel, and the LHD, in coordination with MDHHS and the HCC, has requested transport from their homes to the hospital for assessment and possible admission. Suggested target sectors: Hospital Tiers 1, 2, EMS, Public Health

B. Staffing of Patient Care Team

Summary of domain: Staffing plans must consider training and competency, scheduling, worker safety, PPE and related factors.

Suggested Exercise Objectives:

1. Identify the process to establish and maintain competent staff to care for patients with known or suspected EVD/Special Pathogen.
2. Establish roles and responsibilities of staff that provide care for patients with known or suspected EVD/Special Pathogen.
3. Establish roles and responsibilities of support staff (e.g., Ebola manager, occupational health, infection preventionist).
4. Identify how Administration will support the patient care team.
Suggested Exercise Deliverables:

1. Written staffing plans for the care of one patient with known or suspected EVD/Special Pathogen appropriate to the Tier level.
2. Policy and procedure for obtaining staff. (This may be an addendum to an existing document).
3. Competency Program for staff training.
4. List of staff that has completed competency and ongoing training.
5. Job specific task lists (i.e., job action sheets) for roles of competent staff.
6. Protocol for on-call staff to assemble within amount of time specified in facility's plan.

Basic

B.b.1: Mr. Borg, a 38 year old male who returned from missionary work in Guinea and has been under TEAM protocol monitoring as a low risk traveler by local public health, has developed symptoms of stomach pain, muscle aches and a fever. Public health requests that EMS transport him for testing to rule out EVD. Suggested target sectors: EMS, Public Health, Hospital Tiers 1, 2, 3

Intermediate

B.i.1: A patient with a travel history and risk factors for EVD presents with symptoms at 11:30 PM on Friday. Worsening winter weather and roads prevent transport to another hospital for at least an estimated 48-72 hours. Suggested target sectors: Hospital Tiers 3, 4

B.i.2: An EVD patient with diabetes mellitus is on hemodialysis. Deterioration of the patient's dialysis access point is becoming a clinical concern. Dialysis nurse staffing is stressed by the requirements involved with supporting the patient combined with the ongoing normal patient load. Suggested target sectors: Hospital Tiers 1, 2

B.i.3: An EVD patient is experiencing breathing difficulties not effectively supported with supplemental oxygen. The attending physician determines that ventilatory support may be required, and calls for a consult from Pulmonology and Respiratory Care. Hospital Tiers 1, 2

Advanced

B.a.1: An EVD patient is admitted to the hospital. At a later point, a widespread power outage resulting from a nearby tornado is affecting the entire region. Estimated time of restoration is unknown. While critical power from the facility generators is supporting essential clinical equipment, cooling is not supported, and the weather is hot, with highs in the mid-90's. Interior temperatures are in the 80's, and humidity levels are around 90%. Staff are having difficulty and fatigue monitoring and caring for the patient in their PPE. Suggested target sectors: Hospital Tiers 1, 2
B.a.2: An EVD patient is admitted to the hospital. At a later point, a water main break in the community has reduced water pressure to the hospital, and a boil water advisory has been issued by the water utility. Consultation with public health yields an opinion that the supplied water cannot be regarded as safe for use in patient care or for human consumption without boiling. Suggested target sectors: Hospital Tiers 1, 2

B.a.3: A suspect EVD case presents during a severe influenza outbreak in the community. Staffing is a problem due to clinical demands and staff calling in unable to work due to illness or family care issues. Suggested target sectors: Hospital Tiers 3, 4

C. Patient Transport from Point(s) of Entry to Designated Ebola Treatment or Assessment Area

Summary of domain: Hospitals and EMS providers must have coordinated and communicated protocols for movement of the PUI or patient from the point of entry to the hospital to the care location and any subsequent destinations. PPE, infection control, emergency evacuation, and other considerations must be included in the plans and protocols.

Suggested Exercise Objectives:

1. Define the protocol for a safe transport of a patient with known or suspected EVD/Special Pathogen within a facility.

Suggested Exercise Deliverables:

1. Documented route of transport from the hospital point of entry and/or ED via a pre-identified route that is secure and free of any other patient or personnel traffic, to a pre-identified room/care area.
2. Policy and procedure for safe patient transport within the facility.
3. Identify hospital roles involved in the patient movement.
4. Policy and procedure for maintaining a clean environment (e.g., spill procedure, cleaning protocols for environment and transport equipment).
5. Addendum to current evacuation protocols that address safe transport of patients with EVD/Special Pathogen.

Basic

C.b.1: Lab test results are positive for a PUI, and the patient is en route from a Tier 3 hospital. EMS has arrived at the ED, and the patient is being removed from the ambulance for transfer to the treatment area. Suggested target sectors: EMS, Hospital Tiers 1, 2

C.b.2: EMS arrives with a person who has developed fever, malaise, and diarrhea. The person has been the subject of Direct Active Monitoring consistent with the current TEAM Protocol by the LHD based on travel history and risk factors. The LHD determined the patient should be transported to a hospital and communicated the need for transport. Suggested target sectors: EMS, Public Health, Hospital Tiers 1, 2, 3
Intermediate

C.i.1: A facilities failure in the hospital resulting in flooding has blocked the planned route for EMS and staff to transport an arriving EVD admission. Alternate routing calls for travel through a public area outside the ED. Suggested target sectors: *Hospital Tiers 1, 2*

Advanced

C.a.1: Smoke begins to emit from a computer in the patient care room. Due to care activities in process, staff members are unable to quickly respond to intervene in the malfunction. The amount of smoke increases, and staff decide to evacuate the space. Suggested target sectors: *Hospital Tiers 1, 2*

D. Patient Placement

*Summary of domain: Examples of issues:*

-planning and accommodations must be established for physical separation of the EVD patient from all but essential caregivers.

-Equipment and supplies must be at hand and not used for care of others; reusable equipment must be properly cleaned and disinfected prior to further use. Communication equipment must be provided to facilitate interactions with consulting staff, families or others outside the care location.

*Suggested Exercise Objectives:*

1. Identify and evaluate designated care location for PUI, EVD or other special pathogen patient.
2. Assess plans and protocols for staff entering and using the care location.
3. Assess communications plans and systems for family and consulting services.

*Suggested Exercise Deliverables:*

1. Facility map identifying layout and route of travel for designated care location.
2. Plan identifying features of care location, and where such locations are within the facility (such as Intensive Care Unit, Infectious Disease Unit):
   a. bathroom or commode
   b. negative pressure (if feasible)
   c. separation from other areas
   d. flow of patient care activities within the room
   e. sharps and waste material provisions
   f. use of disposable or reusable equipment
   g. staff changing, donning and doffing areas, shower provisions
   h. communication equipment: phone, computer, etc.
Basic

D.b.1: Ms. Carpenter, an EVD patient who must be admitted, has both close family relatives, as well as extended family accompanying her to the hospital. Family members want to stay with her out of concern. Suggested target sectors: Hospital Tiers 1, 2

Intermediate

D.i.1: Mr. Louis is an admitted EVD patient whose native language is French and he is non-English speaking. Additionally, he has intense spiritual care needs, and his desire is to be attended to daily by the spiritual leader of his church. Suggested target sectors: Hospital Tiers 1, 2

D.i.2: An 11 year old child who accompanied her family on a trip to Africa is now displaying headache and vomiting. The family is under active monitoring by the LHD. The parents are not symptomatic. The child is transported for evaluation, and the parents accompany the child in a separate vehicle. The family must now be integrated into the care plan. Hospital Tiers 1, 2

Advanced

D.a.1: The 9 year old child of a patient admitted for EVD care is now experiencing symptoms, to include fever, muscle aches, severe headache, and vomiting. The child is transported to the hospital for evaluation and care. Suggested target sectors: Hospital Tiers 1, 2

D.a.2: A suspect case presents during a severe influenza outbreak in the community. Exam rooms are under heavy demand. Some ED patients are being staged in the corridor. Suggested target sectors: Hospital Tiers 3, 4

E. Personal Protective Equipment (PPE) and Procedures for Donning and Doffing

Summary of domain: Considerations include items such as PPE selection, supply levels, training and demonstration of competency, donning, doffing, and infection control measures.

Suggested Exercise Objectives:

1. Identify PPE that protects the healthcare worker in their job tasks from exposure to Ebola or other special pathogens. This PPE needs to be reflected in the facility specific Exposure Control Plan, considering applicable CDC and Michigan Occupational Safety and Health Administration (MiOSHA) guidance and requirements.
2. Define the protocols, training, and competency program for healthcare workers caring for the patient with known or suspected EVD or other special pathogen or their environment.
3. Identify the process to obtain and maintain (PPE) supplies.
Suggested Exercise Deliverables:

1. List and quantity of PPE with ordering information.
2. Protocols to don/doff PPE.
3. Posters showing proper don/doff sequence for easy reference.
4. Competency checklist and program.
5. Detailed protocol on how to obtain and maintain PPE levels when usual resources are limited, internally and/or externally.
6. Cleaning protocols for equipment and environment.

Basic

E.b.1: A PUI monitored by the LHD develops symptoms, and self-presents at the ED without coordinating with EMS or the LHD. Triage staff are the first point of contact with the PUI. Suggested target sectors: Hospital Tiers 3, 4

E.b.2: Lab tests indicate that a PUI is positive for EVD, and the patient is transported to the hospital for admission to the designated care area. Staff must don proper PPE. Preparations are also necessary for staff relief after the first four hours of nursing care. Suggested target sectors: EMS, Hospital Tiers 1, 2

Intermediate

E.i.1: Ms. Dodge is a patient who self-presents at the ED, complaining of fever, vomiting, and diarrhea. She answers in the positive regarding travel to Guinea within the past 21 days, but denies contact with any known EVD cases. She admits to contact with a person believed to be ill with malaria. She has been under Active Monitoring by public health, but there is some question about her understanding of the requirements. After 4 hours of evaluating and following up with the patient, staff members discover that reserve PPE supplies have been affected by a sprinkler plumbing leak, and are unusable. Suggested target sectors: Hospital Tiers 1, 2, 3, 4

Advanced

E.a.1: Due to EVD developments across the U.S., demand for EVD evaluation by persons with symptoms has been rising, leading to high PPE usage among hospitals. A patient has been admitted and under care for 5 days, and now another admission has become necessary. Hospital materials management administration advises that the supply chain forecasts a 30 day delay before additional replenishment supplies of selected PPE can be delivered. Suggested target sectors: Hospital Tiers 1, 2
F. Monitoring Healthcare Personnel and Managing Exposures

Summary of domain: This domain deals with healthcare workers who provide care to Ebola patients in U.S. facilities and their risk levels, related to effective wear of PPE and potential breaches in infection control. Considerations include care of other patients, monitoring conditions and periods, and related issues.

Suggested Exercise Objectives:

1. Identify a program/Standard Operating Procedure (SOP) that supports employees who care for or are exposed to patients with Ebola /Special Pathogen.
2. Evaluate post-EVD/Special Pathogen exposure protocols.
3. Identify how employees will be provided with behavioral health support.

Suggested Exercise Deliverables:

1. Protocol for direct and indirect monitoring reflecting collaboration with the LHD.
2. Staff area entry and exit log form reflecting information that can be used to assign risk.

Basic

F.b.1: Ms. Miller, a person under Direct Active Monitoring under the current TEAM Protocol by the LHD based on travel history and risk factors develops a fever, malaise and diarrhea. The LHD has EMS transport her to a hospital. EMS and affected hospital staff now have questions about their health follow-up and work status. Suggested target sectors: EMS, Public Health, Hospital Tiers 1, 2, 3

Intermediate

F.i.1: Lab results for a patient being assessed at a Tier 3 hospital indicate a need for admission at a Tier 1 or 2 hospital in another region. The transport is estimated to be 6.5 hours of driving time between the facilities. After the transport, affected hospital and EMS staff have questions about their health follow-up and work status. Suggested target sectors: EMS, Public Health, Hospital Tiers 1, 2, 3

Advanced

F.a.1: Staff experience an unanticipated, unprotected exposure, when a presenting patient with positive screening question responses has a projectile emesis at the triage desk. Due to others present in the area and social media posts, the incident results in media attention. Suggested target sectors: Hospital Tiers 1, 2, 3, 4, Public Health
G. Laboratory Safety and Capacity

Summary of domain: Issues include managing and testing routine clinical specimens; specimen collection, transport, and submission; packing and shipping specimens; and waste management

Suggested Exercise Objectives:

1. Identify protocols to maintain a safe work environment during the collection and testing of specimens from a patient with known or suspected EVD/Special Pathogen.
2. Identify protocols to maintain a specimen’s chain of custody from phlebotomy to waste stream disposal.
3. Identify capabilities of laboratory to perform minimal testing and timely resulting of malaria, CBC, glucose, potassium, and influenza test.

Suggested Exercise Deliverables:

1. Completed site specific risk assessment.
2. Policy and procedure that includes:
   a. Lab specimen collection.
   b. Specimen labeling.
   c. Specimen transport within a facility.
   d. Specimen transport outside the facility (e.g., packaging, manifesting and shipping).
   e. Specimen testing, as appropriate to Tier level.
   f. Specimen storage.
   g. PPE protocols within the lab or testing area.
   h. Specimen disposal.

Basic

G.b.1: A patient self-presents at the ED, complaining of fever, vomiting, and diarrhea. The patient answers in the positive to travel to Guinea within the past 21 days, but denies contact with any known EVD cases. She admits to contact with a person believed to be ill with malaria. She has been under Active Monitoring by Public Health, but there is some question about her understanding of the requirements. Suggested target sectors: Hospital Tiers 1, 2, 3, Public Health

Intermediate

G.i.1: A patient self-presents at the ED, complaining of fever, vomiting, and diarrhea. The patient answers in the positive to travel to Guinea within the past 21 days, but denies contact with any known EVD cases. She admits to contact with a person believed to be ill with malaria. She has been under Active Monitoring by public health, but there is some question about her understanding of the requirements. The plan for point-of-care testing encounters a challenge when the dedicated equipment malfunctions. Suggested target sectors: Hospital Tiers 1, 2, 3, Public Health
Advanced

G.a.1: A patient with a travel history and risk factors of concern presents at 11:30 PM on Friday. Bad winter weather and roads are affecting the ability of staff to report for scheduled shifts. Local government has announced travel restrictions for safety on the roads, and conditions are expected to persist for 24-36 hours. Suggested target sectors: Hospital Tiers 1, 2, 3

H. Environmental Infection Control and Equipment Reprocessing

Summary of domain: Issues include environmental services staff PPE and procedures; use of an EPA-registered hospital disinfectant with a label claim for a non-enveloped virus; avoiding contamination of reusable porous surfaces that cannot be made single use; routine cleaning and disinfection of the PPE doffing area; and discarding all linens, non-fluid-impermeable pillows or mattresses, and textile privacy curtains into the waste stream with appropriate disposal.

Suggested Exercise Objectives:

1. Assess facility's selection of disinfectants and instructions for use in the EVD/Special Pathogen environment.
2. Identify staff to clean EVD/Special Pathogen care areas, to include daily, response to spills, and post-discharge.
3. Evaluate plans for use of disposable items and cleaning of designated reusable items.
4. Establish competency and training program in procedures for cleaning and disinfection of environment.

Suggested Exercise Deliverables:

1. List of selected EPA-registered disinfectants with instructions for use in the facility (single use only).
2. List of trained staff or name of external agency to maintain environmental cleaning.
3. Cleaning protocols and procedures.
4. List of disposable patient care items to be used.
5. List of reusable equipment to be used and associated procedures for cleaning before re-use.
6. Procedures for disposing of linens, food service items or other equipment located within the patient room.

Basic

H.b.1: Mr. Chandler, a PUI who was in the hospital, has been transferred to be admitted to a Tier 1 hospital. Due to current high clinical demand, the care location in the facility must be promptly returned to service. Suggested target sectors: Hospital Tiers 3, 4
**Intermediate**

H.i.1: A patient with EVD has been admitted to the hospital. Apparently due to fear among environmental services staff, there have been a high number of call-ins, and the designated EVD cleaning staff are now down to 40% of the original team strength. Suggested target sectors: *Hospital Tiers 1, 2*

**Advanced**

H.a.1: An EVD patient with Type 2 diabetes mellitus is on hemodialysis. The patient's condition deteriorated during the course of care related to EVD, and the patient expired. The manager of the dialysis service needs the dialyzer restored to the fleet and wants it processed for re-use. Suggested target sectors: *Hospital Tiers 1, 2*

**I. Management of Waste**

*Summary of domain: This domain deals with the safe handling, treatment, transport and disposal of EVD-contaminated waste. Medical waste contaminated with Ebola virus is a Category A infectious substance regulated as a hazardous material under the U.S. Department of Transportation (DOT) Hazardous Materials Regulations (HMR; 49 CFR, Parts 171-180). For off-site commercial transport of Ebola-associated medical waste, strict compliance with the HMR is required.*

Suggested Exercise Objectives:

1. Evaluate protocols for accumulation, storage, handling and processing or shipping EVD/Special Pathogen waste prior to end of exercise.
2. Identify waste management disposal protocols and designated waste disposal vendor for Category A infectious substances.
3. Demonstrate compliance with CDC, DOT, MDEQ and MiOSHA guidance and rules for waste handlers by producing evidence prior to end of exercise.

Suggested Exercise Deliverables:

1. Written waste management plan including:
   a. storage containers.
   b. staging and storage of waste.
   c. route of waste transport through facility.
   d. procedure for contacting third party waste hauler (if appropriate).
   e. manifest for waste disposal per regulations.
2. Demonstration of ability to communicate with designated waste hauler, including process to get necessary supplies.
Basic

I.b.1: While awaiting transfer of a PUI to a Tier 1 hospital, staff caring for the patient generate waste material amounting to three large containers of waste. The patient has now been identified as positive for EVD. The waste must now be prepared for final disposal. Suggested target sectors: Hospital Tiers 3, 4

I.b.2: An EMS team conducting a relay transport of an EVD patient arrives at the location. The relief team accepts the patient to continue the transport. The team that handed off the patient needs to doff PPE and perform personal decontamination at the hospital. Suggested target sectors: EMS, Hospital Tiers 1, 2, 3, 4

Intermediate

I.i.1: The manager of the local wastewater treatment plant is receiving calls from concerned residents, and wants wastewater discharge from the care area in the hospital pre-treated prior to discharge. She wants to know the method of pre-treatment that would be used. Suggested target sectors: Hospital Tiers 1, 2, Public Health

Advanced

I.a.1: En route to the transfer/disposal location in the hospital, a medical waste tote malfunctions. A wheel falls off the axle, and the container overturns and the load spills. A heavy, hard object in the material penetrates the double bagging, and contents spill onto the floor. Suggested target sectors: Hospital Tiers 1, 2

I.a.2: The refuse hauler carrying EVD waste overturns on a curve on a highway in the jurisdiction. Material is spilled on the roadway and in a ditch with flowing water. Suggested target sectors: Emergency Management, Public Health

J. Communications

Summary of domain: This domain deals with plans to inform and educate staff and patients of plans to care for PUI and Ebola patients; handle media inquiries; protect privacy; and communicate with the LHD.

Suggested Exercise Objectives:

1. Evaluate hospital plans for internal and external communication of EVD/Special Pathogen care.
2. Assess the hospital process for dissemination of every new or changed plan, procedure, and protocol to appropriate groups.
3. Evaluate procedures to maintain confidentiality of the EVD/Special Pathogen patient or PUI, to include the medical record.
4. Assess plans for daily communication with the appropriate public health department on EVD/Special Pathogen matters.
5. Identify a plan for addressing media inquiries.
6. Identify how the patient's family will be able to communicate with the patient.

**Suggested Exercise Deliverables:**

1. Protocols for informing and educating staff and patients of plans to care for PUI and EVD/Special Pathogen patients.
2. Written process for dissemination of every new or changed plan, procedure, and protocol to appropriate groups.
3. Plans for handling EVD/Special Pathogen media inquiries.
4. Plan for protecting the privacy of the PUI and EVD/Special Pathogen patient and controlling and monitoring access of health care practitioners to the patient record.
5. Describe equipment and procedures for the patient's family to communicate with the patient.

**Basic**

J.b.1: Due to a PUI presenting in the ED along with disclosure of the event through social media, the hospital operators are receiving an overwhelming number of calls with questions. Suggested target sectors: *Hospital Tiers 1, 2, 3, 4, Public Health*

**Intermediate**

J.i.1: A community member overhears a verbal exchange at ED triage and rumors are now circulating in the community expressing concerns of the safety of the hospital for other services. Suggested target sectors: *Hospital Tiers 1, 2, 3, 4, Public Health*

J.i.2: A patient now admitted to the hospital for EVD is known to have eaten at local restaurants and shopped at some retail stores prior to admission, and while experiencing symptoms. Suggested target sectors: *Emergency Management, Public Health*

J.i.3: After several weeks of supportive care, an EVD patient has recovered to the point at which his attending physician is prepared to discharge him to his home. The clinical leadership of the care team has a discussion which leads to questions about discharge instructions and post-discharge follow-up. Suggested target sectors: *Hospital Tiers 1, 2, Public Health*

**Advanced**

J.a.1: Community members are picketing in front of the hospital, objecting to the presence of an Ebola PUI or patient. Suggested target sectors: *Hospital Tiers 1, 2, 3, 4, Emergency Management, Public Health*

J.a.2: Hospital staff experience an unanticipated, unprotected exposure, when a presenting PUI has a projectile emesis at the triage desk. Due to others present in the area and social media
posts, the incident results in media attention. Several media outlets are requesting interviews and statements about how the spread of EVD will be prevented. Suggested target sectors: *Emergency Management, Public Health, EMS*

**K. Management of the Deceased**

**Summary of domain:** This domain deals with plans and procedures to protect against the postmortem spread of Ebola infection at the site of death, prior to transport, during transport, at the mortuary, and during final disposition of remains.

**Suggested Exercise Objectives:**

1. Evaluate protocols for post-mortem care of deceased EVD/Special Pathogen patients.
2. Assess identification and training of personnel and PPE for handling remains of a deceased EVD/Special Pathogen patient.
3. Evaluate availability or procurement plans for supplies and equipment for post-mortem care as appropriate to location.
4. Assess protocols to prepare the decedent for transport, and to transport the remains.
5. Examine arrangements or agreements with designated mortuaries prepared to handle EVD/Special Pathogen patient remains, and plans to coordinate with local and state public health authorities and CDC as necessary.

**Suggested Exercise Deliverables:**

1. Protocols for post-mortem care, to include:
   a. process for grieving by loved ones and attending staff.
   b. photo ID of remains.
2. Staff rosters, evidence of training and list of selected PPE for post-mortem care.
3. Presence of necessary post-mortem supplies and equipment, or procurement protocols to obtain them.
4. Plans for preparation and transport of remains.
5. Arrangements with mortuary services for disposition of remains.

**Basic**

K.b.1: An EVD patient has not responded to supportive care and succumbs to the disease. Based on the attending physician's opinion, the medical examiner accepts the cause of death as complications related to EVD. Suggested target sectors: *Hospital Tiers 1, 2, Public Health*
Intermediate

K.i.1: An EVD patient has not responded to supportive care and succumbs to the disease. The medical examiner responds to the care unit, and determines the cause of death as complications related to EVD. Local morticians are hesitant to accept the remains. Suggested target sectors: Hospital Tiers 1, 2, Public Health

Advanced

K.a.1: Public health has called for transport of a PUI to a Tier 1 hospital due to symptoms that developed during the course of monitoring. En route, the patient suffers an apparent massive myocardial infarction. Instructions from the Medical Control Authority, according to predetermined protocol, are not to attempt resuscitation. There are no detectible vital signs. Suggested target sectors: EMS, Emergency Management, Public Health

L. Special Populations

Summary of domain: This domain deals with plans and procedures to address needs of special populations, e.g., pregnant women, infants, children, dialysis patients.

Suggested Exercise Objectives:

1. Assess protocols to address needs of special populations (e.g., pregnant women, infants, children, dialysis patients).
2. Evaluate plans for patient arrival at all entry points (e.g., labor and delivery, ED, outpatient clinic, dialysis unit) and safe transport to the designated treatment area.
3. Assess plans for delivery of care (e.g., staffing, equipment), including labor and delivery, dialysis, surgical intervention, as needed.
4. Ensure protocols exist to address family involvement in pediatric and obstetric care.

Suggested Exercise Deliverables:

1. Protocols to provide for the needs of potential special patient populations.
2. Facility plans for arrival of special population PUI or EVD/Special Pathogen patients at all entry points.
3. Plans for delivery of care to special population PUI or EVD/Special Pathogen patients.
4. Protocols to facilitate family involvement in pediatric and obstetric PUI or EVD/Special Pathogen patients.
Basic

L.b.1: A family that returned from Guinea now has two family members with fever and diarrhea. Their native language is French. One of the ill family members is pregnant. Testing at a tier 3 hospital reveals that she is positive for EVD, and must now be admitted. Suggested target sectors: Public Health, Hospital Tiers 1, 2, 3

Intermediate

L.i.1: A developmentally disabled 28 year old male must be admitted due to positive lab results for EVD. He has an Autism Spectrum Disorder diagnosis, and frequently does not comply well with instructions. His parents are, at times, able to guide him to comply with instructions. Suggested target sectors: Public Health, Hospital Tiers 1, 2

Advanced

L.a.1: An EVD patient with Type 2 diabetes mellitus is on automated peritoneal dialysis. There is evidence that the condition of the patient's peritoneum is deteriorating, and an alternative clinical approach may be needed to sustain the patient. Suggested target sectors: Public Health, Hospital Tiers 1, 2
Special Pathogen Tier 1 Regional ETC Backup Functional Exercise

(Initiated by MDHHS BETP)

Tier 1 hospitals must be prepared to serve as a backup to the Region 5 Ebola Treatment Center (ETC) in Minnesota by completing just-in-time training and final preparations to receive patients within 72 hours of notification.

The following scenarios are intended to prompt a response in preparation for receiving an EVD/Special Pathogen PUI or patient due to circumstances that do not permit the ETC to admit that person.

**Advanced**

Despite efforts by public health to contain it, an EVD outbreak has occurred in the Midwest. The U.S. DHHS Region V ETC located in Minnesota is at capacity, and several new cases have arisen. Working with state public health departments, the CDC has begun planning to offload cases from the Minnesota ETC to manage the additional new cases. Tuesday morning at 8:30 AM, MDHHS receives notice that Michigan is now asked to accept one of the patients from the Minnesota ETC. The CDC will arrange air medical transport, and expects to have the patient arrive in Michigan Friday morning.

The MDHHS contacts the LHD, designated EMS agency and Tier 1 hospital Tuesday at 8:45 AM, advising that the patient should be expected to arrive by air Friday at 8:30 AM. Suggested target sectors: *Public Health, Hospital Tier 1, EMS, Emergency Management*

**Advanced**

The U.S. is experiencing an EVD outbreak. Patients have been admitted to the Nebraska ETC. Two days after the most recent admission, a major municipal water supply system failure has occurred, and the ETC cannot sustain care of the EVD patients beyond 72 hours. The CDC has requested that MDHHS arrange acceptance of one EVD patient from the Nebraska ETC. Arrangements are being made for air transport of the patient to Michigan. Suggested target sectors: *Public Health, Hospital Tier 1, EMS, Emergency Management*
APPENDIX A: REFERENCES

Centers for Disease Control and Prevention (CDC): http://www.cdc.gov

MiOSHA Blood Borne Pathogen Standard Exposure Control Plan

Michigan Department of Health & Human Services: Emerging Disease Issues (various topics)
http://www.michigan.gov/emergingdiseases/

National Ebola Training and Education Center (NETEC) http://netec.org

U.S. Department of Health & Human Services Assistant Secretary for Preparedness and Response Technical Resources, Assistance Center, and Information Exchange (TRACIE)
https://asprtracie.hhs.gov/
# APPENDIX B: ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARDS</td>
<td>Acute Respiratory Distress Syndrome</td>
</tr>
<tr>
<td>ASPR</td>
<td>Office of the Assistant Secretary for Preparedness and Response</td>
</tr>
<tr>
<td>BETP</td>
<td>Bureau of EMS, Trauma and Preparedness</td>
</tr>
<tr>
<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
</tr>
<tr>
<td>CFDA</td>
<td>Catalog of Federal Domestic Assistance</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>ED</td>
<td>Emergency Department</td>
</tr>
<tr>
<td>EMS</td>
<td>Emergency Medical Services</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency</td>
</tr>
<tr>
<td>ETC</td>
<td>Ebola Treatment Center</td>
</tr>
<tr>
<td>EVD</td>
<td>Ebola Virus Disease</td>
</tr>
<tr>
<td>HCC</td>
<td>Healthcare Coalition</td>
</tr>
<tr>
<td>HMR</td>
<td>Hazardous Materials Regulations</td>
</tr>
<tr>
<td>LHD</td>
<td>Local Health Department</td>
</tr>
<tr>
<td>MDHHS</td>
<td>Michigan Department of Health and Human Services</td>
</tr>
<tr>
<td>MDEQ</td>
<td>Michigan Department of Environmental Quality</td>
</tr>
<tr>
<td>MERS-CoV</td>
<td>Middle East Respiratory Syndrome Coronavirus</td>
</tr>
<tr>
<td>MiOSHA</td>
<td>Michigan Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>NETEC</td>
<td>National Ebola Training and Education Center</td>
</tr>
<tr>
<td>PPE</td>
<td>Personal Protective Equipment</td>
</tr>
<tr>
<td>PSAP</td>
<td>Public Safety Answering Points</td>
</tr>
<tr>
<td>PUI</td>
<td>Person Under Investigation</td>
</tr>
<tr>
<td>SMART</td>
<td>Specific, Measurable, Achievable, Results-focused, and Time-bound (SMART) method</td>
</tr>
<tr>
<td>SOP</td>
<td>Standard operating procedure</td>
</tr>
<tr>
<td>SPRN</td>
<td>Special Pathogen Response Network</td>
</tr>
<tr>
<td>TEAM</td>
<td>Traveler Evaluation and Monitoring</td>
</tr>
<tr>
<td>Toolkit</td>
<td>Ebola Virus Disease/Special Pathogen Response Network Exercise Toolkit</td>
</tr>
<tr>
<td>TRACIE</td>
<td>Technical Resources, Assistance Center, and Information Exchange</td>
</tr>
<tr>
<td>U.S.</td>
<td>United States</td>
</tr>
</tbody>
</table>
A. Pre-Hospital Transport Plans, Emergency Medical Services (EMS), Emergency Department (ED) Preparedness

Suggested objectives
1. Patient screening and isolation protocols.
2. Evaluate hospital plans for EMS transport of PUIs, known or suspect for EVD or other special pathogen patients.
3. Assess pre-hospital plans and protocols for all aspects of transporting a special pathogen patient, including screening and isolation, communications, PPE, post-transport follow-up, etc.
4. Evaluate plans for hospitals to work with designated EMS provider to accept and transfer the PUI or EVD patient to the designated care location.
5. Assess ED plans and protocols to screen and isolate patients based on risk factors.
7. Assess hospital protocols for specimen collection and processing.
8. Assess protocols for environmental infection prevention and control measures, equipment decontamination, and waste management for EMS and hospital clinical activities.

Suggested deliverables
1. Ensure organization has incorporated travel screening/algorithm protocols.
2. Written plans and protocols for PUI, EVD or other special pathogen patient transport.
3. Identification of a PUI or suspect EVD patient.
4. Procedures for PPE use by health care practitioners.
5. Procedures for specimen collection, handling and processing.
6. Protocols for infection prevention and control, use of disposable equipment, decontamination of reusable equipment, and waste management.

B. Staffing of Patient Care Team

Suggested objectives
1. Identify the process to establish and maintain competent staff to care for patients with known or suspected EVD/Special Pathogen.
2. Establish roles and responsibilities of staff that provide care for patients with known or suspected EVD/Special Pathogen.
3. Establish roles and responsibilities of support staff (e.g., Ebola manager, occupational health, infection preventionist).
4. Identify how Administration will support the patient care team.

Suggested deliverables
1. Written staffing plan for 24-96 hours for the care of one patient with known or suspected EVD/Special Pathogen.
2. Policy and procedure for obtaining staff. (This may be an addendum to an existing document).
3. Competency Program for staff training.
4. List of staff that has completed competency and ongoing training.
5. Job specific task lists (i.e., job action sheets) for roles of competent staff.
6. Protocol for on-call staff to assemble within amount of time specified in facility's plan.

C. Patient Transport from Point(s) of Entry to Designated EVD/Special Pathogen Treatment Area

Suggested objectives
1. Define the protocol for a safe transport of a patient with known or suspected EVD/Special Pathogen within a facility.

Suggested deliverables
1. Documented route of transport from the hospital point of entry and/or ED via a pre-identified route that is secure and free of any other patient or personnel traffic, to a pre-identified room/care area.
2. Policy and procedure for safe patient transport within the facility.
3. Identify hospital roles involved in the patient movement.
4. Policy and procedure for maintaining a clean environment (e.g., spill procedure, cleaning protocols for environment and transport equipment).
5. Addendum to current evacuation protocols that address safe transport of patients with EVD/Special Pathogen.

D. Patient Placement

Suggested objectives
1. Identify and evaluate designated care location for PUI, EVD or other special pathogen patient.
2. Assess plans and protocols for staff entering and using the care location.
3. Assess communications plans and systems for family and consulting services.

Suggested deliverables
1. Facility map identifying layout and route of travel for designated care location.
2. Plan identifying features of care location, and where such locations are within the facility (such as Intensive Care Unit, Infectious Disease Unit):
   a. bathroom or commode
   b. negative pressure (if feasible)
   c. separation from other areas
   d. flow of patient care activities within the room
   e. sharps and waste material provisions
   f. use of disposable or reusable equipment
   g. staff changing, donning and doffing areas, shower provisions
   h. communication equipment: phone, computer, etc.
E. Personal Protective Equipment and Procedures for Donning and Doffing

Suggested objectives
1. Identify PPE that protects the healthcare worker in their job tasks from exposure to Ebola or other special pathogens. This PPE needs to be reflected in the facility specific Exposure Control Plan, considering applicable CDC and Michigan Occupational Safety and Health Administration (MiOSHA) guidance and requirements.
2. Define the protocols, training, and competency program for healthcare workers caring for the patient with known or suspected Ebola/Special Pathogen or their environment.
3. Identify the process to obtain and maintain (PPE) supplies.

Suggested deliverables
1. List and quantity of PPE with ordering information.
2. Protocols to don/doff PPE.
3. Posters showing proper don/doff sequence for easy reference.
4. Competency checklist and program.
5. Detailed protocol on how to obtain and maintain PPE levels when usual resources are limited, internally and/or externally.
6. Cleaning protocols for equipment and environment.

F. Monitoring Healthcare Personnel and Managing Exposures

Suggested objectives
1. Identify a program/Standard Operating Procedure (SOP) that supports employees who care for or are exposed to patients with Ebola/Special Pathogen.
2. Evaluate post-EVD/Special Pathogen exposure protocols.
3. Identify how employees will be provided with Behavioral Health support.

Suggested deliverables
1. Protocol for direct and indirect monitoring reflecting collaboration with the LHD.
2. Staff area entry and exit log form reflecting information that can be used to assign risk.

G. Laboratory Safety and Capacity

Suggested objectives
1. Identify protocols to maintain a safe work environment during the collection and testing of specimens from a patient with known or suspected EVD/Special Pathogen.
2. Identify protocols to maintain a specimen’s chain of custody from phlebotomy to waste stream disposal.
3. Identify capabilities of laboratory to perform minimal testing and timely resulting of malaria, CBC, glucose, potassium, and influenza test.

Suggested deliverable
1. Completed site specific risk assessment.
2. Policy and procedure that includes:
a. Lab specimen collection.
b. Specimen labeling.
c. Specimen transport within a facility.
d. Specimen transport outside the facility (e.g., packaging, manifesting and shipping).
e. Specimen testing.
f. Specimen storage.
g. PPE protocols within the lab or testing area.
h. Specimen disposal.

H. Environmental Infection Control and Equipment Reprocessing

Suggested objectives
1. Assess facility's selection of disinfectants and instructions for use in the EVD/Special Pathogen environment.
2. Identify staff to clean EVD/Special Pathogen care areas, to include daily, response to spills, and post-discharge.
3. Evaluate plans for use of disposable items and cleaning of designated reusable items.
4. Establish competency and training program in procedures for cleaning and disinfection of environment.

Suggested deliverables
1. List of selected EPA-registered disinfectants with instructions for use in the facility (single use only).
2. List of trained staff or name of external agency to maintain environmental cleaning.
3. Cleaning protocols and procedures.
4. List of disposable patient care items to be used.
5. List of reusable equipment to be used and associated procedures for cleaning before re-use.
6. Procedures for disposing of linens, food service items or other equipment located within the patient room.

I. Management of Waste

Suggested objectives
1. Evaluate protocols for accumulation, storage, handling and processing or shipping EVD/Special Pathogen waste prior to end of exercise.
2. Identify waste management disposal protocols and designated waste disposal vendor for Category A infectious substances.
3. Demonstrate compliance with CDC, DOT, MDEQ and MiOSHA guidance and rules for waste handlers by producing evidence prior to end of exercise.

Suggested deliverables
1. Written waste management plan including:
   a. storage containers.
   b. staging and storage of waste.
   c. route of waste transport through facility.
d. procedure for contacting third party waste hauler (if appropriate).
   e. manifest for waste disposal per regulations.

2. Demonstration of ability to communicate with designated waste hauler, including process to get necessary supplies.

J. Communications

Suggested objectives
1. Evaluate hospital plans for internal and external communication of EVD/Special Pathogen care.
2. Assess the hospital process for dissemination of every new or changed plan, procedure, and protocol to appropriate groups.
3. Evaluate procedures to maintain confidentiality of the EVD/Special Pathogen patient or PUI, to include the medical record.
4. Assess plans for daily communication with the appropriate public health department on EVD/Special Pathogen matters.
5. Identify a plan for addressing media inquiries.
6. Identify how the patient's family will be able to communicate with the patient.

Suggested deliverables
1. Protocols for informing and educating staff and patients of plans to care for PUI and EVD/Special Pathogen patients.
2. Written process for dissemination of every new or changed plan, procedure, and protocol to appropriate groups.
3. Plans for handling EVD/Special Pathogen media inquiries.
4. Plan for protecting the privacy of the PUI and EVD/Special Pathogen patient and controlling and monitoring access of health care practitioners to the patient record.
5. Describe equipment and procedures for the patient's family to communicate with the patient.

K. Management of the Deceased

Suggested objectives
1. Evaluate protocols for post-mortem care of deceased EVD/Special Pathogen patients.
2. Assess identification and training of personnel and PPE for handling remains of a deceased EVD/Special Pathogen patient.
3. Evaluate availability or procurement plans for supplies and equipment for post-mortem care as appropriate to location.
4. Assess protocols to prepare the decedent for transport, and to transport the remains.
5. Examine arrangements or agreements with designated mortuaries prepared to handle EVD/Special Pathogen patient remains, and plans to coordinate with local and state public health authorities and CDC as necessary.
Suggested deliverables
1. Protocols for post-mortem care, to include:
   a. process for grieving by loved ones and attending staff.
   b. photo ID of remains.
2. Staff rosters, evidence of training and list of selected PPE for post-mortem care.
3. Presence of necessary post-mortem supplies and equipment, or procurement protocols to obtain them.
4. Plans for preparation and transport of remains.
5. Arrangements with mortuary services for disposition of remains.

L. Special Populations

Suggested objectives
1. Assess protocols to address needs of special populations (e.g., pregnant women, infants, children, dialysis patients).
2. Evaluate plans for patient arrival at all entry points (e.g., labor and delivery, ED, outpatient clinic, dialysis unit) and safe transport to the designated treatment area.
3. Assess plans for delivery of care (e.g., staffing, equipment), including labor and delivery, dialysis, surgical intervention, as needed.
4. Ensure protocols exist to address family involvement in pediatric and obstetric care.

Suggested deliverables
1. Protocols to provide for the needs of potential special patient populations.
2. Facility plans for arrival of special population PUI or EVD/Special Pathogen patients at all entry points.
3. Plans for delivery of care to special population PUI or EVD/Special Pathogen patients.
4. Protocols to facilitate family involvement in pediatric and obstetric PUI or EVD/Special Pathogen patients.
APPENDIX D: Members of the EVD/SPRN Planning Team and Advisory Group

The MDHHS would like to acknowledge all the people who helped create and develop the course and the toolkit for their expertise, dedication, and personal commitment.

Carly Adams
Denise Bechard
Jennifer Beggs
Karla Black, PhD
Timothy Bolen
Julie Bulson
Bruce Cadwallender
Kevin Chau
Betty Ann Eash
Don Edwards, DO
Phil Fennema
Fatema Mamou
Jay Fiedler
Sheila Finch
Jennie Finks, DVM
Denise Fleming
Paul Haley
Tiffany Henderson
Joyce Lai
Patrick Lickiss
Patricia Lyons
Mary Macqueen
Ann McDonald
Noreen Mollon
Anne Newlon
Kenneth Onye
Roger Racine
Bethany Reimink
Scott Schreiber
Linda Scott
Diana Seehase
Kristin L. Sims
Dena Smith
Julie Stafford
Alyson Sundberg
John Waters
Suzanne White, MD
Keira Wickliffe Berger
Julia Wolf-Duis
Carrie Wright
Larry Zimmerman
Gloria Zunker

Support for this document can be reached at: MDHHS-BETP-Primary@michigan.gov
## Tier 1 Hospitals

<table>
<thead>
<tr>
<th>Domain</th>
<th>Basic</th>
<th>Intermediate</th>
<th>Advanced</th>
<th>Highly Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Pre-Hospital Transport Plans, Emergency Medical Services (EMS), Emergency Department (ED) Preparedness</td>
<td>A.b.1, A.b.2, A.b.3, A.b.4</td>
<td>A.i.1</td>
<td>A.a.2</td>
<td>A.h.1</td>
</tr>
<tr>
<td>B. Staffing of Patient Care Team</td>
<td>B.b.1</td>
<td>B.i.2, B.i.3</td>
<td>B.a.1, B.a.2</td>
<td></td>
</tr>
<tr>
<td>C. Patient Transport From Point(s) of Entry to Designated Ebola Treatment or Assessment Area</td>
<td>C.b.1, C.b.2</td>
<td>C.i.1</td>
<td>C.a.1</td>
<td></td>
</tr>
<tr>
<td>D. Patient Placement</td>
<td>D.b.1</td>
<td>D.i.1, D.i.2</td>
<td>D.a.1</td>
<td></td>
</tr>
<tr>
<td>E. Personal Protective Equipment and Procedures for Donning and Doffing</td>
<td>E.b.2</td>
<td>E.i.1</td>
<td>E.a.1</td>
<td></td>
</tr>
<tr>
<td>F. Monitoring Healthcare Personnel and Managing Exposures</td>
<td>F.b.1</td>
<td>F.i.1</td>
<td>F.a.1</td>
<td></td>
</tr>
<tr>
<td>G. Laboratory Safety and Capacity</td>
<td>G.b.1</td>
<td>G.i.1</td>
<td>G.a.1</td>
<td></td>
</tr>
<tr>
<td>H. Environmental Infection Control and Equipment Reprocessing</td>
<td></td>
<td>H.i.1</td>
<td>H.a.1</td>
<td></td>
</tr>
<tr>
<td>I. Management of Waste</td>
<td></td>
<td>I.i.1</td>
<td>I.a.1</td>
<td></td>
</tr>
<tr>
<td>J. Communications</td>
<td></td>
<td>J.i.1, J.i.3</td>
<td>J.a.1</td>
<td></td>
</tr>
<tr>
<td>K. Management of the Deceased</td>
<td></td>
<td>K.i.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L. Special Populations</td>
<td></td>
<td>L.a.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Tier 2 Hospitals

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>A.b.1, A.b.2, A.b.3, A.b.4</td>
<td>B.b.1</td>
<td>C.b.1, C.b.2</td>
<td>D.b.1</td>
<td>E.b.2</td>
<td>F.b.1</td>
<td>G.b.1</td>
<td>I.b.2</td>
<td>J.b.1</td>
<td>K.b.1</td>
<td>L.b.1</td>
<td></td>
</tr>
<tr>
<td>Intermediate</td>
<td>A.i.1</td>
<td>B.i.2, B.i.3</td>
<td>C.i.1</td>
<td>D.i.1, D.i.2</td>
<td>E.i.1</td>
<td>F.i.1</td>
<td>G.i.1</td>
<td>H.i.1</td>
<td>I.i.1</td>
<td>J.i.1, J.i.3</td>
<td>K.i.1</td>
<td>L.a.1</td>
</tr>
<tr>
<td>Advanced</td>
<td>A.a.2</td>
<td>B.a.1, B.a.2</td>
<td>C.a.1</td>
<td>D.a.1</td>
<td>E.a.1</td>
<td>F.a.1</td>
<td>G.a.1</td>
<td>H.a.1</td>
<td>I.a.1</td>
<td>J.a.1</td>
<td>L.i.1</td>
<td></td>
</tr>
<tr>
<td>Highly Advanced</td>
<td>A.h.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Tier 3 Hospitals

<table>
<thead>
<tr>
<th>Domain</th>
<th>Pre-Hospital Transport Plans, Emergency Medical Services (EMS), Emergency Department (ED) Preparedness</th>
<th>Staffing of Patient Care Team</th>
<th>Patient Transport From Point(s) of Entry to Designated Ebola Treatment or Assessment Area</th>
<th>Patient Placement</th>
<th>Personal Protective Equipment and Procedures for Donning and Doffing</th>
<th>Monitoring Healthcare Personnel and Managing Exposures</th>
<th>Laboratory Safety and Capacity</th>
<th>Environmental Infection Control and Equipment Reprocessing</th>
<th>Management of Waste</th>
<th>Communications</th>
<th>Management of the Deceased</th>
<th>Special Populations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>A.b.1, A.b.2, A.b.3, A.b.4</td>
<td>B.b.1</td>
<td>C.b.2</td>
<td>E.b.1</td>
<td>F.b.1</td>
<td>G.b.1</td>
<td>H.b.1</td>
<td>I.b.1, I.b.2</td>
<td>J.b.1</td>
<td>K.b.1</td>
<td>J.b.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Basic Populations

- A.b.1
- A.b.2
- A.b.3
- A.b.4

### Intermediate Populations

- A.i.1
- B.i.1

### Advanced Populations

- A.a.2
- B.a.3

### Highly Advanced Populations

- A.a.2
- B.a.3

- D.a.2
- F.a.1
- G.a.1

- J.a.1
## Tier 4 Hospitals

<table>
<thead>
<tr>
<th>Domain</th>
<th>Basic</th>
<th>Intermediate</th>
<th>Advanced</th>
<th>Highly Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A.b.1, A.b.3</td>
<td>B.i.1</td>
<td>D.a.2</td>
<td>B.a.3</td>
</tr>
<tr>
<td></td>
<td>E.b.1</td>
<td>F.b.1</td>
<td>F.a.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H.b.1</td>
<td>I.b.1, I.b.2</td>
<td>J.a.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>J.b.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------------------------------------------------------------------------</td>
<td>---------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Basic</td>
<td>A.b.1, A.b.2, A.b.4</td>
<td>B.b.1</td>
<td>C.b.1, C.b.2</td>
<td>E.b.2</td>
</tr>
<tr>
<td>Intermediate</td>
<td>A.i.1, A.i.2, A.i.3, A.i.4</td>
<td></td>
<td></td>
<td>E.i.1</td>
</tr>
<tr>
<td>Advanced</td>
<td>A.a.1</td>
<td>D.a.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highly Advanced</td>
<td>A.h.1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Public Health

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>A.b.1, A.b.2, A.b.4</td>
<td>B.b.1</td>
<td>C.b.2</td>
<td>F.b.1</td>
<td>I.b.2</td>
<td>K.b.1</td>
<td>L.b.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermediate</td>
<td>A.i.1, A.i.2, A.i.3, A.i.4</td>
<td></td>
<td></td>
<td>F.a.1</td>
<td>J.i.1, J.i.2, J.i.3</td>
<td>K.i.1</td>
<td>L.i.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced</td>
<td>A.a.1, A.a.2</td>
<td></td>
<td></td>
<td>F.a.1</td>
<td>I.a.2</td>
<td>J.a.1, J.a.2</td>
<td>K.a.1</td>
<td>L.a.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highly Advanced</td>
<td>A.h.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Published January 2017