All-Hazards Response and Recovery Plan

STATE OF MINNESOTA CONCEPT OF OPERATIONS: EBOLA VIRUS DISEASE

CHAPTER OF THE HEALTH CARE SURGE ANNEX

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For External Use

DEPARTMENT OF HEALTH

MDH All-Hazards Response and Recovery Plan

Minnesota Department of Health
Center for Emergency Preparedness and Response
PO Box 64975
St. Paul, MN 55164-0975
651-201-5700
health.epr@state.mn.us
www.health.state.mn.us

Upon request, this material will be made available in an alternative format such as large print, Braille or audio recording. Printed on recycled paper.

Contents

Letter from Minnesota Department of Health Commissioner Ed Ehlinger

To Whom It May Concern:

The 2014-2016 global Ebola Virus Disease (EVD) outbreak led Minnesota to significantly enhance their preparedness efforts for dealing with EVD and other high-consequence infectious diseases. During the outbreak, Minnesota and its local partners monitored a total of 954 travelers with a few patients under investigation (PUI) for EVD being transferred to Ebola treatment hospitals to be tested. No actual case of EVD was confirmed in Minnesota during the outbreak.

During the outbreak, Minnesota took a risk-based approach to identifying hospitals who could provide higher levels of care. During the outbreak, Minnesota had four hospitals (Mayo-St. Marys, Children's, Unity, UMMC-West Bank) that were willing to handle an Ebola patient. Currently, Mayo-St. Marys is a state Ebola Treatment Center, and UMMC-West Bank is the Regional Ebola Treatment Center for HHS Region V (MN, WI, IL, IN, MI, OH, City of Chicago).

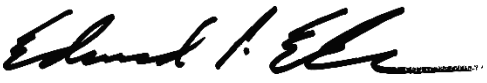
The Concept of Operations outlined in this document provides a structure for how the Minnesota Department of Health (MDH) and its federal, tribal, state, and local partners would operate if there was an Ebola outbreak. The plan is the culmination of many of collaboration with our partners and a draft version of the document was distributed across the state for feedback from our health partners. This plan will be exercised and updated as needed.

The major sections of the plan contain:

- Overview of the Ebola Virus Disease.
- Roles and Responsibilities of MDH, federal, tribal, state, and local partners.
- Three-Tiered Approach to managing Ebola cases (Ebola Treatment Centers, Assessment Hospital, Frontline Health Care Facilities.
- Transferring an Ebola patient under investigation including identifying the 7 Ebola-Ready EMS that provide state-wide coverage.
- Waste and fatality management considerations.
- Alert and Notification Chart including internal and external partners.
- Background on the 2014-2016 outbreak in Minnesota, including the community outreach work done by MDH.
- Monitoring Travelers.

In addition to this document, MDH's Center for Emergency Preparedness and Response (EPR) staff also worked with our Region V partners to develop a regional interstate transport plan for Ebola patients, which is outlined in a separate document. If you have any questions or concerns regarding this plan, please contact Cheryl Petersen-Kroeber, the Director of Emergency Preparedness and Response, at 651-201-5700 or Cheryl.Petersen-Kroeber@state.mn.us.

Sincerely,



Edward P. Ehlinger, M.D., M.S.P.H
Commissioner of Health
P.O. Box 64975
St. Paul, MN 55164-0975

1.1 Purpose

The State of Minnesota Concept of Operations for planning and response to Ebola virus disease (EVD)—hereinafter referred to as "the ConOps" or "this ConOps"—delivers a consolidated and coordinated response and incorporates best practices to assess and treat suspected and confirmed patients with EVD successfully and prevent the disease from spreading within the state of Minnesota.

This plan defines the actions and roles necessary to provide coordinated Ebola assessment and treatment within the State of Minnesota. All activities are coordinated to:

1. Protect the health and well-being of people in Minnesota.
2. Minimize exposure of health care workers and the public to EVD.
3. Conduct active public health and medical surveillance to identify and isolate symptomatic cases.
4. Identify consequence management[1] steps for confirmed case(s) and their contacts.
5. Support rapid and effective response.
6. Collect and disseminate accurate incident and public information to improve decision making, dispel rumors, and promote public awareness.

1.2 Scope

The ConOps is limited to describing operational intent when responding to suspected or confirmed EVD cases within the state of Minnesota. Confirmed or suspected cases of EVD present special requirements for disease surveillance, public communications, allocation of medical resources, and expansion of public health/health care services. Other planning factors may include jurisdictional legal authorities related to isolation/quarantine and law enforcement responsibilities. Components of this plan will not supersede or replace facility, local, or county emergency operations plans or policy. Under the Commissioner of Health, the Minnesota Department of Health will direct response for all confirmed or suspected cases of EVD.

[1] U.S. Federal Emergency Management Agency (FEMA) defines consequence management as "predominantly an emergency management function and includes measures to protect public health and safety, restore essential government services, and provide emergency relief to governments, businesses, and individuals affected by the consequences of terrorism." https://training.fema.gov/hiedu/docs/terms%20and%20definitions/terms%20and%20definitions.pdf

1.3 Situation Overview

The 2014-2016 EVD outbreak in West Africa has increased the possibility of patients with EVD traveling from the affected countries to the United States. The likelihood of contracting EVD is extremely low unless a person has direct unprotected contact with the body fluids of a symptomatic person with EVD.

The incubation period for EVD, from exposure to appearance of signs and symptoms, ranges from 2 to 21 days (most commonly 8-10 days). Any EVD patient with signs or symptoms should be considered infectious. Most EVD patients without signs or symptoms are not considered contagious. However, men who have recovered from EVD may still be able to transmit the virus to others through semen if not using condoms during sex.

Beginning March 2014, West Africa experienced the largest outbreak of EVD in history. The U.S. Centers for Disease Control and Prevention (CDC) and partners have worked to contain this epidemic at its source. Sierra Leone, Liberia, and Guinea were hardest hit; there were also cases reported in Senegal, Nigeria, Italy, Spain, Mali, the United Kingdom, and the United States.[2]

1.3.1 Description of the Disease

EVD is an infectious disease caused by the Ebola virus, and rarely other viruses in the ebolavirus group. Symptoms appear from 2 to 21 days after exposure and may include fever, headache, joint and muscle aches, weakness, diarrhea, vomiting, stomach pain, and abnormal bleeding.

1.3.2 Transmission

Ebola virus is believed to have a natural reservoir in animals and is transmitted to humans through animal contact. Once infection occurs in humans, the virus can be transmitted to others through direct contact with the blood or bodily fluids of an infected symptomatic person or through exposure to contaminated objects (such as needles). Recent case reports seem to indicate that the Ebola virus could remain in some body fluids (e.g., semen) of Ebola survivors longer than previously suspected. Therefore, transmission from asymptomatic survivors is possible. People are not contagious until they develop symptoms. People at highest risk for Ebola include health care workers and other people with direct contact with infected, symptomatic people. Effective isolation of patients and appropriate infection control measures can help contain any potential spread of the disease.

[2], "2014 Ebola Outbreak in West Africa – Case Counts," Center for Disease Control and Prevention, updated April 13, 2016, accessed April 14, 2016 (http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/case-counts.html)

1.3.3 Description of Jurisdiction

Minnesota has a population of 5.4 million people spread over 86,000 square miles.[3] A majority of the population (54%) live within the Twin-Cities Metropolitan area. Due to a fluid Liberian population of over 30,000 residing in Minnesota (primarily in the Twin-Cities Metropolitan area), and because Minnesota has destination medical centers, the Minnesota Department of Health (MDH) would coordinate with federal, tribal, and local partners on programs that focus on communications, infection control, and procedures for safe diagnosis, transport, and treatment of potential Ebola patients. Emergency Medical Services (EMS) in Minnesota are provided by over 300 licensed public, private and not for profit services which includes six air ambulance licensees. The Minneapolis-St. Paul International Airport (MSP) served more than 36 million travelers in 2015.[4] The airport has a CDC-staffed Quarantine Station.

Ebola Treatment Centers in Minnesota

Two Ebola Treatment Centers (ETCs) have been established in Minnesota. Each facility made CDC-recommended changes and developed EVD-specific protocols that address preparation and receiving of EVD Persons Under Investigation (PUIs) and actual EVD cases.

- University of Minnesota Medical Center, West Bank Campus (UMMC-West Bank): (UMMC-West Bank is the Regional Ebola Treatment Center for the U.S. Department of Health and Human Services [HHS] Region V which includes City of Chicago, Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin)
- Mayo Clinic Hospital, Saint Marys Hospital in Rochester (Mayo Clinic Hospital-Rochester) (State Ebola Treatment Center)

1.4 Planning Assumptions

Planning assumptions include, but are not limited to, the following:

- Horizontal and vertical partnerships will be established to include, but not limited to, appropriate federal, state and local, private and non-governmental organizations.
- National specialized biocontainment units which have successfully treated EVD patients, (Emory University, the University of Nebraska Medical Center/Nebraska Medicine and the New York Health and Hospitals Corporation, Bellevue Hospital Center) may not be available.

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[3], "Quick Facts: Minnesota," U.S. Census Bureau, population estimates: 2015, accessed April 14, 2016 (http://www.census.gov/quickfacts/table/PST045214/27)

[4], "Passengers" Minneapolis-St. Paul International Airport, 2015, accessed April 14, 2016 (https://www.mspairport.com/about-msp)

- CDC requires that health care network system planning include policy/protocol related to patient screening, evaluation and transfer protocols, equipment, training and staffing needs. Plans also need to intersect with EMS/transport protocols.
- Health care workers at entry points and within the larger health care system in Minnesota will be trained to identify persons for potential EVD exposure and be able to employ appropriate infection control and waste management procedures.
- All Minnesota hospitals, emergency departments (EDs), and ambulatory care settings are expected to be able to identify persons presenting with a travel history or exposure history compatible with EVD and be prepared to isolate patients for up to 24 hours, and inform and consult with public health officials.[5] CDC notes that it is unlikely that frontline healthcare facilities will be required to provide prolonged care (>12–24 hours) for a severely ill patient at high risk for EVD[6] and a patient transfer would occur as quickly as possible.
- Suspected or confirmed EVD patients may access the health care system through various points of entry, and some might self-transport to a health care facility. Regional tiered approaches involving more than one state will be required (cross-border planning) given the Region V treatment center in the state.
- If activated due to a world-wide Ebola outbreak, direct active monitoring and active monitoring of persons potentially exposed to EVD would assist in identifying persons with early symptoms and plans for evaluation and management when in place. The use of direct active monitoring and active monitoring would be dependent on the extent of EVD incidence throughout the world, as well as current CDC guidance and protocols that are in place regarding monitoring.
- In the event that a patient with EVD is cared for in Minnesota, direct active monitoring of exposed health care workers will be a joint initiative between the impacted health care facilities and MDH.
- Ebola Treatment Centers (ETCs) and AHs have dedicated treatment and personal protective equipment (PPE) donning and doffing areas, skilled and trained staff, appropriate equipment and excellent infection control procedures.
- In the instance of either a confirmed case of EVD or a highly suspect EVD case, all four of the assessment and treatment hospitals in the state will be informed by MDH to maintain readiness.
- The ConOps is geared toward patients with a known epidemiological risk factor for a HCID and that in absence of a known epidemiological risk factor this plan does not apply.
- The clinical status of the patient will determine the transport of the patient to an EVD assessment or treatment center.

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[5] "Hospital Preparedness: A Tiered Approach, Frontline Hospitals," CDC, updated August 28, 2015, accessed April 14, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/preparing/frontline-healthcare-facilities.html)

[6] Ibid.

2.1 Roles and Responsibilities/Tiered Approach

The State of Minnesota and its state, local, and tribal stakeholders take a multi-pronged approach to responding to a potential EVD patient. The State of Minnesota follows the CDC guidelines, which classify health care facilities into three categories. These categories are based upon expectations for the level of effort expected regarding identification, isolation, assessment, and/or treatment of persons with suspected or confirmed EVD. The tiered health care delivery system allows for a systematic approach for resource allocation, training and education, transportation, risk management, waste management and disposal, and legal planning. A tiered system also reduces the number of facility and health care worker exposures while allowing both the state's treatment and assessment hospitals to focus on a higher practice of infection control and medical expertise during treatment.

Currently, there are two state ETCs in Minnesota: Mayo Clinic Hospital-Rochester, which can take one adult or pediatric patient, and UMMC-West Bank, which can take two adult, obstetric, or pediatric patients. UMMC-West Bank is also serving as the treatment center for HHS Region V and can take patients from six states across the Great Lakes region (Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin).

The three tiered approach includes: frontline hospitals, which are responsible for identifying and isolating an Ebola patient and informing MDH; assessment hospitals, which assess and treat Ebola patients for up to 96 hours; and treatment centers, which are capable of treating Ebola patients for as long as they need to be treated including possibly providing outpatient care after discharge. A consolidated, tiered approach to Ebola treatment offers several advantages:

- A cross-functional team can prepare Ebola response plans focusing on delivering the safest and best care for patients and protection of staff using a dedicated care team in a designated isolation area of the hospital.
- Health care workers at consolidated locations, with intensive training, develop greater proficiency in treating the unique needs of Ebola patients and in the intricate safety measures necessary to prevent exposure.
- Using fewer Ebola treatment sites ensures that the communication and operationalization of the latest information from local, state, and federal health agencies is streamlined.
- Caring for an Ebola patient requires many specially trained medical staff, complex waste management procedures, a significant quantity of PPE, and other resources; by consolidating care, Minnesota's health care providers are better able to deploy personnel and resources.

Frontline Health Care Facilities (FHCFs)

Frontline Health Care Facilities are acute care hospitals and other emergency care settings, including urgent care clinics and critical access hospitals. These facilities should be prepared to evaluate a person who has a travel history, potential exposure, and symptoms suggestive of Ebola. It is the expectation that PUIs be transferred as quickly as possible from a FHCF to an assessment or treatment facility, however, in a worst-case scenario, where the number of PUI exceed the bed capacity of AHs and ETCs in Minnesota, FHCF need to be prepared to care for a PUI for up to 24 hours. This would include time for the AHs/ETCs and the Ebola-Ready Ambulance Services to prepare for transport.

All health care workers at FHCFs should be trained and able to recognize symptoms, safely isolate a suspect Ebola patient, and contact MDH for guidance on next steps for safely managing the patient and protecting themselves. At a minimum, staff at these facilities should be trained on waste management, and infection control including appropriate PPE use. If specified FHCFs have had appropriate training and guidance on specimen collection and transport, some limited laboratory testing ruling out more likely options may take place. If a patient has been identified with relevant exposure AND signs or symptoms compatible with EVD; CDC recommends the FHCF immediately notify their hospital/facility infection control program, other appropriate facility staff, and the state and local public health agencies to discuss the level of risk, clinical and epidemiologic factors, alternative diagnoses, and plan for EVD testing and further care. Patients who are deemed to have low likelihood of EVD on the basis of clinical and epidemiologic factors and have mild illness, but who nonetheless require EVD testing, may, in limited circumstances, remain at the FHCF while testing is conducted to rule out other diseases.

The FHCFs are responsible for updating MDH on the situation and would work with the clinical team at MDH, EMS, and the state's assessment and treatment facilities to arrange the transport of a PUI to the next facility.

Assessment Hospitals

While the roles of Ebola assessment hospitals and Ebola treatment centers vary in regard to the length of time they will need to treat the patient, the high level of preparedness in terms of infrastructure and resources are similar. Due to this, in Minnesota, the State ETCs will serve as Assessment Hospitals if needed. Ebola assessment hospitals are prepared to receive and isolate a PUI for EVD and care for the patient until an Ebola diagnosis can be confirmed or ruled out and until discharge or transfer is completed. MDH may refer individuals from the traveler monitoring program (if it exists at the time) that develop symptoms consistent with Ebola to an assessment hospital for further evaluation.

These hospitals have the capability to evaluate and care for PUIs for up to 96 hours, initiate or coordinate Ebola testing and testing for alternative diagnoses, and either rule out Ebola or transfer the individual to an ETC, as needed.

Staff at AHs are trained on specimen collection and transport, waste management, infection control, and using PPE appropriately.

Similar to the patient transfer from an FHCF to an AH, the AH will work with MDH clinical team, EMS, and the ETC to facilitate patient transport from an assessment to treatment hospital.

Ebola Treatment Centers

ETCs have implemented strategic plans that are incorporated into their policies and procedures in order to safely and effectively manage patients with suspected or confirmed EVD. The hospitals have on-going preparedness exercises with other key stakeholders in order to assess, isolate, diagnose, transfer and treat a suspected case of Ebola. Exercises, drills, and training have focused on best practices as they relate to EVD. The exercises have focused on infection control and prevention policies and procedures for PPE (donning/doffing), patient intake, admission, isolation, treatment and discharge of patients and suspect patients with EVD.

ETCs are staffed, equipped, and have current capability, training, and resources to provide the complex treatment necessary to care for an Ebola patient, while minimizing risk to health care workers and to the community.

2.2 Assignment of Responsibilities of Key Stakeholders

In addition to the frontline, assessment and treatment centers listed above, key stakeholders include, but are not limited to:

- CDC/National Ebola Training & Education Center[7] (NETEC)
- Governor's Office
- Office of the Minnesota Attorney General
- MDH
- Minnesota Pollution Control Agency (MPCA)
- Minnesota Department of Public Safety (DPS)-Homeland Security and Emergency Management (HSEM) Leadership
- Emergency Medical Services Regulatory Board (EMSRB)
- Regional Health Care Coalitions (HCCs) and Regional Health Care Preparedness Coordinators (RHPCs)

[7] NETEC is a collaborative effort among HHS' Office of the Assistant Secretary for Preparedness and Response (ASPR), CDC and Nebraska Medical Center, Emory University, and Bellevue Hospital, and was established to support the training and education of assessment hospitals and treatment centers.

- Local Health Departments
- Tribal Health Departments
- Medical Examiners
- EMS agencies
- Emergency Managers
- Minnesota Hospital Association (MHA)
- Impacted Communities
- Other professional associations for health care

Centers for Prevention and Disease Control/National Ebola Training & Education Center

CDC and the newly established NETEC will provide guidance and technical assistance to MDH and its health care coalitions as they develop their concept of operations for their statewide plan to manage confirmed and suspected EVD patients. NETEC will provide guidance to the assessment and treatment hospitals within the state to ensure the facilities maintain their capabilities to respond to Ebola.

CDC also assists states in determining which hospitals may serve as EVD assessment and/or treatment centers, and the CDC Rapid Ebola Preparedness (CDC REP) teams consulted with state health officials and hospitals to provide technical assistance and recommendations to the state's assessment and treatment hospitals. CDC also has CDC Ebola Response Teams (CERT), made up of experts in epidemiology, infection control, laboratory, and communications on stand-by, ready to deploy to any hospital in the United States with a probable Ebola case. NETEC will conduct annual site visits of UMMC-West Bank during the five-year grant period to ensure UMMC-West Bank maintains their capabilities and readiness. In the event of a confirmed case, CDC would set up a clinical call between the hospital with the confirmed patient and the previous hospitals who dealt with confirmed Ebola patients to discuss patient care.

The CDC Minneapolis-St. Paul Quarantine Station (MQS) is located at MSP.[8] In the event the CDC MQS is concerned about Ebola or a high consequence infectious disease (HCID), MDH will be contacted before a decision is made to transfer the patient so they may advise the best hospital to seek treatment.

[8] The MQS jurisdiction includes all U.S.-Canada land border crossings in North Dakota and Minnesota and all ports of entry in Nebraska, North Dakota, South Dakota, and Minnesota. http://www.cdc.gov/quarantine/stations/minneapolis.html

Governor's Office

In the case of an Ebola outbreak, the Governor's Office will work with relevant state entities to ensure necessary coordination of state agencies in the response to a potential Ebola outbreak. Additionally, during the onset of an outbreak, the Governor may issue an Executive Order or declare a state of emergency, when requested by the Commissioner of Health.

Minnesota Department of Health

MDH is a key stakeholder responsible for managing suspected or confirmed EVD cases, which includes identifying and coordinating health care facilities willing and capable of managing patients. Critical requirements include coordinating screening programs, training and education guidance, financial and legal authorities, risk management issues, EMS and patient transport arrangements, interagency and intra-agency involvement, public education, media participation and involvement, and logistics.

When initiating or maintaining a response to a confirmed EVD case, the following responsibilities will be initiated:

- Activate Incident Command System (ICS)
- Notify MDH leadership, Governor's Office and key national, state, local, and tribal partners
- Conduct patient management and infection control consultation
    - Serve as contact with CDC/NETEC
    - Support health care and EMS
    - Provide technical assistance to the hospital on infection prevention
    - Provide technical assistance on clinical aspects of Ebola testing
    - Provide laboratory testing and arrange for specimens to be sent to CDC
- Initiate contact tracing
    - MDH will interview patient/family members to identify people who may have come into contact with the patient or his/her bodily fluids during illness including family, friends, other travelers, hospital staff, EMS, and airport contacts
    - Local and/or tribal health departments will be engaged as appropriate
    - All contacts will be contacted and monitored for 21 days (fever watch)
- Provide communications
    - Public Information Officer distributes "first case" press release
    - Send health alert to provide notification of the incident and required action steps to all local public health and health care providers (hospitals, clinics)
    - Develop and disseminate public messaging

    - Develop and distribute partner communications
- Provide necessary legal activities
    - Pursue voluntary isolation for the patient and quarantine for contacts if needed
    - Consult with Attorney General for legal action if voluntary isolation or quarantine is not adequate
    - Ensure that local health departments are meeting essential service needs for individuals in quarantine
- Establish Hotlines as needed
    - Clinician and/or local public health hotline
    - Public hotline if needed
        - Determine if MDH establishes and staffs a hotline or supports a HSEM hotline for the public
- Provide technical support to other state agencies and partners as needed or if requested
- Support local and tribal health departments
    - Provide links to recommended guidance on essential services, isolation and quarantine
    - Request key agency staff have updated contact information in Workspace
    - Conduct periodic conference calls as needed
    - Encourage local health department to communicate with emergency manager and law enforcement partners about role of public health in an infectious disease incident
- Complete "Emergency Authorization" forms for Administration if needed
- Work with treatment centers and assessment hospitals to build their capacity and maintain their capabilities to deal with a confirmed Ebola case
- Community Engagement[9]
    - MDH will bring together leaders from the impacted communities to:
        - Hear concerns and questions, develop FAQ (frequently asked questions) guide on disease outbreak
        - Plan collaborative efforts including community forums
        - Includes faith leaders
    - Develop Fact Sheets, which would be available in several languages.
    - Coordinate any campaigns with relevant ethnic media

[9] More information on MDH's community engagement efforts specific to the 2014 Ebola outbreak can be found in Appendix D.

- Disseminate information to broader community to reduce stigmatization of impacted communities

Minnesota Pollution Control Agency (MPCA)

At the request of MDH, MPCA will support the response by overseeing and assisting local government authorities in performing decontamination activities at non-health care facilities. MPCA will also assure waste management and disposal activities. This may involve the MPCA's Emergency Response, Hazardous Waste, Solid Waste and Wastewater programs.

Minnesota Office of the Attorney General

The Minnesota Office of the Attorney General will represent MDH on potential isolation and quarantine matters; seek court orders for isolation and quarantine; work with state court system and law enforcement agencies as needed; and draft pleadings, affidavits, and other legal documents.

Minnesota Department of Public Safety – Homeland Security and Emergency Management Leadership

In the event of Ebola, HSEM will activate the State Emergency Operations Center (EOC), at either a Level III, Level II, or Level I, based upon agencies that may need to respond, and work with MDH and the Governor's Office to coordinate the response when requested by the Governor. In the case of an outbreak, HSEM would serve in a supportive role to MDH and would help manage information-sharing, resource-sharing, and consequence management in the case of an outbreak through the State Emergency Operations Center. Additionally, HSEM may open the State Joint Information Center (JIC) to help coordinate state communications between agencies and the media.

Emergency Medical Services Regulatory Board

EMSRB will work in concert with MDH to create criteria for licensed ambulance services to determine if they are capable to transport a suspected or confirmed case of EVD. EMSRB is the state regulatory body for EMS.

Local/Tribal Health Departments

Local and tribal health departments will assist MDH in the monitoring of travelers in select communities. In Minnesota, providing essential services to those being isolated/quarantined is the role of local public health departments. MDH conducts regular training and preparedness work with local public health so they can be ready to ensure essential needs are addressed (as

required per Minnesota Statute 144.419 subdivision 2 (g)[10]) if an isolation and quarantine event occurs.

Medical Examiners

MDH and treatment centers will work with medical examiners to implement the fatality management plan.

Licensed Ambulance Services

MDH, and the assessment and treatment hospitals, will work with transport providers to ensure the transfer of suspected or diagnosed patients to an EVD assessment or treatment facility for further evaluation, testing, and treatment. AHs and ETCs will also provide EMS with a location for EMS to doff PPE, as well as assisting with decontamination of the EMS vehicle and disposal of all waste. Licensed ambulance services have also received grant dollars to help mitigate gaps and enhance preparedness in the event of an Ebola outbreak.

Minnesota Hospital Association

MHA will support the state and its health care system by leveraging resources to increase the overall infrastructure alignment and promote sustainability among the two Ebola treatment and assessment hospitals; facilitate on-going communication and situational awareness with all MHA members; serve as a trusted partner for information and guidance; as well as serving as an advocate for the state's hospitals.

Impacted Communities

Impacted communities would work with state and local government agencies to share information, plan collaborative efforts, and assist in the development of messaging efforts. (*More information can be found in Appendix D: Background on Minnesota Department of Health's Role During the 2014 Ebola Outbreak*)

Health Care System Preparedness- Regional Health Care Coalitions

Minnesota has eight Health Care Coalitions and will continue to provide on-going communication with partners, maintain situational awareness, review and disseminate updated Ebola-related guidance, facilitate sharing of necessary PPE with requesting health care facilities, and update plans to share PPE and other resources within each region. They will also conduct facility and regional training and exercises on Ebola. HCCs with Treatment Centers (Metro and

[10] The needs of persons isolated and quarantined shall be addressed in a systematic and competent fashion, including, but not limited to, providing adequate food, clothing, shelter, means of communication between those in isolation or quarantine and those outside these settings, medication, and competent medical care.

Southeast) currently have written EVD response plans based on CDC guidance and to align with this ConOps. The coalitions will conduct annual exercises with EMS and frontline facilities (and assessment hospitals and treatment centers, where applicable) to test their capabilities to handle a PUI.

2.3 Intent

MDH is responsible for the development, implementation, and maintenance of this ConOps and acts as the lead agency for the coordination and management of any suspected or confirmed EVD case. MDH will also provide guidance to local health departments, hospitals, EMS providers, licensed ambulance services, and other organizations regarding training, exercises, and other activities to ensure EVD preparedness.

2.4 Critical Information Requirements

In order to necessitate an effective and timely response that ensures appropriate patient care, community safety, and protection of health care workers, key information must be communicated to MDH from health care partners in a timely manner. MDH will disseminate this information, as needed, to federal, tribal, state, and local partners. This information includes:

- All people arriving at a port of entry, hospital, or clinic identified as low (but not zero), some, or high risk for contracting Ebola.
- All people confirmed with Ebola.
- The death of any person confirmed with Ebola.
- Incidents where first responders, health care workers, or the public have a known or suspected exposure to a person confirmed with Ebola.
- PPE shortages that could affect worker safety, or other medical product shortages or needs that could affect patient treatment.

2.5 Concept of Operations

This ConOps is limited to describing operational intent when responding to PUIs or patients confirmed with Ebola; however, with slight modification it can describe operations for responding to other HCIDs. The necessary elements of Minnesota's EVD response are described in the following subsections. These activities require close coordination between public health, health care facilities, and emergency medical service providers and emergency management. The responsible agency or organization for each element is noted. References to detailed guidance are provided where necessary.

2.5.1 Health Monitoring and Isolation and Quarantine

Monitoring Assumptions

As of the writing of this document in spring 2016, monitoring is not currently occurring in the state of Minnesota. If there is another Ebola outbreak, CDC recommends traveler monitoring and MDH determines that traveler monitoring should be conducted, MDH would likely use a framework similar to the one conducted in 2014-2016 (*See Appendix C*).

As CDC has stated on its website, "The *Interim U.S. Guidance for Monitoring and Movement of Persons with Potential Ebola Virus Exposure*" was specific to the 2014 Ebola epidemic. In their discussion on monitoring guidance, CDC noted that "although most Ebola outbreaks will not require such extensive measures, CDC will consider the need for similar guidance during future outbreaks based on the situation, taking into account the extent of the outbreak and the risk of importation and spread of disease into the United States."[11]

Involved Parties

For on-going planning and coordination to implement monitoring, isolation and quarantine, MDH will continue the close partnership with local public health, tribal health and CDC (including CDC MQS at MSP). Within MDH, the multi-disciplinary Community Mitigation Recommendations Group exists to make recommendations regarding monitoring, isolation and quarantine and other non-pharmaceutical interventions.

Monitoring

The purpose of monitoring is to identify and provide information to people who have potentially been exposed to Ebola. Monitoring may help protect others from being exposed and make sure the individual gets early treatment, which improves patient outcomes. Individuals who have recently traveled to countries with widespread Ebola and those with contact to a known EVD case (e.g., community, household, and health care workers) may also require active monitoring.

MDH has previously developed a protocol and infrastructure to conduct monitoring. Monitoring protocols and resources will be adapted per CDC guidelines and situation specific recommendations. Local public health has received training on monitoring procedures and on-going training and resources are provided by MDH. Local public health has been given the option of conducting monitoring and initial interviews (i.e., Day Zero calls) or having MDH conduct these calls with residents of their jurisdiction.

[11] "Notes on the Interim U.S. Guidance for Monitoring and Movement of Persons with Potential Ebola Virus Exposure," CDC, updated February 19, 2016, accessed March 2, 2016, http://www.cdc.gov/vhf/ebola/exposure/monitoring-and-movement-of-persons-with-exposure.html

Potentially Exposed Individuals Who Develop Symptoms

All individuals being monitored will be provided with a 24/7 phone number to contact MDH. Individuals under monitoring will be instructed to contact the 24/7 number or 651-201-5414 during business hours if they do not need immediate medical attention and symptoms developed or if their temperature becomes elevated. The MDH Monitoring Team member will then report these symptoms to a member of the Clinical Team. The MDH Clinical Team (led by the IDEPC Medical Director) will consult with the individual to determine if care is needed, if medical transport (ambulance) is necessary or if they can transport themselves in a private vehicle, and direct the patient to receive care at the nearest treatment center. (UMMC-West Bank in Minneapolis or Mayo Clinic Hospital-Rochester). If the ETCs are at capacity, MDH will work with HHS/ASPR to appropriately place the PUI.

The MDH Clinical Team will contact the hospital to discuss the clinical situation and to indicate the need for transport. (*See Transportation Section 2.4.2 for further information*). Monitored individuals will also be instructed to contact the hospital or call 911 if they need immediate medical attention and make the health care providers aware that they are currently being monitored because of a possible exposure to EVD. Individuals will be provided with a specific assessment/treatment hospital that they should go to should symptoms develop.

Potentially Exposed Individuals Who Do Not Comply With Monitoring

Individuals who do not comply with monitoring are subject to: possible legal action including quarantine, isolation, Do Not Board orders (restricting ability to fly), or other restrictions on their movement or activities. Non-compliant individuals will be handled on a case-by-case basis.

Isolation and Quarantine

Isolation and quarantine are strategies that may be used as part of the overall effort to prevent and control the transmission of EVD. Isolation of patients with certain communicable diseases occurs routinely in health care facilities. This section outlines federal and state guidelines for isolating and quarantine patients under investigation for Ebola. Isolation is the separation or restriction of movement of people with a communicable disease in order to prevent disease transmission to others.[12] Quarantine is the separation or restriction of movement of people who have been exposed to a communicable disease and are presumed infectious but who are not ill, in order to prevent the spread of disease.[13] Isolation and quarantine fulfills the critical public health missions of disease prevention, mitigation, and control while assuring that essential services are in place and due process and other legal rights of individuals are protected.[14]

[12] "Community Mitigation Intervention Annex for Pandemic Flu," Minnesota Department of Health, updated June 2015, accessed March 9, 2016.

[13] Ibid.

[14] Ibid.

Controlled Movement, Self-Isolation

Restricted movement, isolation, and quarantine of individuals at risk of developing EVD may be required to protect the public's health. The Day Zero script, which is read to travelers at the beginning of their monitoring period, will assess each person's risk. For "low, but not zero risk" individuals there will be no restrictions on movement/activities. For "some risk" travelers, the travelers will be advised to avoid long-distance commercial transportation and locations where they will be unable to self-isolate promptly. If anyone becomes symptomatic, MDH will recommend that they immediately isolate themselves from others and contact MDH to determine next steps. (*See Appendix C for further information*.)

MDH may request both asymptomatic and symptomatic non-hospitalized infectious patients to isolate and possibly quarantine themselves at home during their infectious period, which will be determined on a case-by-case basis.

Isolation and quarantine can be voluntary (upon recommendation of the Commissioner of Health), or may be mandated by a court order. Decisions about quarantine and asymptomatic exposed persons will need to be done a case-by-case basis. MDH may seek court orders of isolation and quarantine if it determines that legal action is appropriate to protect public health and meets the other requirements set forth in Minn. Stat. §144.419-.4195. Persons subject to isolation and quarantine have due process protections. Ramsey County District Court has statewide jurisdiction for such cases. A patient with confirmed Ebola will be isolated in a hospital until they 1) clinically recover and 2) test negative in serial PCR tests.

Plan to Reactivate/Deactivate Monitoring

Reactivating and deactivating the monitoring program would be determined by MDH with consideration of CDC guidance.

Legal Justification

State Level

Minnesota Statute §144.419 outlines specific actions and authorities for the Commissioner of Health regarding isolation and quarantine. The statute notes, "Prior to isolating or quarantining a person or group of persons, the Commissioner of Health shall obtain a written, ex parte order authorizing the isolation or quarantine from the District Court of Ramsey County, the county where the person or group of persons is located, or a county adjoining the county where the person or group of persons is located."[15] State law further mandates that "isolation and quarantine must be by the least restrictive means necessary to prevent the spread of a communicable or potentially communicable disease to others and may include, but are not

[15] "144.4195: Due Process for Isolation or Quarantine of Persons," Minnesota Statutes, accessed March 9, 2016, https://www.revisor.mn.gov/statutes/?id=144.4195

limited to, confinement to private homes or other private or public premises."[16] State law further states, "Isolated and quarantined individuals must be immediately released when they pose no known risk of transmitting a communicable or potentially communicable disease to others."[17]

Federal Level[18]

The Commerce Clause of the U.S. Constitution gives the federal government the authority for isolation and quarantine. Section 361 of the Public Health Service Act (PHSA) (42 U.S. Code §264) gives the Secretary of HHS authorization to prevent the entry of a HCID from a foreign country by enforcing isolation and quarantine and is authorized to take measures to prevent the spread of HCIDs between states. CDC is the designated agency to carry out these functions.

CDC is authorized to detain, medically examine, and release persons at ports of entry suspected of carrying an HCID under 42 Code of Federal Regulations (CFR) parts 70 and 71. Routine monitoring by the CDC occurs at quarantine stations, including the Minneapolis-St. Paul Quarantine Station located at MSP.

Federal isolation and quarantine are authorized by an Executive Order of the President for the following HCIDs:

- Viral hemorrhagic fevers (i.e., EVD)
- Cholera
- Diphtheria
- Infectious tuberculosis
- Plague
- Smallpox
- Severe acute respiratory syndromes
- Flu that can cause a pandemic

Providing Essential Services to Those Under Isolation/Quarantine

In Minnesota, providing essential services to those being isolated or quarantined is the role of local public health departments. MDH conducts regular training and preparedness work with local public health so they can be ready to ensure essential needs are addressed (as required per Minnesota Statute §144.419 subdivision 2 (g)) if an isolation and quarantine event occurs.

[16] Ibid.

[17] Ibid.

[18] "Legal Authorities for Isolation and Quarantine" CDC, updated October 8, 2014 (https://www.cdc.gov/quarantine/aboutlawsregulationsquarantineisolation.html)

Quarantine of Housing/Decontamination of Households and Public Spaces

If an individual is a suspect Ebola case and there is contamination (e.g., blood, body fluids) of household and/or public spaces, public health authorities will work with MPCA to manage the setting. If the patient is confirmed to have Ebola, MPCA will support the response by overseeing and performing decontamination activities at non-health care facilities. MPCA will also oversee waste management and disposal activities. This may involve the MPCA's Emergency Response, Hazardous Waste, Solid Waste and Wastewater programs.[19]

If local public health authorities wish to hire a contractor to complete surficial cleaning of low-risk areas, first reference the CDC's "Interim Guidance for the U.S. Residence Decontamination for Ebola Virus Disease (Ebola) and Removal of Contaminated Waste."[20]

Contact with Pets

If a person with a confirmed Ebola has had contact with a pet, either in the patient's home or elsewhere, a rapid risk assessment will need to be conducted in collaboration with human and animal health officials to determine how to handle the pet(s) and whether quarantine of the pet is warranted.[21]

2.5.2 Transportation/Patient Transfer

The transfer of a PUI or a confirmed EVD patient to the appropriate health care facility should be done in an efficient and timely manner. During this process, the safety of first responders, EMS, and hospital personnel is of utmost importance and steps need to be taken to ensure their safety. In order to maintain safety, the following guidelines, in accordance with CDC, HHS Office of the Assistant Secretary of Preparedness and Response (ASPR), and the U.S. Department of Transportation (USDOT), should be adhered to throughout the entire EMS and health care systems.

911/Public Safety Answering Points

As determined by MDH—based on data from local and state public health authorities, and the CDC—when there is an elevated risk[22] in a community, region, or state, MDH may work with EMSRB and Minnesota DPS to reach out to the Minnesota Sheriff's Association and local police associations to implement 911/Public Safety Answering Points (PSAPs) operators modified

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[19] "Decontamination of buildings contaminated with Ebola virus", Minnesota Pollution Control Agency, accessed December 13, 2017 https://www.pca.state.mn.us/sites/default/files/c-er10-01.pdf

[20] "Interim Guidance for U.S. Residence Decontamination for Ebola and Removal of Contaminated Waste," CDC, updated March 2, 2015, accessed February 18, 2016 (http://www.cdc.gov/vhf/ebola/prevention/cleaning-us-homes.html)

[21] "Interim Guidance for Dog or Cat Quarantine after Exposure to a Human with Confirmed Ebola Virus Disease," American Veterinary Medical Association Companion Animal Response Plan Working Group, released November 10, 2014, accessed February 18, 2016 (http://www.cdc.gov/vhf/ebola/pdf/dog-cat-quarantine.pdf)

[22] In relation to EVD, an elevated risk may be determined by, but is not limited to, 1) Outbreak status in another country 2) A confirmed case of EVD within the United States.

query usage to screen for possible EVD.[23] If the 911/PSAP operator suspects Ebola or another HCID process after asking the requisite travel-related questions, the operator is then responsible for notifying the EMS agency who responds to the primary service area (PSA) from where the call is located of this risk. If an EMS agency has a secondary PSAP service or call transfer capabilities, 911/PSAP operators could then transfer the call to the responding EMS agency so they may gather additional medical information prior to arrival. If not, the operator should try to gather as much clinical information as possible to give to EMS. To see modified caller queries, please reference *Appendix F: Identify, Isolate, Inform: Emergency Medical Services (EMS) Systems and 9-1-1 Public Safety Answering Points (PSAPs) for Management of Patients Who Present with Possible Ebola Virus Disease (Ebola) in the United States*.[24] Finally, if the person affected is at an airport or other international port of entry to Minnesota (Canadian border and Duluth harbor), it is also the responsibility of the 911/PSAP operator to notify the CDC Quarantine Station located at the Minneapolis-Saint Paul International Airport at (612) 725-3005.[25]

Transfer from Hospital Point of Entry to Isolation Room (Any Hospital Setting)

HHS/Office of Emergency Management/ASPR recommends if EVD is suspected, all hospitals—Frontline, Assessment, and Treatment facilities—establish a policy for patient transfer upon point of entry to the hospital until they are secure in a designated isolation room.[26] This policy needs to address health care personnel PPE and safety as well as proper disinfection of equipment and waste management. Hospital staff should be trained in proper transfer techniques and practice the pre-designated route from point of entry to the isolation room through drills and exercises. Additionally, this policy needs to address management of blood or body fluid spills during transport and disinfection. Finally, staff need to be trained in proper donning and doffing techniques.[27,28]

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[23] "Interim Guidance for Emergency Medical Services (EMS) Systems and 9-1-1 Public Safety Answering Points (PSAPs) for Management of Patients with Known of Suspected Ebola Virus Disease in the United States," CDC, updated December 29, 2015, accessed March 17, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/emergency-services/ems-systems.html)

[24] Ibid.

[25] "Quarantine Station Contact List, Map, and Fact Sheets," CDC, updated December 22, 2014, accessed April 6, 2016 (http://www.cdc.gov/quarantine/quarantinestationcontactlistfull.html)

[26], "Ebola Preparedness 2015 Hospital Preparedness Program (HPP) Measurement Implementation Guidance," ASPR, July 2015, Version 7.0, accessed on March 11, 2016 (http://www.phe.gov/Preparedness/planning/sharper/Documents/2015-hpp-ebola-prep-measures.pdf)

[27] "Guidance on Personal Protective Equipment (PPE) to Be Used by Healthcare Workers during Management of Patients with Confirmed Ebola or Persons under Investigation (PUIs) for Ebola who are Clinically Unstable or Have Bleeding, Vomiting, or Diarrhea in U.S. Hospitals, Including Procedures for Donning and Doffing PPE," CDC, updated November 17, 2015, accessed March 25, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/guidance.html)

[28] "Guidance for Donning and Doffing Personal Protective Equipment (PPE) During Management of Patients with Ebola Virus Disease in U.S. Hospitals," CDC, updated October 29, 2014, accessed April 1, 2016 (http://www.cdc.gov/vhf/ebola/hcp/ppe-training/index.html)

The Ebola Collaborative Hospitals[29] will assist EMS with the decontamination process of the ambulance, doffing of PPE, and securing all EMS waste in the designated bay or unloading area. It is the hospital's responsibility to notify MDH of patient arrival. MDH in turn will notify CDC per *Section 2.5.1- Alert and Notification*. If point of entry is not an assessment or treatment hospital (i.e., FHCF, clinic, physician's office), MDH will advise the hospital or other point of entry, steps to take to initiate transfer to appropriate facility (*Section 2.5.1- Alert and Notification*).

Intra-State Inter-Facility Transport (Tiered Approach)

As outlined in the tiered approach section of this document, there is a three-tiered approach in identifying, confirming, and treating Ebola suspected and confirmed cases. Due to the demographic and geographic uniqueness of Minnesota's at-risk population, the chances that a PUI would be directly transported to one of the two ETCs or one of the two Ebola AHs is high. However, in the event a person presents to a Frontline Hospital (either through the ED or by ambulance transport by a local 911 response) the expectation is for the hospital personnel to identify the patient as a PUI, isolate them, and notify MDH. Under the advice of the MDH Clinical Team, the Frontline Hospital will notify the recommended receiving hospital (either assessment or treatment center) and arrange transport. If a FHCF is located within the PSA of an "Ebola/HCID Ready" Ambulance Service [30] *(See Appendix G: "Ebola or Other Highly Infectious Disease Ready" Ambulance Service Criteria*), they will transport the PUI to the appropriate facility. If they are not, the EMS agency will contact an "Ebola/HCID Ready" Ambulance Service with whom they have an agreement (*See Appendix H: List of "Ebola or Other Highly Infectious Disease Ready" Ambulance Services*) to transport.

Upon arrival to the AH or ETC, the transport vehicles will report to the designated bay or unloading area for Ebola patients. In the designated unloading area, the hospital staff will meet the ambulance crew for patient handoff. The hospital staff will then follow the hospital's pre-designated route to transfer the patient to the biocontainment unit.

Intra-State Transport Outpatient Settings

CDC Minneapolis-St. Paul Quarantine Station

As previously stated, the CDC MQS is located at MSP. All transports from MSP to an AH or ETC will be handled by Allina Health EMS. (*Please reference Section Transport from Airport to ETC/RTC for more details.*)

[29] Ebola Collaborative Hospitals are Minnesota State ETCs and include: University of Minnesota Medical Center, West Bank; and Mayo Clinics & Hospital, St. Marys Campus.

[30] An "Ebola/HCID Ready" Ambulance Service is one who is willing and capable to transfer a suspected or confirmed case of EVD. Criteria to meet listed in Appendix G and a list of ambulance services is in Appendix H.

Private Residence

If a person is under active monitoring or direct active monitoring and needs medical transport, they may be advised by MDH to not transport themselves via private or public transportation to a hospital or clinic if they are symptomatic. Instead they need to contact 911 and report to the 911/PSAP operator they are under monitoring for EVD and are now experiencing symptoms. A Licensed Ambulance Service deemed "Ebola/HCID Ready" will provide transport per protocol to AH or ETC.

Doctor's Office/Clinic

Ebola and other HCID symptoms may appear to be common illnesses such as the flu or malaria. Providers[31] located at clinics and primary care practices should ask all patients about international travel in the past 21 days. If a provider has a patient with symptoms concerning for EVD and with a confirmed travel history to areas with known Ebola transmission should notify the Clinical Team at MDH at 1-877-676-5414 (toll-free) or 651-201-5414 (24/7). The Clinical Team will advise the provider whether to direct the patient to drive themselves in a private vehicle to the AH or ETC or to call 911 for immediate transport. EMS will appropriately arrange transport per protocol to an AH or ETC if needed.

Patient Transfer Points (PTPs)

During a ground transport, EMS personnel ideally should not be in PPE for more than 3-3 ½ hours. Therefore, should a patient transfer be longer, EMS crews will need to switch at pre-identified patient transfer points. All PTPs should maintain readiness and have the following capabilities:

- Decontamination station for ambulance
- Designated donning/doffing area
- Designated area for personnel decontamination
- Secure patient transfer zone
- Category A waste disposal
- Redundant communications
- Provide basic care for the patient if medically necessary

The patient will not enter the health care facility unless medically necessary. The use of PTPs will be determined on a case by case basis. A list of PTPs can be found in *Appendix I: List of Patient Transfer Points in Minnesota*.

[31] Provider refers to anyone with the ability to prescribe: MD, DO, DNP, NP, PA

Transport from Airport to ETC/Regional Treatment Center (RTC)

There are two scenarios in which a PUI would be transferred directly to an ETC or the RTC from an airport.

1. A call from the CDC MQS located at MSP

The CDC MQS observes and in some cases assesses international travelers entering the United States at MSP. If during their assessment they suspect Ebola or another HCID, they will contact MDH first to determine the best hospital to transfer the patient. Since MSP falls into Allina Health EMS's PSA, they are the designated ground transport team to respond to any call at MSP and have a long standing working relationship with the Metropolitan Airports Commission and CDC MQS. Both CDC and EMS will notify UMMC-West Bank per the MSP International Airport Communicable Disease Emergency Response Plan/CDC's Operations Manual Standard Operating Procedure (SOP) for Air Illness Response.[32]

Upon arrival to the ETC or RTC, the transport vehicle will report to the designated bay or unloading area for Ebola patients. In the designated unloading area, the hospital staff will meet the ambulance crew for patient handoff. The hospital staff will then follow the hospital's pre-designated route to transfer the patient to the biocontainment unit. EMS will decontaminate the ambulance and doff in designated areas at UMMC-West Bank.

2. A 911 call at any Port of Entry within the CDC MQS jurisdiction

If there is a 911 call prompting an EMS response, the CDC MQS will work in conjunction with EMS and MDH to evaluate the symptoms. If Ebola is suspected, the patient is stable for transport, and can be contained safely at the port of entry, an "Ebola/HCID Ready" Ambulance Service will respond directly there and transfer the patient to the ETC or RTC recommended by MDH in either the Metropolitan region or Rochester. In the event the patient is unstable and requires medical attention, after consultation with the MDH Clinical Team, the "Ebola/HCID Ready" Ambulance Service will transfer the patient to a FHCF to be stabilized for long-distance transport to the appropriate facility.

Death of PUI or Confirmed EVD Patient En Route to ETC

Ebola can be transmitted postmortem. If a confirmed patient were to die during EMS transport intra-state, the EMS agency should proceed to UMMC-West Bank and upon arrival report to the designated garage. Security will be stationed outside and the doors closed prior to ambulance doors being opened. If not already done by the EMS medical director, a UMMC-West Bank physician in appropriate PPE will declare time of death. Appropriate UMMC-West Bank staff will notify the Hennepin County Medical Examiner's (HCME) office of the death, as well as Metro First Call and the Cremation Society of Minnesota (CSM). UMMC-West Bank staff will follow the appropriate CDC Guidelines regarding the bagging of the remains,[33] and with EMS crew

[32] Minneapolis-St. Paul International Airport. *Communicable Disease Emergency Response Plan Draft*.

[33] "Guidance for Safe Handling of Human Remains of Ebola Patients in U.S. Hospitals and Mortuaries," CDC, updated February 11, 2015, accessed April 11, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/hospitals/handling-human-remains.html)

member assistance, bag the body in the ambulance garage. Upon arrival to UMMC-West Bank, Metro First Call will report to the ambulance garage and load the body into their vehicle to be transported for cremation. After Metro First has departed, the EMS crew will decontaminate their rig per protocol and UMMC-West Bank will gather all Category A waste and properly dispose of it.

If a patient were to die during a Region V ground transport, MDH will defer to the state where the death occurred. Per Minnesota Statute 149A.93, if a death occurs outside of the state permits for burial, disposition, or removal are required to transport the body through Minnesota.[34] The USDOT Hazardous Materials Regulations (HMR) (49 CRF, Parts 171-180) applies to any human remains during transport.[35] *(Please reference Section 2.4.6 - Mortuary Affairs for further details.*)

EMS Provider Safety and Monitoring

MDH in partnership with the Minnesota EMSRB will work with ambulance services and EMS medical directors statewide to insure that policies and procedures are in place to protect all responders. Those EMS providers who are not prepared or unwilling to transport a suspected or confirmed case of Ebola due to lack of PPE or other necessary resources will follow guidelines established by the MDH and EMSRB to contact an "Ebola/HCID Ready" Ambulance Service for transport of the confirmed or expected Ebola patient. (*A list of "Ebola or Other HCID Ready" Ambulance Services can be found in Appendix H.*) The guideline will include a process to define a clear communication pathway between the requesting ambulance service and the "Ebola/HCID Ready" Ambulance Service. "Ebola/HCID Ready" Ambulance Services will need to establish guidelines for and participate in regularly scheduled training appropriate for EMS personnel, including but not limited to donning and doffing procedures.

These services should have appropriate protection materials to prepare their ambulance for transport thereby decreasing response time to transport. Medical directors should implement SOPs specifically for transport of Ebola suspected or confirmed cases. The SOPs should cover the following:[36]

- Adjusted list of required ambulance equipment
- Ambulance preparation
- PPE requirements, donning and doffing procedures
- Waste management protocols and agreements

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[34] "149A.93: Transportation of Dead Human Bodies," Minnesota Statutes, accessed March 16, 2016 (https://www.revisor.mn.gov/statutes/?id=149A.93)

[35] "Guidance for Safe Handling of Human Remains of Ebola Patients in U.S. Hospitals and Mortuaries," CDC, updated February 11, 2015, accessed April 11, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/hospitals/handling-human-remains.html)

[36] "Guidance for Developing a Plan for Interfacility Transport of Persons Under Investigation or Confirmed Patients with Ebola Virus Disease in the United States," CDC, updated January 28, 2016, accessed March 11, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/emergency-services/interfacility-transport.html)

- On scene assessment and treatment
- Communication with MDH, law enforcement, and hospitals
- Monitoring of personnel
- Contingencies, like transferring between two ambulances

"Ebola/HCID Ready" Ambulance Services will coordinate, in accordance with established guidelines, with MDH or their local health department to identify and monitor any responder involved in a patient transport with suspected or confirmed EVD. (*Monitoring should follow the same procedures described in Section 2.3.1- Health Monitoring and Isolation and Quarantine.*)

Decontamination and Waste Management

All "Ebola or Other HCID Ready" Ambulance Services need to have policies and procedures for safe handling of waste as well as effective decontamination of equipment used. Per Minnesota Statute §116.78, Subd. 9, infectious waste produced by an ambulance service in the transport or care of a patient must be properly packaged and disposed of at the destination hospital.[37, 38] It is expected the Collaborative Hospitals will provide sufficient disinfectant for the EMS crew to decontaminate the ambulance in designated areas at the Ebola Treatment Centers.[39] *(For further guidance on decontamination and waste management, please see Section 2.3.4 - Waste Management Considerations*).

Special Considerations

The Minnesota Department of Health will be responsible for advising involved stakeholders in the case that requires special considerations. With the understanding this list is not all-encompassing, the following are several scenarios that may require special consideration:

Pediatric/Neonatal Patients

All transport procedures and protocols will be the same for pediatric (< 18 years of age) and neonatal (< 28 days old) patients, however, special consideration should be given due to their age. Per CDC, one caregiver can accompany a child if the caregiver agrees to wear a face shield and surgical face mask, an impermeable gown, and two pairs of gloves and only if the patient is *not exhibiting* active bleeding, vomiting, or diarrhea.[40] Caregivers are defined as an adult parent

[37] It is assumed Ebola/HCID Ready Ambulance Services will only be transporting these patients from FHCF to AH or ETCs or from AHs to ETCs. If FHCF require assistance with Category A waste, they should contact MPCA and/or MDH for information.

[38] Statute §116.78, Subd. 9 "Nothing in this subdivision shall require a hospital to accept infectious waste if the waste is of a type not generated by the hospital or if the hospital cannot safely store the waste."

[39] "116.78: Waste Management," Minnestota Statues, accessed September 24, 2016 (https://www.revisor.mn.gov/statutes/?id=116.78)

[40] "Q&A's about the Transport of Pediatric Patients (<18 years of age) Under Investigation or with Confirmed Ebola," CDC, updated February 2, 2015, accessed April 7, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/emergency-services/transporting-pediatric-patients.html)

or legal guardian.[41] If a caregiver is not present or unable to travel with the child, the caregiver can designate another adult to travel with the patient. Pediatric patients should not be placed in PPE, though they can be placed in an appropriate Isopod if available. Using the patient's own car seat is preferable if needed. For additional information, please reference the CDC's *Q&A's about the Transport of Pediatric Patients (<18 years of age) Under Investigation or with Confirmed Ebola.*[42] In air transport, a parent can fly with patient per Phoenix Air Group, Inc. (PAG) company policies.[43]

English as a Second Language or Non-English Speaking Patients

Any patient who does not speak English as their first language should be given the consideration to have one family member or friend travel with them in the ambulance to provide translating services if the family member or friend agrees to wear a face shield and surgical face mask, an impermeable gown, and two pairs of gloves and only if the patient is *not exhibiting* active bleeding, vomiting, or having diarrhea.

Tribal Nations

It is understood that Tribal Nations are sovereign and will determine their own policies regarding emergency response, treatment and transport of PUIs, or who are suspected or confirmed to have Ebola. Tribal health agencies are encouraged to work with local and state Emergency Medical Services partners and Ebola Treatment Centers to ensure the safe response, treatment and transport of persons who potentially have Ebola to the appropriate Ebola Treatment facilities.

Weather

Ground Transport

If an ambulance transporting a suspected or confirmed case of EVD is in a weather related delay or a crash, EMS and law enforcement personnel need to be able to secure the scene and a second response team may need to be dispatched immediately to transport the Ebola patient. Additional "Ebola Ready" teams will need to be dispatched if EMS personnel sustained injuries as well as other teams to address possible needs of anyone else harmed in a crash.

Air Transport

In the event that MSP or St. Paul Downtown Airport (STP) cannot accept a medical transport due to weather, the ideal solution would be to divert the plane to Rochester International Airport (RST) and transport the patient to the Mayo Clinic Hospital-Rochester for treatment. In the event that no medical transport can land within reasonable ground transport distance to

[41] Ibid.

[42] Ibid.

[43] Phoenix Air Groups, Inc. Worldwide Aircraft Services. PowerPoint.

either UMMC-West Bank or Mayo Clinic Hospital-Rochester, MDH will confer with the CDC to determine the best course of action.

If the PAG plane is diverted for any reason, but ground transport is still feasible to UMMC-West Bank, MDH will work with regional partners to establish ground transport.

2.5.3 Laboratory Guidance/Laboratory Services Support and Coordination[44]

Specimen Collection

Ebola is detected in the blood only after the onset of symptoms, which may take up to three days. Specimens should be collected when a symptomatic patient reports to a health care facility and is suspected of having an Ebola virus exposure. Optimally, this specimen collection should take place during testing at an assessment or treatment hospital. If the onset of symptoms is less than three days, a subsequent specimen may be needed to rule out Ebola virus if the first specimen tests negative. MDH requires two purple top EDTA tubes with a minimum of 4 ml in each tube for adults and 2 ml in each tube for children. One tube will be for MDH and another will be sent to the CDC. Specimens should be shipped at 2-8 degrees Celsius on cold packs. Do not freeze specimens. This guidance differs from CDC guidance as there are concerns that a specimen that is frozen but cycles from frozen to thawed may not render an accurate test result. Do not submit glass containers. Do not submit specimens preserved in heparin tubes.

Packing and Shipping Specimens for Ebola Virus Testing

Specimens for shipment should be packaged following the USDOT Category A infectious substance regulations and must be shipped according to USDOT regulations when sending by ground transport, and the International Air Transport Association (IATA) regulations when sending by air. Federal Express (FedEx) will ship a potential Ebola specimen with the name of "Suspected Category A Infectious Substance." Persons responsible for packing and shipping any specimen for Ebola testing must be certified by their institution in packaging and shipping. (Note: In most cases, MDH anticipates that laboratories will send specimens directly to Minnesota State Public Health Lab [PHL]).

Transporting Specimens Within the Hospital

In compliance with 29 CFR 1910.1030, specimens should be placed in a durable, leak-proof secondary container for transport within a facility. To reduce the risk of breakage or leaks, do not use any pneumatic tube system for transporting suspected Ebola virus disease specimens.

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[44] "Guidance for Collection, Transport and Submission of Specimens for Ebola Virus Testing, updated February 5, 2015, accessed February 18, 2016 (http://www.cdc.gov/vhf/ebola/hcp/interim-guidance-specimen-collection-submission-patients-suspected-infection-ebola.html)

Coordination with Assessment/Treatment Hospitals

MDH's lab team works with assessment and treatment centers to ensure the hospital's labs have a dedicated lab space (if possible), are able to conduct possible point-of-care testing, select proper equipment, disinfection, have appropriate staffing levels, reagents, have access to proper training, and can provide safe specimen transport to the MDH Public Health Lab for Ebola testing.[45] CDC recommends that lab testing at assessment and treatment centers should, at a minimum, include a complete blood count (CBC); glucose and potassium concentrations; malaria testing (smear or rapid tests); and testing for influenza virus and liver function.[46]

2.5.4 Waste Management Considerations

Ebola waste is a USDOT Category A Infectious Substance. Category A Infectious Substances must be transported according to standards described in 49 CFR or in accordance with a special authorization permit from the USDOT. Items include medical equipment, sharps, linens, and used health care products (such as soiled absorbent pads or dressings, emesis pans, portable toilets, used personal protection equipment [gowns, masks, gloves, goggles, face shields, respirators, booties, etc.] or byproducts of cleaning) contaminated or suspected of being contaminated with a Category A infectious substance. As with all waste streams, it is the responsibility of the generator of Category A waste to evaluate it for other hazardous characteristics, classify it, and handle the waste appropriately.

According to the CDC, there is no epidemiologic evidence of environmental Ebola virus transmission via fomites (e.g., bed rails, door knobs, laundry, etc.).[47] However, given the apparent low infectious dose, potential of high virus titers in the blood of ill patients, and disease severity, higher levels of precaution are warranted to reduce the potential risk posed by contaminated surfaces in the patient care environment. CDC and MDH both recommend that anyone cleaning potentially contaminated surfaces use PPE and related precautions.[48] The Occupational Safety and Health Administration (OSHA) recommends that an Environmental Protection Agency (EPA)-registered disinfectant with label claims for use against non-enveloped

[45] "Hospital Preparedness: A Tiered Approach, Assessment Hospitals" CDC, updated August 28, 2015, accessed March 24, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/preparing/assessment-hospitals.html)

[46] "Guidance for U.S. Laboratories for Managing and Testing Routine Clinical Specimens When There is a Concern About Ebola Virus Disease," updated October 8, 2015, accessed March 24, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/laboratories/safe-specimen-management.html)

[47] "Interim Guidance for Environmental Infection Control in Hospitals for Ebola Virus," CDC, updated April 27, 2015, accessed March 25, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/cleaning/hospitals.html)

[48] "Guidance on Personal Protective Equipment (PPE) to Be Used by Healthcare Workers during Management of Patients with Confirmed Ebola or Persons under Investigation (PUIs) for Ebola who are Clinically Unstable or Have Bleeding, Vomiting, or Diarrhea in U.S. Hospitals, Including Procedures for Donning and Doffing PPE," CDC, updated November 17, 2015, accessed March 25, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/guidance.html)

viruses (e.g., norovirus, rotavirus, adenovirus, poliovirus) be used to treat contamination/spills and to disinfect non-porous surfaces after bulk spill material has been removed.[49]

Ebola waste that has been sterilized by the generator using effective procedures (autoclaving or incineration) may be managed as trash and may be incinerated or landfilled as appropriate if there are no other hazardous characteristics.[50] Chemical treatment alone will not remove the Ebola waste (Category A) designation.

Hospitals and Other Medical Facilities

Hospitals or other medical facilities that have the capability to sterilize Ebola waste in an on-site autoclave should do so as waste is generated in order to avoid the accumulation of large volumes of untreated Ebola waste on-site. Prior to sterilization in an autoclave, any confirmed or suspect Ebola waste must be properly packaged and labeled while held in temporary storage (*see storage requirements below*). As of the time of this writing (May 2016), UMMC-West Bank is in process of installing an autoclave to sterilize their waste.

Hospitals or other medical facilities without autoclaving capabilities should package the waste following USDOT requirements (Title 49, Part 173.196, and other associated USDOT guidance) or in accordance with the special authorization permit issued to the waste contractor by the USDOT.[51] The packaged waste should be properly labeled and placed into a secure storage area. Hospitals should work with their waste management contractors to ensure that the contractor is capable of handling, transporting, and disposing of Ebola waste or contact MPCA to obtain assistance in identifying and selecting a waste transporter and disposal facility.[52] All of Minnesota's treatment centers and assessment hospitals for EVD, UMMC-West Bank and Mayo Clinic Hospital-Rochester have waste management providers with both state and federal permits allowing the proper disposal of the Category A waste. (*See Appendix J for more information on the disposal of Ebola waste*).

EMS agencies involved in the transport of suspected EVD patients will leave patient related waste with the receiving hospital consistent with CDC guidance and the receiving hospital protocol.

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[49] "Fact Sheet: Safe Handling, Treatment, Transport and Disposal of Ebola-Contaminated Waste," OSHA, National Institute for Occupational Safety and Health, U.S. Environmental Protection Agency, accessed March 25, 2016 (https://www.osha.gov/Publications/OSHA_FS-3766.pdf)

[50] MPCA makes no differentiation between incineration or autoclaving. MPCA recommends that metal may be sent to an incinerator, while paper or plastic to an autoclave.

[51] "Infectious Waste: Management guidance for transporters", Minnesota Pollution Control Agency, accessed December 13, 2017 (https://www.pca.state.mn.us/sites/default/files/w-sw4-31.pdf)

[52] Ibid.

Waste Management at Non-Health Care Facilities

At the request of MDH, the MPCA would oversee and perform decontamination activities at non-health care facilities.[53] MPCA will also oversee waste management and disposal activities, which may involve the MPCA's Emergency Response, Hazardous Waste, Solid Waste and Wastewater programs.[54]

MPCA Guidelines for Early-Symptomatic Person

For an early-symptomatic person, MDH and MPCA would follow CDC guidelines. No special handling or decontamination procedures are required for a structure where an early-symptomatic EVD individual resides, and the residents can clean and launder as normal using detergent and/ or disinfectant.[55] If the EVD-infected individual is early-symptomatic (fever only), then no special waste disposal regulations would apply to any waste that was generated by the affected individual. The waste should be properly managed following standard waste disposal regulations.[56]

MPCA Guidelines for Fully-Symptomatic Person with Ebola

MPCA's guidelines outline the decontamination process for a non-health care structure (school, office, house/apartment/condominium) where someone confirmed to have EVD, and had active symptoms (with diarrhea and vomiting), worked, resided or otherwise spent time.[57] (*Further Information can be found in Appendix J*).

Isolation of the Area/Storage of Waste

While a patient is under investigation, potential EVD-contaminated structures in a non-health care setting may need to be isolated in the impacted area. The city/municipality will need to follow MDH recommendations for the isolation of potential area(s) of concern. Security of the waste being stored or transported is the responsibility of the individuals preparing the waste for transport, under the HMR administered by USDOT.[58]

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[53] "Decontamination of buildings contaminated with Ebola virus", Minnesota Pollution Control Agency, accessed December 13, 2017 (https://www.pca.state.mn.us/sites/default/files/c-er10-01.pdf)

[54] Ibid.

[55] Ibid.

[56] Ibid.

[57] Active Symptoms means someone with a fever AND at least one of the following symptoms: diarrhea, vomiting, and unexplained bleeding.

[58] "Infectious Waste: Management guidance for transporters", Minnesota Pollution Control Agency, accessed December 13, 2017 (https://www.pca.state.mn.us/sites/default/files/w-sw4-31.pdf)

2.5.5 PPE Resources

The following procedures provide detailed guidance on the types of PPE to be used and on the processes for donning and doffing (i.e., putting on and removing) PPE for all health care workers entering the room of a patient hospitalized with confirmed EVD. The guidance in this document reflects lessons learned from the recent experiences of U.S. hospitals caring for Ebola patients and emphasizes the importance of training, practice, competence, and observation of health care workers in correct donning and doffing of PPE selected by the facility. This guidance contains the following key principles:

1. Prior to working with Ebola patients, all health care workers involved in the care of Ebola patients must have received repeated training and have demonstrated competency in performing all Ebola-related infection control practices and procedures, and specifically in donning/doffing proper PPE.
2. While working in PPE, health care workers caring for Ebola patients should have no skin exposed.
3. The overall safe care of Ebola patients in a facility must be overseen by an on-site manager at all times, and each step of every PPE donning/doffing procedure must be supervised by a trained observer to ensure proper completion of established PPE protocols.[59]

CDC Guidance Recommends the Following PPE to Care for a Patient with Suspected EVD[60] (As of August 27, 2015):

- Single-use (disposable) impermeable gowns extending at least to mid-calf OR single-use (disposable) coverall
- Powered Air Purifying Respirators (PAPRs), or disposable, National Institute for Occupational Safety and Health (NIOSH) certified, N95 respirators with full face shield
- Single-use (disposable) examination gloves with extended cuffs
- Single-use (disposable) boot covers

Additional information including donning and doffing guidance can be found on CDC's website in Section 9.[61]

[59] "Guidance on Personal Protective Equipment (PPE) to Be Used by Healthcare Workers during Management of Patients with Confirmed Ebola or Persons under Investigation (PUIs) for Ebola who are Clinically Unstable or Have Bleeding, Vomiting, or Diarrhea in U.S. Hospitals, Including Procedures for Donning and Doffing PPE," CDC, updated November 17, 2015, accessed March 25, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/guidance.html)

[60] Ibid.

[61] Ibid.

2.5.6 Mortuary Affairs

Ebola virus can be transmitted postmortem; therefore, proper precautions need to take place to assure transmission does not occur. On the most basic level, appropriate PPE must be worn when handling or exposed to human remains. The Medical Examiner's Consortium consisting of representatives from the HCME, Ramsey Medical Examiner, Anoka Medical Examiner and Southern Minnesota Regional Medical Examiner's Office (SMRMEO) in collaboration with Industrial Hygienists at the University of Minnesota have developed a series of protocols and best practices to assist in the fatality management process, which are incorporated into this document. The state Disaster Mortuary Emergency Response Team (DMERT) may assist with victim processing, victim identification, ante-mortem and post-mortem database management and victim preparation dependent upon the circumstances and scope of the event.

Fatalities in a Hospital Setting

Given the screening systems in place to identify people with suspected Ebola virus disease (including monitoring of travelers to impacted countries), planning assumptions suggest Ebola-related deaths in the United States would likely occur in a hospital setting. The CDC notes, "Ebola can be transmitted in postmortem care settings by laceration and puncture with contaminated instruments used during postmortem care, through direct handling of human remains without recommended PPE, and through splashes of blood or other body fluids such as urine, saliva, feces, or vomit to unprotected mucosa such as eyes, nose, or mouth during postmortem care."[62] Hospital staff trained in handling infected human remains and wearing recommended PPE would be responsible for bagging remains infected with the Ebola virus (confirmed or suspected).[63] Hospital staff should not remove any implanted medical devices from the body, should refrain from washing the body, and should not otherwise prepare the body in any way that will increase the potential for health care worker exposure, or transmission of the disease. CDC provides step-by-step guidance on how to safely handle human remains.[64]

Transport of Ebola Infected Remains

Hospital personnel and mortuaries should refer to the Mortuary Guidance Job Aid: Postmortem Preparation in a Hospital Room[65] and CDC's Guidance for Safe Handling of Human Remains of Ebola Patients in U.S. Hospitals and Mortuaries[66] prior to handling the body. Hospitals should

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[62] "Guidance for Safe Handling of Human Remains of Ebola Patients in U.S. Hospitals and Mortuaries," CDC, updated February 11, 2015, accessed April 11, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/hospitals/handling-human-remains.html)

[63] Ibid.

[64] "Mortuary Guidance Job Aid: Postmortem Preparation in a Hospital Room," CDC/National Institute of Occupational Safety and Health, accessed April 15, 2015 (http://www.cdc.gov/vhf/ebola/pdf/postmortom-preparation.pdf)

[65] Ibid.

[66] "Guidance for Safe Handling of Human Remains of Ebola Patients in U.S. Hospitals and Mortuaries," CDC, updated February 11, 2015, accessed April 11, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/hospitals/handling-human-remains.html)

also have a pre-designated route and policies in place for the transfer of remains through the hospital that comply with CDC Guidance. The CDC recommends that staff "minimize transportation of remains that contain Ebola virus to the extent possible."[67]

The HCME and the Medical Examiner Consortium[68] have contracted with Metro First Call and the CSM to handle the transport and final disposition of all cases of confirmed or suspected Ebola within their jurisdiction.

Hospital staff, in conjunction with MDH officials, should be in contact with the CSM and Metro First Call to coordinate the transport for deaths occurring in a hospital. As per 49 CFR, Parts 171-180, human remains transported for interment, cremation, are exempt from the U.S. Department of Transportation's HMR.[69]

Final Disposition of EVD Infected Remains

If cremation cannot occur, due to safety concerns over some medical devices (pace-makers, cardiac defibrillators, neuro stimulators and pain pumps) connected to or implanted in the body, the remains should be properly packaged per CDC guidelines, sealed in accordance with MDH requirements and buried in a standard metal casket.[70] In the case of an Ebola death, MDH's Mortuary Science Section would consult with MDH's Infectious Disease Epidemiology, Prevention and Control Division (IDEPC) and provide guidance regarding the final disposition. The local coroner or medical examiner's office may provide additional guidance in the cases under their jurisdiction. The casket containing the bagged remains can be handled with basic PPE (including gloves, N95 respirator and eye protection).[71] Cremation is recommended final disposition for EVD infected remains. Cremated remains are no longer infectious and can be returned to the family using normal procedures.[72]

Family Visitation

Hospitals should consider alternative methods (e.g., video monitor) to allow loved ones to view the remains since direct access is not an option.

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[67] Ibid.

[68] The Southeast region of Minnesota (where Mayo Clinic is located) is part of the Medical Examiner Consortium.

[69] "Guidance for Safe Handling of Human Remains of Ebola Patients in U.S. Hospitals and Mortuaries," CDC, updated February 11, 2015, accessed April 11, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/hospitals/handling-human-remains.html) and "49 C.F.R., §173.134 Class 6, Division 6.2—Definitions and exceptions," U.S. General Publishing Office, accessed April 25, 2016 (http://www.ecfr.gov/cgi-bin/text-idx?SID=7ecfa9deee74f43b60d496c7284fefda&mc=true&node=se49.2.173_1134&rgn=div8)

[70] Ibid. 149 outlines the state's mortuary requirements.

[71] Ibid. HCME's recommended PPE is a surgical mask, eyewear and gloves.

[72] "Guidance for Safe Handling of Human Remains of Ebola Patients in U.S. Hospitals and Mortuaries," CDC, updated February 11, 2015, accessed April 11, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/hospitals/handling-human-remains.html)

Out of Hospital Deaths

In the rare circumstances where the death occurs outside of a hospital setting, the local ME/C assumes jurisdiction over the death, and transport of the remains. Both HCME and SMRMEO have developed detailed protocols and algorithms (*HCME's algorithm is outlined in Appendix L*), which outline their response protocols and best practices. Upon notification of an out-of-hospital death, the Medical Examiner Investigator will ascertain whether the signs and symptoms of Ebola and travel history of either the deceased or their contacts are present. If the case is suspected to be Ebola, local Emergency Management and MDH personnel will be notified. The staff deployed to the scene would consist of trained ME and Transport personnel, who will respond to the scene to coordinate specimen collection for diagnostic confirmation of EVD. The remains may be held in quarantine until confirmatory Ebola testing is complete.

EMS Protocol

EMS will not transport a person with suspected EVD who is dead on arrival (DOA), or declared dead by medical control following scene treatment, unless consistent with existing protocols for fatality management with Coroner or Medical Examiner oversight.

ME Response Personnel Monitoring

Medical Examiner, and contracted response personnel should undergo health care worker monitoring through MDH or their health care facility. (*See Appendix E on health care worker monitoring.*)

2.6 Communications

2.6.1 Alert and Notification

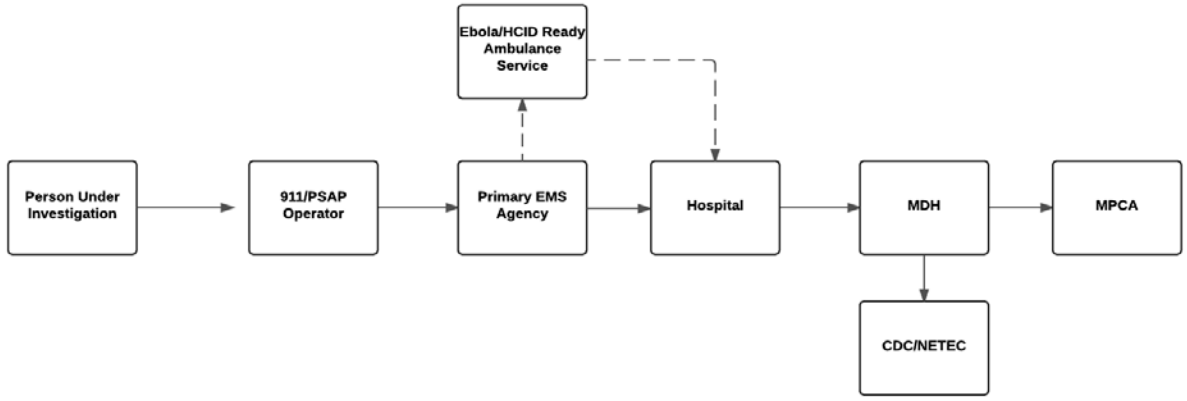
Communication is one of the most important components of response and recovery operations. Timely and accurate communication to internal and external stakeholders is critical to ensure the safety of the public, first responders, health care personnel, and patients. One goal during response is to be transparent with the public and other stakeholders to provide situational awareness, however, this should always be done in compliance with patient confidentiality laws. Methods and vehicles for communicating both internal and external stakeholders may include Health Alert Network (HAN) messages; advisories and guidance documents; materials developed in preparation for, or generated in connection with conference calls (e.g., agendas or minutes); individual mass distribution email, including Workspace messages; face-to-face conferences or briefings and documents generated in connection with those events; and one-on-one contact by phone or in person. The following section outlines the general principles, policies, and expectations for communications as related to Ebola.

External Alert and Notification of MDH

911 Call

911/PSAPs, first responders and EMS are a common entry point into the emergency health care system. Dispatch, response, patient assessment and transportation to definitive care are the key elements of the EMS response system. The public expectation is for rapid response consistent with community standards when a call requesting EMS response is made. It is imperative that first responders react in a quick, but safe and thoughtful way that does not put their well-being in danger. Thus, essential planning and exercises should take place to test this notification process. In case 911/PSAP operators receive a call where Ebola or another HCID is suspected the following is the pathway to notification:

Diagram 1: Notification Pathway Originating from 911/PSAP



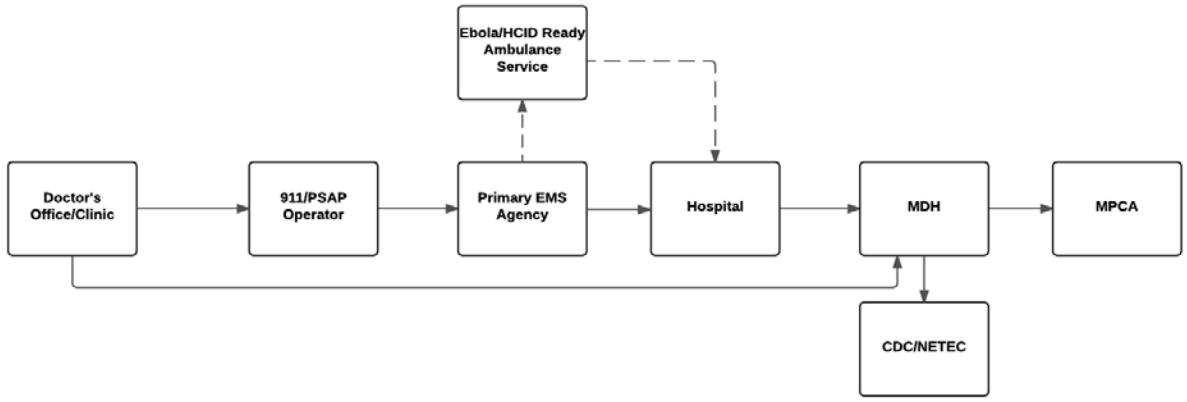
- If the primary responding EMS agency is not an "Ebola/HCID Ready" Ambulance Service, they will contact the "Ebola/HCID Ready" Ambulance Service with whom they have a Mutual Aid Agreement to respond. "Ebola/HCID Ready" ambulances are services that have been pre-identified as having the capacity to take a confirmed or suspected Ebola patient.
- If Ebola/HCID is identified by 911/PSAP operators or EMS, the PUI will most likely go directly to the nearest treatment center per MDH advice.
- The MPCA will be notified by MDH in the event the originating location of the PUI needs to be contained as they are responsible for community clean up.

Doctor's Office/Clinic

If there is a heightened risk within a community or state, as determined by MDH and CDC, physicians located at clinics and primary care practices may see patients with common symptoms with confirmed travel histories that concern them. At all times, MDH has a 24/7 on call number for clinicians to utilize. In an elevated risk situation, MDH may also establish a Medical Hotline if necessary.

- Provider notifies MDH of concern related to patient signs and symptoms. If MDH determines testing for EVD should be sought, we will advise the following steps to be taken by the provider:
  - Isolate the person under investigation.
  - Inform the patient their signs and symptoms and travel history put them at risk for EVD and the need to isolate them.
  - Call 9-1-1 and state that EVD/or other HCID is suspected and need transport directly to AH or ETC recommended by MDH.
  - Wait for EMS transport to arrive.
    - Communication pathway will remain the same as established in direct 911 call (EMS will contact hospital; hospital will confirm with MDH)
- Meanwhile, MDH will contact CDC, MPCA, and will reach out to the receiving hospital.
- MPCA will contact the clinic or office with additional instructions related to decontamination of location.
- If the patient is a highly suspect PUI/confirmed Ebola patient, MDH would work with health care providers to monitor health care workers.

Diagram 2: Notification Pathway Originating from Doctor's Office/Clinic



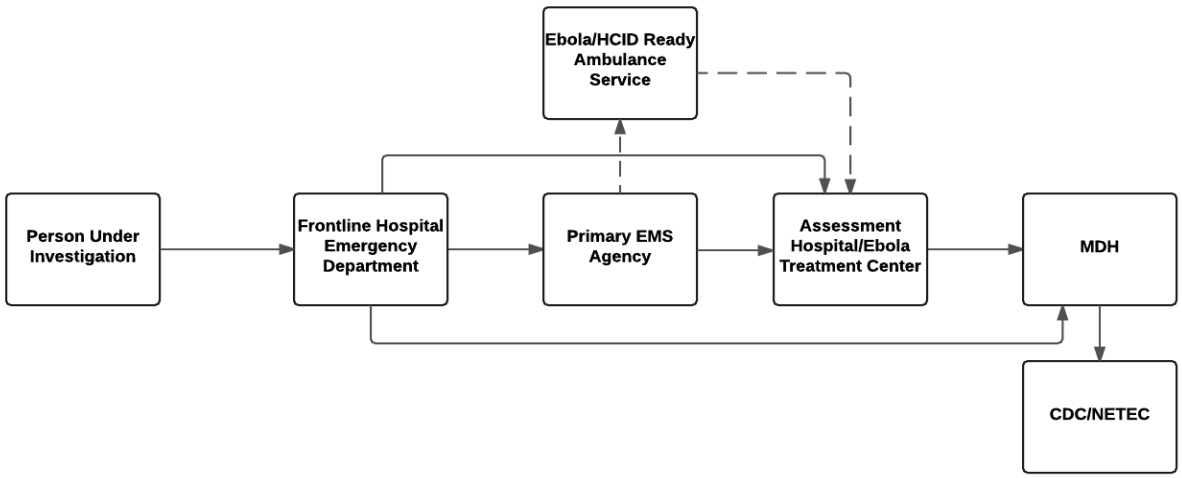
Presents to ED of Frontline Hospital

The ED is the primary point of entry into a hospital. Therefore, it would not be surprising for a patient to present to a frontline hospital ED with the general symptoms of EVD. Once a registration staff member or clinician[73] suspects Ebola due to confirmed travel and signs and symptoms, the expectation is they immediately isolate the patient. Notification should then proceed in this manner:

[73] Clinician encompasses any persons with a clinical degree with ability to assess: RN, NP, DNP, PA, DO, MD

- Clinician should follow hospital policy in notifying appropriate hospital personnel.
- Hospital will notify MDH of PUI.
  - MDH will advise, if and where the PUI should transfer and call receiving facility to alert them to the need for transfer.
- Frontline Hospital will notify the receiving Assessment or Treatment facility and arrange transport.
- MDH will notify CDC.
- If the patient is a highly suspect PUI/confirmed Ebola patient, MDH would work with health care providers to monitor health care workers.

Diagram 3: Notification Pathway Originating from Frontline Hospital ED



Presents to ED of Assessment Hospital or Ebola Treatment Center

If a patient presents to the ED of an AH or ETC, notification will follow the same pathway as previous scenario (Presentation at Frontline ED). Again, MDH will advise if necessary to transfer the patient to the ETC or if assessment can occur at the AH. If the patient is a highly suspect PUI/confirmed Ebola patient, MDH would work with health care providers to monitor health care workers.

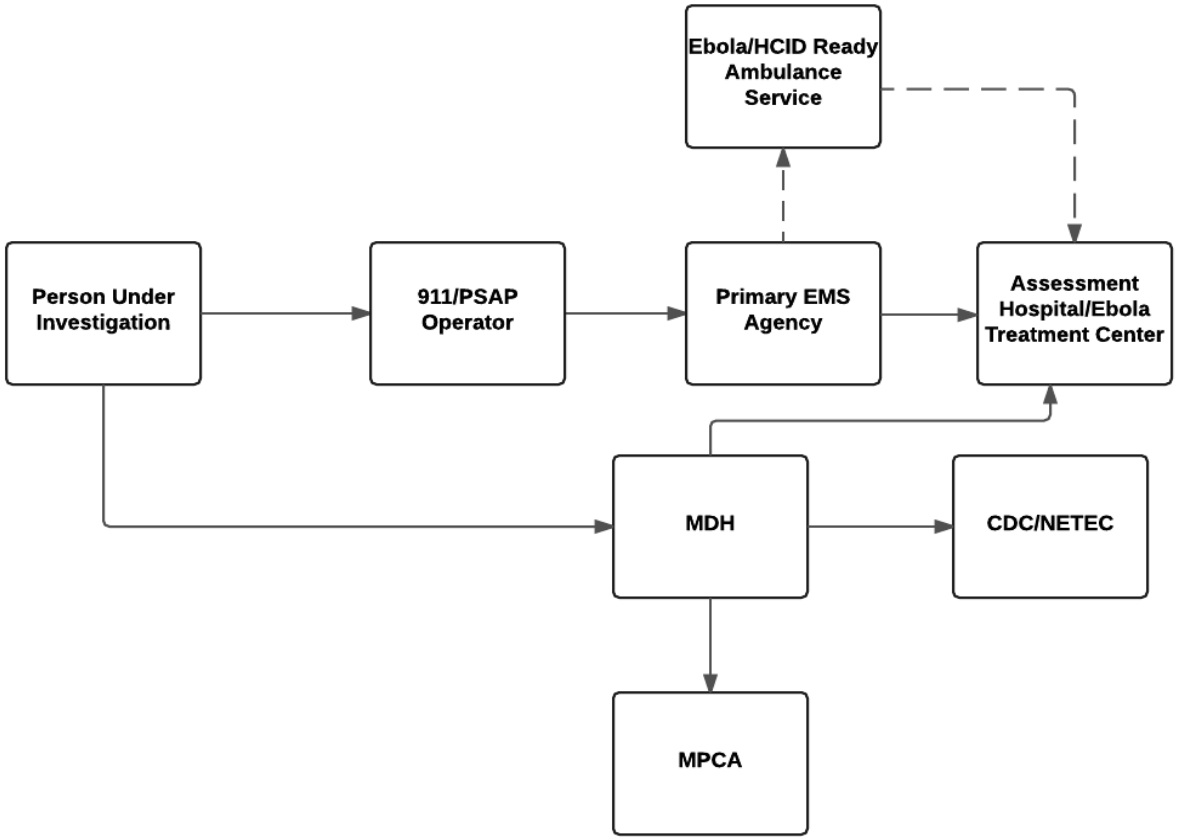
A Monitored Traveler Alerts MDH of Ebola-Related Symptoms

In a time of elevated risk, MDH may be monitoring several people who have recently traveled to an active outbreak country. In such scenarios, MDH will provide the traveler with a 24/7 phone number to call if they begin to experience symptoms and will conduct daily monitoring as per MDH's protocol (*See Section 2.3.1, Health Monitoring and Isolation and Quarantine, for details*). In the event a person under monitoring becomes a PUI (*See Appendix R – Definition of Terms*) and it is deemed medical treatment is necessary, the following notification pathway should be followed.

- MDH will determine which Collaborative Hospital will accept the patient and point of contact for that facility.
- MDH will advise person under monitoring:
  - Hospital they need to go to
  - Necessary mode of transportation to the medical facility (private vehicle vs ambulance)
    - Clinically stable PUI who do not have bleeding, vomiting, or diarrhea (at minimum): May use private vehicle after speaking with hospital point of contact.[74]
    - Active Symptoms: Will need to hang up and dial 911 and state that they are under monitoring for Ebola/PUI and need to report to the designated facility per MDH's recommendation.
- MDH will then contact the CDC and then MPCA and follow up with the hospital.
- 911/EMS will handle the transport from the patient's home to the appropriate facility if necessary.

[74] "For U.S. Healthcare Settings: Donning and Doffing Personal Protective Equipment (PPE) for Evaluating Persons Under Investigation (PUIs) for Ebola Who Are Clinically Stable and Do Not Have Bleeding, Vomiting, or Diarrhea," CDC, updated November 17, 2015, Accessed: August 11, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/guidance-clinically-stable-puis.html)

Diagram 4: Notification Pathway Originating from PUI or MDH



Airport Traveler at MSP

Minnesota residents include more than 30,000 individuals of Liberian descent, thus making the frequency of travel between Minnesota and the African continent high.[75] If during an elevated risk situation, travelers are identified by the CDC MQS located at MSP, notification will be as follows:

- CDC will notify MDH.
- MDH/local public health department will monitor the patient per protocol.
- If a traveler is symptomatic at MSP, CDC will notify Allina EMS, which is their sole service provider and arrange transport directly to UMMC-West Bank, the treatment center.
- Allina EMS will be in communication with UMMC-West Bank about PUI arrival to the hospital.

[75] "Brooklyn Park readies safeguards against Ebola," Star Tribune, July 30, 2014, Accessed: May 13, 2016 (http://www.startribune.com/brooklyn-park-readies-safeguards-against-ebola/269311081)

- Once PUI arrives at UMMC-West Bank, the hospital will reconnect MDH.

Airport Planned Transfer

Since UMMC-West Bank is the HHS Region V designated RTC, it is feasible that either MSP or STP would accept a scheduled transfer either internationally or domestically. For details on this plan please reference the Region V EVD Coordination and Transportation Plan.

Internal Alert and Notification of MDH

The MDH internal alert and notification process describes how MDH staff are to notify management and staff when there is a PUI and/or confirmed case of Ebola or other HCID. Should the MDH Medical Director or IDEPC Division Director (initial points of contact at MDH) suspect Ebola/HCID, or the hospital where a patient presents initiates transfer to an AH or ETC, the following individuals—or their designated backups will be notified immediately:

- Emergency Preparedness and Response (EPR) Director
- Public Health Lab Director
- Public Health Lab Emergency Preparedness and Response Supervisor
- Communications Office Director
- State Epidemiologist

It is understood each director will follow their own established communication pathways to disseminate information. Additionally, the PHL Emergency Preparedness and Response Supervisor will communicate a positive or negative result either confirming or ruling out Ebola/HCID to their Director (PHL Director) and the PHL Director will notify the directors of IDEPC, EPR, and Communications, and the State Epidemiologist. (*For more detail, please see Appendix N: Initial Alert and Notification.*)

Activation

As outlined in the Minnesota All-Hazards Response and Recovery Plan (AHRRP), MDH would implement ICS to facilitate communication and decision making. For more details, please see the MDH AHRRP.

Statewide Health Care Partners

For ongoing communications and communications during an outbreak or disaster situation, MDH connects with health care partners through the Health Care Preparedness Regional Coalitions. Minnesota has eight health care regions: Northwest, Northeast, West Central, Central, Metro, Southwest, South Central, and Southeast. Funded by MDH through ASPR each health region has at least one RHPC to facilitate coalition planning and response activities. Health care coalition membership generally includes: hospitals, jurisdictional emergency management, local public health, emergency medical services, long term care,

mental/behavioral health providers, clinics, and tribal health care. (*The diagram in Appendix O demonstrates the communication pathways for communication with the health care coalitions.*)

Additionally, Statewide Health Care Partners frequently utilize the Minnesota system for Tracking Resources, Alerts, and Communications (MNTrac). MNTrac can and will be used during outbreak situations to track hospital bed availability across the eight statewide regions, in real time, to determine which facilities can handle how many (and the types of) patient beds. Also, with the ability to send and receive system-wide alerts to any and all MNTrac users, via text messages, emails, and pagers, potential outbreak information and instructions could be readily communicated to all involved parties.

Hospital Communications/Ebola Collaborative

All Ebola hospitals—Frontline, Assessment, and Treatment Centers—need to develop internal communication plans about how they will notify, inform, and educate health care personnel and patients about providing care for suspected and/or confirmed cases of Ebola. Hospitals should reference CDC and World Health Organization (WHO) guidance on care when writing these plans. If the plan pertains to any outside stakeholders (i.e., EMS), the hospital needs to disseminate the information to necessary stakeholders. Additionally, hospitals should establish a plan to maintain communication between the patient and their family.

The Ebola Collaborative consists of the four designated AH and ETC, MHA, relevant regional coalition staff and MDH staff. The Collaborative meets bi-monthly via conference calls to discuss issues at hand. In the event of an outbreak or expressed need, MDH will arrange more frequent calls for on-going communication with partners. Additionally, to communicate with hospital staff and public health officials, MDH utilizes the following:

- Health Alert Network (HAN)[76]
- The Health Alert Network is a national system that rapidly disseminates urgent public health information to public health practitioners, including federal, state, territorial, tribal, and local public health; clinicians, and public health laboratories. Messages may originate from CDC or MDH.
- All messages require actions – typically indicating that new actions are suddenly needed. HAN is part of a constellation of communication methods at MDH that allow us to reach multiple partner agencies with a variety of health messages. The HAN is a health care specific tool and is not utilized to communicate messages to the general public or laboratorians.
- Laboratory Response Network (LRN)[77]

[76] "Health Alert Network," MDH, updated October 4, 2016, accessed April 23, 2016, www.health.state.mn.us/han

[77] "The Laboratory Response Network Partners in Preparedness," updated September 30, 2014, accessed April 23, 2016 (http://emergency.cdc.gov/lrn/index.asp)

- The Laboratory Response Network is a national system comprised of local, state, and federal public health, food testing, veterinary diagnostic, and environmental testing laboratories that can respond to public health emergencies.
- Information is rapidly disseminated to partners that include state and local public health, federal, military, and international laboratories. Additionally, the network provides a link for laboratories to key stakeholders including the CDC, Federal Bureau of Investigation (FBI), and the Association of Public Health Laboratories (APHL).
- MDH Clinical 24/7 Line
- At all times there is a 24/7 phone line staffed by MDH IDEPC team members available to answer questions and/or concerns of any clinician.
- 1-877-676-5414 (toll-free) or 651-201-5414

2.6.2 Administrative Preparedness

MDH's administrative preparedness plan has been fully implemented. The legal authorities, processes, and protocols are in place for the majority of the administrative aspects of emergency response. The plan details the routine processes and indicates how these processes can be expedited during emergency situations. These include emergency procurement, contracting, contract amendments, hiring, and allocation of funds to sub-awardees. MDH has expedited processes in place for receiving, allocating, and spending emergency funds.

Minnesota's two treatment centers (UMMC-West Bank, Mayo Clinic Hospital-Rochester) have contracts with waste management vendors to handle the transport and disposal of Category A waste. MPCA would handle the contracting of waste removal for the decontamination process in a non-hospital setting.

2.6.3 Public Messaging

Public information and messaging in the event of a suspected or confirmed case of Ebola will be coordinated by the MDH Communications Office, in cooperation with the host hospital.

In the case of a confirmed Ebola patient, the public information officer would work with IDEPC, the Commissioner and Governor's office, and the hospital's communications staff to coordinate public messaging efforts including: the development of press releases; update the public website and social media, as needed; and inform and educate the public on the response efforts.[78]

Special consideration should be made for English as a Second Language and non-English speaking audiences and to assure material is at an accessible health literacy level and is easily translated into the appropriate languages. Additionally, due to the large West African diaspora

[78] See the Public Information and Warning Annex to the MDH All-Hazards Response and Recovery Plan for more detailed responsibilities of Public Information Officers and the Communications Office.

in Minnesota, MDH worked with community and faith-based leaders in their development and distribution of public messages to ensure that messaging is disseminated as effectively as possible.[79]

MDH may activate a public hotline, as needed, when the State EOC's hotline is inactive. The hotline, housed in the Operations Section of the MDH Department Operations Center (DOC), is activated at the request of one of the MDH divisions. Hotline organization and staffing is arranged through program staff and the MDH Emergency Preparedness and Response unit. The DOC Public Information Officer (PIO), the Communications Office director or the director's designee are responsible for providing standardized talking points for hotline staff to ensure consistency of information.

Public information and messaging in the event of a suspected or confirmed case of Ebola will be coordinated by the MDH Communications Office, in cooperation with the host hospital. Designated MDH PIOs will work with the MDH IDEPC Division and with hospital communications staff to draft and coordinate public messaging and information as needed to inform and educate the public about Ebola and emergency response efforts. MDH PIOs will also work closely with the MDH commissioner and the governor's office.

Public information materials may include but are not limited to news releases, talking points, public website and intranet updates and social media posts. MDH PIOs will additionally work with IDEPC's Refugee and International Health to determine messaging needs of populations with limited English and the most effective methods for reaching them, including but not limited to translated materials, community meetings, faith-based leaders and radio public service announcements. Special effort will be made to involve faith-based leaders in developing and disseminating public messages to Minnesota's widely dispersed West African population. Furthermore, messaging to the broader communities will need to be considered to attempt to reduce any stigma, discrimination, and harassment that the impacted groups may be experiencing in response to fear of the disease. Incident command will determine funding sources for these activities.

3.1 Recommendations for Conducting Training

This ConOps will be exercised annually and updated to ensure it is actionable and includes the most up-to-date information. MDH will work with hospitals, coalitions, local public health, MHA, EMS, and other relevant entities to ensure health care workers are properly trained and understand their roles and responsibilities within the three-tiered system. Relevant entities will document their trainings and exercises and complete After-Action Reports (AARs), which upon completion, will be submitted to MDH.

[79] More information on MDH's work with impacted communities can be found in Appendix D:

MDH will also continue to host periodic conference calls with the treatment hospitals (Ebola Collaborative) to share best practices and have relevant MDH staff update the Ebola Collaborative on the latest infectious diseases. In addition, the Ebola Collaborative will participate in NETEC trainings and conferences to maintain readiness and capabilities as necessary.

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Appendix A: Abbreviations and Acronyms

Abbreviation or Acronym	***Definition***
AAR	After Action Report
AH	Assessment Hospital
AHRRP	All-Hazards Response and Recovery Plan
ASPR	Assistant Secretary for Preparedness and Response
CBC	Complete Blood Count
CDC	Centers for Disease Control and Prevention
CDC REP	CDC Rapid Ebola Team
CERT	CDC Ebola Response Teams
CFR	Code of Federal Regulations
ConOps	State of Minnesota Concept of Operations: Ebola virus disease
CSM	Cremation Society of Minnesota
DMERT	State Disaster Mortuary Emergency Response Team
DOA	Dead on arrival
DOC	MDH's Department Operations Center
DPS	Minnesota Department of Public Safety
ED	Emergency Department
EMS	Emergency Medical Services
EMSRB	Minnesota Emergency Medical Services Regulatory Board
EOC	State of Minnesota Emergency Operations Center
EPA	U.S. Environmental Protection Agency
EPR	MDH, Emergency Preparedness and Response Section
ETC	Ebola Treatment Center

Abbreviation or Acronym	***Definition***
EVD	Ebola virus disease
FedEx	Federal Express
FEMA	U.S. Federal Emergency Management Agency
FHCF	Frontline Health Care Facility
FOA	Funding Opportunity Announcement
HAN	Health Alert Network
HCID	High Consequence Infectious Disease
HCME	Hennepin County Medical Examiner's Office
HHS	U.S. Department of Health and Human Services
HMR	Hazardous Material Regulations
HPP	ASPR Hospital Preparedness Program
HSEM	Minnesota Homeland Security & Emergency Management Agency
IATA	International Air Transport Association
ICAR	Infection Control Assessment and Response Program
ICS	Incident Command System
IDEPC	MDH Infectious Disease Epidemiology, Prevention and Control
JIC	Joint Information Center
LRN	Laboratory Response Network
Mayo Clinic Hospital-Rochester	Mayo Clinic and Hospital-Saint Marys Campus, Rochester
MAFTAE	MN African Task Force Against Ebola
MDH	Minnesota Department of Health
MERS-CoV	Middle East Respiratory Syndrome Coronavirus
MHA	Minnesota Hospital Association

Abbreviation or Acronym	***Definition***
MNTrac	Minnesota system for Tracking Resources, Alerts, and Communications
MPCA	Minnesota Pollution Control Agency
MQS	CDC Minneapolis-St. Paul Quarantine Station
MSP	Minneapolis-Saint Paul International Airport
NETEC	National Ebola Training and Education Center
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
PAG	Phoenix Air Group, Inc.
PAPR	Power Air Purifying Respirator
PHEP	Public Health Emergency Preparedness
PHL	Minnesota Public Health Laboratory
PHSA	Public Health Service Act
PIO	Public Information Officer
PPE	Personal Protective Equipment
PSA	Primary Service Area
PSAP	Public Safety Answering Points
PTP	Patient transfer point
PUI	Person Under Investigation
RHPC	Regional Health Care Preparedness Coordinator
RST	Rochester International Airport
RTC	Regional Treatment Center
SMRMEO	Southern Minnesota Regional Medical Examiner Office
SOP	Standard Operating Procedure

Abbreviation or Acronym	***Definition***
STP	Saint Paul Downtown Airport
UMMC-West Bank	University of Minnesota Medical Center-West Bank Campus
USDOT	U.S. Department of Transportation
WHO	World Health Organization

Appendix B: Preparedness at Hospital Level

MDH is working with frontline hospitals to identify and fix gaps in response to Ebola in training, resources, and protocols. In the winter of 2015-16, MDH conducted an assessment to determine the readiness of frontline hospitals in response to a potential Ebola outbreak. MDH will then work with their local partners and regional coalitions to implement a process to fix any of the identified gaps including, but not limited to conducting trainings, and sharing resources within their coalition.

To ensure readiness for Ebola, all of Minnesota's assessment hospitals as well as treatment centers had CDC REP and MDH team visits in 2014-2015, a follow-up MDH visit in the summer of 2015, and made recommended changes following the visits. In addition to the CDC REP and MDH visit, NETEC has committed to conducting annual visits to UMMC-West Bank as the regional treatment center to assist the facility in the building and maintenance of capabilities to deal with a PUI. An initial NETEC visit was conducted in December of 2015. Further infection control procedures, including Infection Control Assessment and Response (ICAR) recommendations, can be found in Appendix M.

Appendix C: Monitoring Program

(During 2014-2016 Ebola Outbreak, as of March 2016)

Monitoring will take place for 21 days past the last possible exposure to Ebola and can occur on a voluntary basis or may be required by public health order (depending on the risk status of the traveler). There are two categories of monitoring, active monitoring and direct active monitoring.

Active Monitoring

- Individuals being monitored must take their temperature twice daily, watch themselves for symptoms, and immediately tell public health officials if they have a fever or other symptoms.
- Public health officials are responsible for checking at least once a day to see if individuals have a fever or other symptoms of Ebola.
- Allows public health authorities to assess symptomatic people in the *low but not zero risk* categories to determine if further medical evaluation at a health care facility is needed.
- Public health officials will give those being monitored a 24/7 phone number to call if they are experiencing symptoms.

Direct Active Monitoring

- Public health officials conduct monitoring by directly observing the person. This means that a public health official directly observes the person at least once a day to review symptoms and check their temperature. Direct observation can be through electronic means (Skype™ or Facetime©). A second follow-up per day can be done by telephone instead of being directly observed.
- Allows public health authorities to assess symptomatic people in the *some* and *high risk* categories to determine if further medical evaluation at a health care facility is needed.
- Public health officials will give those being monitored a 24/7 phone number to call if they are experiencing symptoms.
    - Those with a known some risk/high risk exposure may also be subject to movement restrictions (e.g., Restrict themselves from using local public transit or attending mass gatherings, including cruise ships)[80] and possible quarantine as determined on a case-by-case basis.

[80] "Notes on the Interim U.S. Guidance for Monitoring and Movement of Persons with Potential Ebola Virus Exposure," CDC, updated February 19, 2016, accessed March 2, 2016 (http://www.cdc.gov/vhf/ebola/exposure/monitoring-and-movement-of-persons-with-exposure.html)

Risk Categories[81] (As of October 9, 2015 CDC Update)

Exposure Risk Category	Description	Monitoring
High-Risk (direct contact of infected body fluids)	▪ Needle stick, or splashes to eyes, nose, or mouth. ▪ Getting body fluids directly on skin. ▪ Handling body fluids, such as in a laboratory, without wearing PPE or following recommended safety precautions. ▪ Touching a dead body without correctly wearing PPE in a country with widespread Ebola transmission (In countries with widespread Ebola transmission, it is not always known what a person died of. Therefore, touching any dead body in one of these countries is considered a high-risk exposure). ▪ Living with and caring for a person with a case of Ebola while they are symptomatic.	*Direct-active monitoring*
Some-Risk	▪ Close contact with a person showing signs of Ebola such as in a household, health care facility, or the community (no PPE worn). Close contact means being within three feet of the person with Ebola for a long time without wearing PPE. (Subject to controlled movement) ▪ In countries with widespread Ebola transmission: direct contact with a person with Ebola while wearing PPE. ▪ Public health authorities will assess symptomatic people clinically to determine if further medical evaluation at a health care facility is needed. ▪ Being in the patient-care area of an Ebola treatment unit. ▪ Travel on an airplane with a person showing symptoms of Ebola and sat within three feet. ▪ Providing any direct patient care in non-Ebola health care settings.	*Direct active monitoring*
Low-Risk (but not zero)	▪ Having been in a country with widespread Ebola transmission within the previous 21 days and having no known exposure ▪ Being in the same room for a brief period of time (without direct contact) with a person showing symptoms of Ebola ▪ Having brief skin contact with a person showing symptoms of Ebola when the person was believed to be not very contagious ▪ In countries without widespread Ebola transmission: direct contact with a person showing symptoms of Ebola while wearing PPE ▪ Health care workers who take care of patients with Ebola in health care facilities with appropriate infection prevention and control practices in U.S. (Direct active monitoring) ▪ Travel on an airplane with a person showing symptoms of Ebola. (Sat farther than three feet away.) (Self-Monitoring)[82] ▪ Laboratory processing of blood or body fluids from a person with Ebola who has symptoms, while wearing appropriate PPE and using standard biosafety precautions. ▪ Public health authorities should assess symptomatic people clinically to determine if further medical evaluation at a health care facility is needed.	*Active monitoring for most; Direct active monitoring for some*
No-Risk	▪ Contact with a person who is not showing symptoms after that person was in contact with a person with Ebola. ▪ Contact with a person with Ebola before the person was showing symptoms. ▪ Having traveled to a country with Ebola outbreak more than 21 days ago.	*No monitoring*

[81] "Epidemiologic Risk Factors to Consider when Evaluating a Person for Exposure to Ebola Virus," CDC, updated May 28, 2015, accessed March 2, 2016 (http://www.cdc.gov/vhf/ebola/exposure/risk-factors-when-evaluating-person-for-exposure.html)

[82] People check their own temperature twice daily and monitor themselves for other symptoms. People who develop symptoms while under self-monitoring should immediately self-isolate (separate themselves from others) and notify public health authorities.

Appendix D: Background on Minnesota Department of Health's Role During the 2014 Ebola Outbreak

Summary of MDH Monitoring Activities

Beginning in October 2014, MDH worked with CDC and local public health to monitor people at risk for developing EVD. The monitoring focused on travelers from countries classified by the CDC[83] as having widespread EVD transmission (henceforth referred to simply as "travelers") and people with known exposure to a patient with confirmed EVD. MDH also coordinated monitoring with Hennepin County and Ramsey County local public health departments for travelers who were residents of these counties. MDH monitored residents/visitors to all other counties in the state.

During the EVD outbreak in 2014, travelers returning from countries with widespread EVD transmission were screened prior to leaving Liberia, Guinea, or Sierra Leone. They then were routed through one of the designated airports in the United States where CDC conducted an additional screening and collected information on the passenger. MDH received the information from the CDC screening and contacted the traveler to conduct an initial interview which determined their risk of exposure to EV, travel plans, and established a monitoring plan.

From October 2014 through January 2016, 954 travelers were monitored in Minnesota. Monitoring was done per CDC Monitoring and Movement Guidelines. Monitoring in Minnesota was discontinued in January 2016.

Summary of MDH/IDEPC Community Engagement on Ebola (as of 12/15/16)

Meetings with community leaders:

- Starting in late July 2014, MDH engaged with key leaders in the affected immigrant communities (Liberian, Sierra Leonean, and Guinean, as well as other local West Africans), as well as concerned leaders from the larger communities in which they live. This continued even after the outbreak was stopped, through information sharing and continuing conversations on other issues in travelers' health and infectious disease.

[83] "2014 Ebola Outbreak in West Africa – Case Counts," Center for Disease Control and Prevention, updated April 13, 2016, accessed April 14, 2016 (http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/case-counts.html)

- These leaders were pivotal in helping us to refine our messaging, be alerted to issues being seen in the community, partnering in events, as well as helping to disseminate information.
- Examples of those engaged throughout the process:
  - The Minnesota African Task Force Against Ebola (MATFAE)
  - The Liberian Ministers Association
  - The Liberian Health Initiative
  - The Kofa Foundation
  - Hennepin County Cultural Services Units
  - Local imams
  - Many individual community leaders across the metro and in Greater MN
  - Brooklyn Center and Brooklyn Park city officials
  - Hennepin County Public Health

Community Info Sessions:

- Sunday, Aug. 3rd, 2014: Brooklyn Park Community Info Session
  - Advisory, messaging, support and assistance
  - Partners: Hennepin County Public Health, City of Brooklyn Park
- Wednesday, Aug. 6th, 2014: Brooklyn Center Community Info Session
  - Partners: City of Brooklyn Center, Hennepin County Public Health, MATFAE
- Saturday, Oct. 25th, 2014: Community Info Session at North Hennepin Community College (Brooklyn Park)
  - Partners: Hennepin County Public Health, Liberian Health Initiative, MATFAE, Allina Health
  - Drew 200 plus people for panel discussion and Q/A on Ebola. Audience was appreciative and news coverage was solid.
- Saturday, Nov. 8th, 2014: DOJ Community Info Session on Ebola-Related Stigma (Brooklyn Center Community Center):
  - This was done in response to experiences of stigma, discrimination, and harassment by various community members.
  - Partners: Dept. of Justice, Dept. of Education, US Attorney's Office, EEOC, MN Dept. of Human Rights, Hennepin County Public Health, MN Africans Against Ebola Task Force
  - Approximately 100 attendees for panel discussion, coverage by MPR and KSTP
- Monday, Dec 9th, 2014: Ebola Info Session in Marshall, MN

  - Partners: Southwest MN State University (SMSU)
- MDH has also presented information and factsheets at non-MDH Ebola-related events, or smaller meetings, including:
  - 9/14/14: Prayer/Info Session: Elim Lutheran Church
  - 10/19/2014: The Memorial for Eric Duncan and others, Cross of Glory Church

Diverse Media Campaigns

- Community leaders helped MDH in refining Ebola messaging being targeted to West African and/or broader community.
- Ad with info on Ebola and accompanying article published in a variety of ethnic media based in MN (examples: Mshale, the African News Journal, PepperSoup) in Fall 2014
- Ad placed in more mainstream media reaching the broader community that has large West African populations (example: Sun Post).
- PSAs aired on a variety of ethnic shows through KFAI – Fresh Air Radio and TMZ Liberian Radio (Brooklyn Park)
- Various MDH staff have appeared on a variety of radio programs to share information on Ebola (examples: KMOJ, KFAI, MPR)

Information Dissemination

- Creation of a FAQ to respond to the questions received from community meetings, info sessions, and calls to our infectious disease line, as well as from CDC's social media efforts.
- Emails to key leaders from the Liberian, Guinean, and Sierra Leonean communities in MN with updates from CDC, MDH, and other entities (at least weekly, most often 3-4 per week). Frequency of emails declined by the end of 2015.
- In the aftermath of the Texas case, MDH responded by creating key messages for Minnesotans – in direct response to requests for guidance from local community leaders
- Disseminating MDH messaging and materials to a broader group (Professionals working with immigrants/refugees, CBOs, diverse media vendors)
- Language Access: MDH factsheet was made available in English, French, Hmong, Somali, Spanish (other communities requested information in their languages due to fear among LEP community members)
- Infographic on how MN would respond to a case of Ebola

Partnership

- Providing community organization partners with advice and the technical information needs that they request from MDH (examples: MATFAE, Kofa Foundation, Liberian Health Initiative)

- Numerous meetings with MATFAE and other community leaders to respond to emerging issues, and ensure that all partners were on the same page in terms of messaging and efforts.
- Community partners were helpful in building understanding and participation in the voluntary monitoring program for recent travelers.
- Presented at the 2015 Community Health Conference on lessons learned. Co-presented with the Chair of MATFAE, Abdullah Kiatamba.
- Participated (August 2016) in debrief meeting for community and organizational partners to reflect on lessons learned, a model for other health issues in the MN West African community. Debrief held by Bloomington Public Health and MATFAE, using funding from MDH.

Connections:

- Connecting local Liberian leaders to the outreach being done by CDC – they became part of the calls CDC was doing with Liberian leaders in the US.
- Connecting leaders to CDC/ORR calls with West African communities

Appendix E: Special Considerations for Health Care Workers

Health care workers, broadly defined as any person working in a health care setting (including laboratory workers and emergency responders), and other workers who are potentially exposed to Ebola virus while caring for a patient with EVD or during environmental cleanup activities.

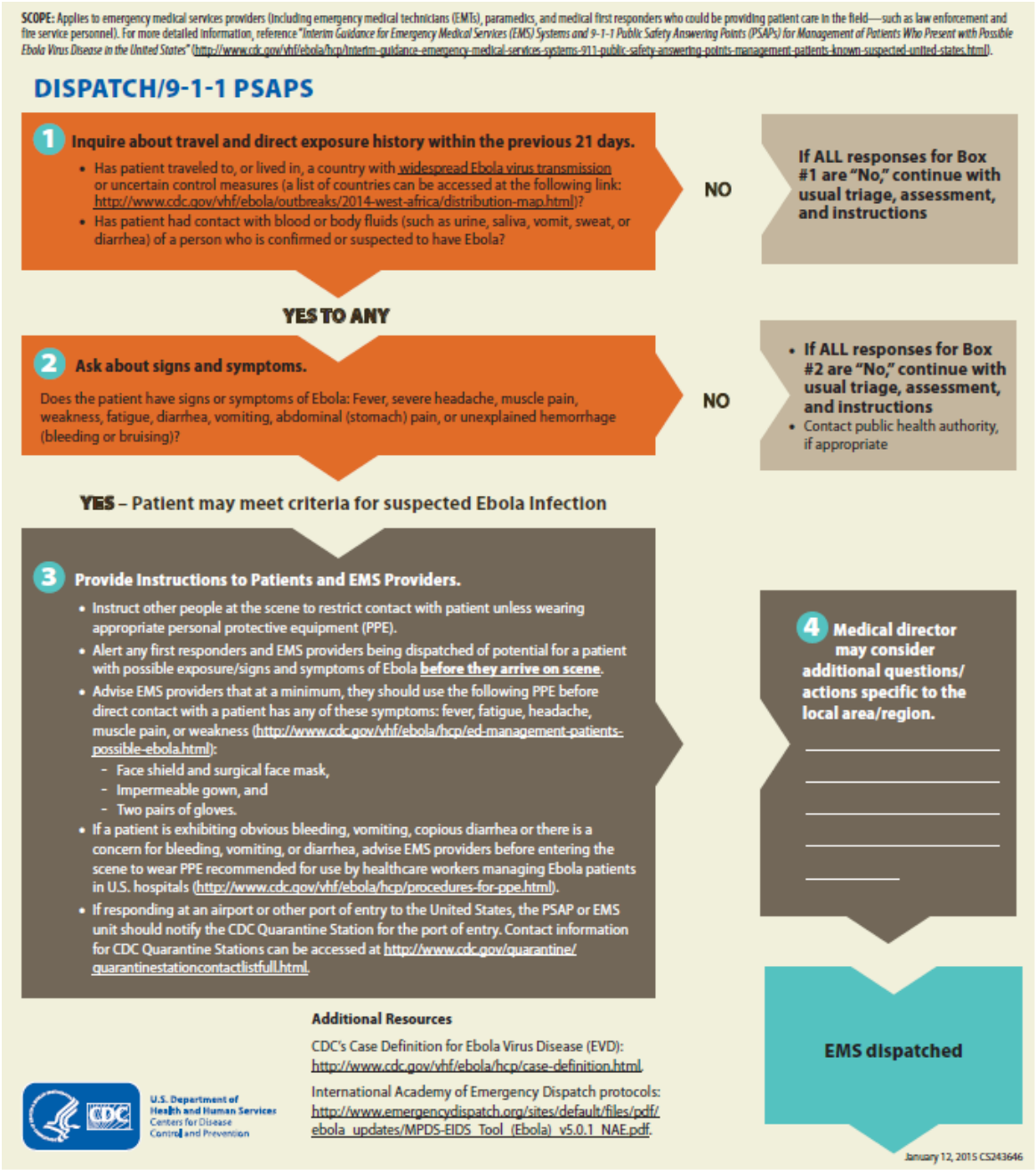
In 2014-15, CDC recommended the same requirements for active monitoring and restricted movement as any other person, with the following exceptions (It is important to note that these recommendations were made specific to the 2014 Ebola Outbreak and may not necessarily apply to a future situation.):

- Workers who wear proper Level I PPE will be exempt from the 21-day restricted movement period that begins after their last contact with the patient or potentially infectious materials. Active monitoring and a prohibition on travel by commercial conveyances will still apply. However, if the employee reports or is observed by a PPE trained observer to have experienced a needle stick or breach in PPE protocol, the full 21-day restricted movement period will apply.[84]
- Health care workers potentially exposed to Ebola virus who wear a lower than optimal level of PPE during patient care will be subject to active monitoring and restricted movement, except such workers may continue to work as part of a dedicated Ebola virus disease patient care team, and may not provide care or services to any other patient, until 21 days after the last known potential exposure.[85]

[84] Epidemiologic Risk Factors to Consider when Evaluating a Person for Exposure to Ebola Virus," CDC, updated May 28, 2015, accessed March 2, 2016 (http://www.cdc.gov/vhf/ebola/exposure/risk-factors-when-evaluating-person-for-exposure.html)

[85] Ibid.

Appendix F: Identify, Isolate, Inform: Emergency Medical Services (EMS) Systems and 9-1-1 Public Safety Answering Points (PSAPs) for Management of Patients Who Present with Possible Ebola Virus Disease (Ebola) in the United States[86]



[86] "Interim Guidance for Emergency Medical Services (EMS) Systems and 9-1-1 Public Safety Answering Points (PSAPs) for Management of Patients with Known of Suspected Ebola Virus Disease in the United States," CDC, updated December 29, 2015, accessed March 17, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/emergency-services/ems-systems.html)

Appendix G: "Ebola or Other High Consequence Infectious Disease Ready" Ambulance Service Criteria

Criteria

1. Be willing and prepared to transport either a Suspected or Confirmed Case of Ebola regardless of circumstance. This includes:
   A. Local Transport within your PSA.
   B. Local & Long Distance Transport for Mutual Aid partner or other ambulance service outside your PSA including Greater Minnesota that is requesting assistance from your ambulance service to do transport of a suspected or confirmed Ebola patient.
2. Activate "Ebola/HCID Ready" ambulance response team within specified time frame:
   A. Interfacility Transport onsite within 240 minutes (4 hours)[87]
   B. Outpatient Setting onsite within 120 minutes (2 hours)
   C. 911/PSAP Response request within 30 minutes
3. Have in place formal, written protocols for:
   A. Transport of Suspect and Confirmed Case of Ebola and Patient Handoff[88]
   B. Decontamination of Ambulance/Equipment for Ebola[89]
   C. Waste Management Protocol for Category A Waste
      a. Waste contaminated *(or suspected to be contaminated)* is a regulated hazardous material under the U.S. Department of Transportation Hazardous Materials Regulations (49 CFR, Parts 171-180).
      b. *Ambulances or other authorized vehicles are **not** licensed to transport this material* once a patient arrives at the medical facility, therefore at minimum a gross decontamination is to occur at Assessment Hospitals and/or Ebola Treatment Centers in compliance with their protocols at all times.

[87] Performance Measure 1. ASPR, July 2015, Hospital Preparedness Program (HPP) Measure Manual: Implementation Guidance for Ebola Preparedness Measures. Version 7.0

[88] "Example: Standard Operating Procedure (SOP) for Patient Handoff between a Health care Facility and a Transporting Ambulance," CDC, updated January 28, 2016, accessed March 24, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/emergency-services/patient-handoff.html)

[89] "Example: Standard Operating Procedure (SOP) for Decontamination of an Ambulance that has Transported a Person under Investigation or Patient with Confirmed Ebola," CDC, updated January 28, 2016, accessed March 24, 2016, (http://www.cdc.gov/vhf/ebola/healthcare-us/emergency-services/ambulance-decontamination.html)

D. PPE Resupply

E. Contingencies including crashes, mechanical failures, weather delays etc. that may occur during transport of Ebola patient

4. Medical director approved Ebola or Other HCID training is conducted at least *annually (more frequently during an outbreak in Minnesota)* and includes:

   A. Signs & Symptoms of Ebola and other highly infectious or new emerging disease threats

   B. How to avoid & decrease risk of exposure

   C. Ebola Specific PPE with annual donning/doffing and trained observer interactive session

      a. Active Symptoms (bleeding, vomiting, diarrhea or requires aerosol-generating procedures):[90]

         - Single-use impermeable gown that extends to at least mid-calf or single-use impermeable coverall
         - PAPR with single-use hood or single-use N95 Respirator
         - Two pairs of single-use extended cuff gloves
         - Single-use Boot covers
         - Single-use apron

      b. Clinically stable PUI who do not have bleeding, vomiting, or diarrhea (at minimum):[91]

         - Single-use (disposable) fluid-resistant gown that extends to at least mid-calf or single-use (disposable) fluid-resistant coveralls without integrated hood
         - Single-use (disposable) full face shield
         - Single-use (disposable) facemask
         - Single-use (disposable) gloves with extended cuffs. Two pairs of gloves should be worn. At a minimum, outer gloves should have extended cuffs Decontamination of ambulance and equipment

[90] "Guidance on Personal Protective Equipment (PPE) to Be Used by Healthcare Workers during Management of Patients with Confirmed Ebola or Persons under Investigation (PUIs) for Ebola who are Clinically Unstable or Have Bleeding, Vomiting, or Diarrhea in U.S. Hospitals, Including Procedures for Donning and Doffing PPE," CDC, updated November 17, 2015, accessed March 25, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/guidance.html)

[91] "For U.S. Healthcare Settings: Donning and Doffing Personal Protective Equipment (PPE) for Evaluating Persons Under Investigation (PUIs) for Ebola Who Are Clinically Stable and Do Not Have Bleeding, Vomiting, or Diarrhea," CDC, updated November 17, 2015, Accessed: August 11, 2016 (http://www.cdc.gov/vhf/ebola/healthcareus/ppe/guidance-clinically-stable-puis.html)

5. Maintain >90% of all staff trained **or** designate specific Ebola Team Members who are willing to respond at any and all times[92]
6. Maintain all Ebola ready training documentation on file for review
7. Conduct or participate in patient transport drill/exercise annually
8. Collaborate with all entities including: MDH, EMSRB, Health Care Coalitions, Local & Tribal Public Health, Hospitals, PSAPs, and first response agencies
9. Be able to maintain normal operations and coverage within PSA during Ebola/HCID transport

Implications

It is important all ambulance services and their medical directors understand the potential implications of performing such a high risk response and transport. All ambulance services considering accepting this role should first understand the following:

1. The ambulance (or authorized vehicle) utilized will be out of service until decontamination is completed (Estimated time: up to 72 hours or more in some cases)
2. Personnel who perform the transport must be willing and able to:
    A. Follow CDC recommended PPE guidance at all times.
    B. Remain with the patient until hospital staff assume care of the patient.
    C. Provide life-saving treatment within scope of practice or under medical director approval including, but not limited to: CPR, airway management, establishing and/or maintain IV.[93]
        a. Per CDC guidelines, life-saving treatment should not be withheld because a person is suspected or confirmed with Ebola. However, EMS personnel must work with their medical director, medical control physician or ED physician to assess the risk of exposure prior to a decision to withhold care.
        b. "Prehospital resuscitation procedures such as endotracheal intubation, open suctioning of airways, and cardiopulmonary resuscitation frequently result in a large amount of body fluids, such as saliva and vomit. Performing these procedures in a less controlled environment (for example, a moving vehicle) increases risk of exposure to infectious pathogens for EMS providers. Perform these procedures under safer circumstances (when the vehicle has stopped, upon

[92] No personnel who have not been trained will be dispatched to the field to respond to an Ebola call.

[93] "Interim Guidance for Emergency Medical Services (EMS) Systems and 9-1-1 Public Safety Answering Points (PSAPs) for Management of Patients with Known of Suspected Ebola Virus Disease in the United States," CDC, updated December 29, 2015, accessed March 17, 2016 (http://www.cdc.gov/vhf/ebola/healthcare-us/emergency-services/ems-systems.html)

arrival at the hospital destination) and wear the PPE recommended by CDC to use during aerosol-generating procedures."[94]

c. "Invasive procedures should be limited to those essential for patient management."[95]

D. Follow monitoring, isolation, and potential quarantine protocols of their agency, MDH, and CDC.

Understand if there is a PPE failure or exposure to body fluids from the patient, they may be unable to report to work for up to 21 days if placed under isolation or quarantine.

[94] Ibid.

[95] Ibid.

Appendix H: List of "Ebola or Other High Consequence Infectious Disease Ready" Ambulance Services

Agency	EMS Region(s) of Operation[96]	Contact Name	Email	Station Address
Allina Health EMS	Metro, Central, South Central, Southwest	Cory Kissling	cory.kissling@allina.com	167 Grand Ave Saint Paul, MN 55102
Altru Ambulance Service	Northwest	Eric Toutenhoofd	etoutenhoofd@altru.org	1200 South Columbia Rd PO Box 6002 Grand Forks, ND 58206
FM Ambulance	West Central, Northwest	Brett Wigglesworth	Brett.wigglesworth@fmambulance.com	2215 18th St S Fargo, ND 58103
Gold Cross EMS	Northeast, Central, Southeast	Mike Sveen	sveen.michael@mayo.edu	501 6th Ave NW Rochester, MN 55901
HealthEast EMS	Metro	Nick Lesch	njlesch@healtheast.org	799 Reaney Ave Saint Paul, MN 55106
North Memorial Ambulance	Metro, Central, Southeast, South Central, Southwest	Kevin Novotny	Kevin.Novotny@northmemorial.com	4501 68th Ave N Brooklyn Center, MN 55429
Willmar Ambulance Service	Southwest	Brad Hanson	bhns@rice.willmar.mn.us	301 SW Becker Ave Willmar, MN 56201

[96] EMS Regions differ from the Public Health and Health Care Regions. Counties Meeker & McLeod are located in EMS Region Southwest, not South Central and county Becker is located in EMS Region West Central, not Northwest.

Appendix I: List of Patient Transfer Points in Minnesota

For Internal Use Only

Appendix J: MPCA Process of Ebola Related Waste Disposal Diagram

For Internal Use Only

Appendix K: MPCA Guidelines for Fully-Symptomatic Person with Ebola

For Internal Use Only

Appendix L: HCME's Ebola Response Algorithm

For Internal Use Only

Appendix M: MDH's On-Going Infection Control Procedures

MDH has a series of advisory committees that have been working to improve infection control practices in all health care settings. For example, the Minnesota Health Care-Associated Infection Prevention Advisory Group includes representatives from the following organizations:

- Association of Professionals in Infection Control and Epidemiology – Minnesota Chapter,
- Aging Services of Minnesota
- End-Stage Renal Disease Network #11,
- Institute for Clinical Systems Improvement,
- Minnesota Alliance for Patient Safety,
- Minnesota Ambulatory Surgery Center Association,
- Minnesota Directors of Nursing Administration,
- Minnesota Hospital Association,
- Minnesota Interlaboratory Microbiology Association,
- Minnesota Medical Association,
- Minnesota Medical Directors Association,
- North Central Chapter Infectious Diseases Society of America,
- Stratis Health (Minnesota's Quality Improvement Organization),
- Regional Health Care Preparedness Consultants.

Within MDH, the advisory group includes the regional health care coalitions as well as members from the following divisions:

- Health Regulations;
- Health Policy (Adverse Events Reporting and Health Information Technology);
- IDEPC;
- Health Partnerships (EPR);
- Executive Office (State Epidemiologist).

In addition, MDH has sponsored an antimicrobial stewardship steering group made up primarily of infectious disease physicians and infectious disease pharmacists since 2012. This group has provided guidance for the development of an antimicrobial stewardship toolkit. The group has also planned three annual antimicrobial stewardship conferences. A new 'One Health' Antimicrobial Resistance Steering Group has been established including leaders in animal and environmental health in addition to human health.

MDH ICAR staff are currently working on a platform for which to house a compendium of Minnesota health care settings. MDH will compile the contact information for the facility infection prevention staff, the phone, address, email, as well as the accrediting agency or regulatory authority.

In addition to our work with EVD Treatment Facilities, MDH partners with Acute Care, Long Term Care, Outpatient, and Dialysis care facilities to administer the CDC ICAR Assessment Tool to identify gaps in infection control. MDH will prioritize the identified gaps and determine methods to best mitigate the gaps.

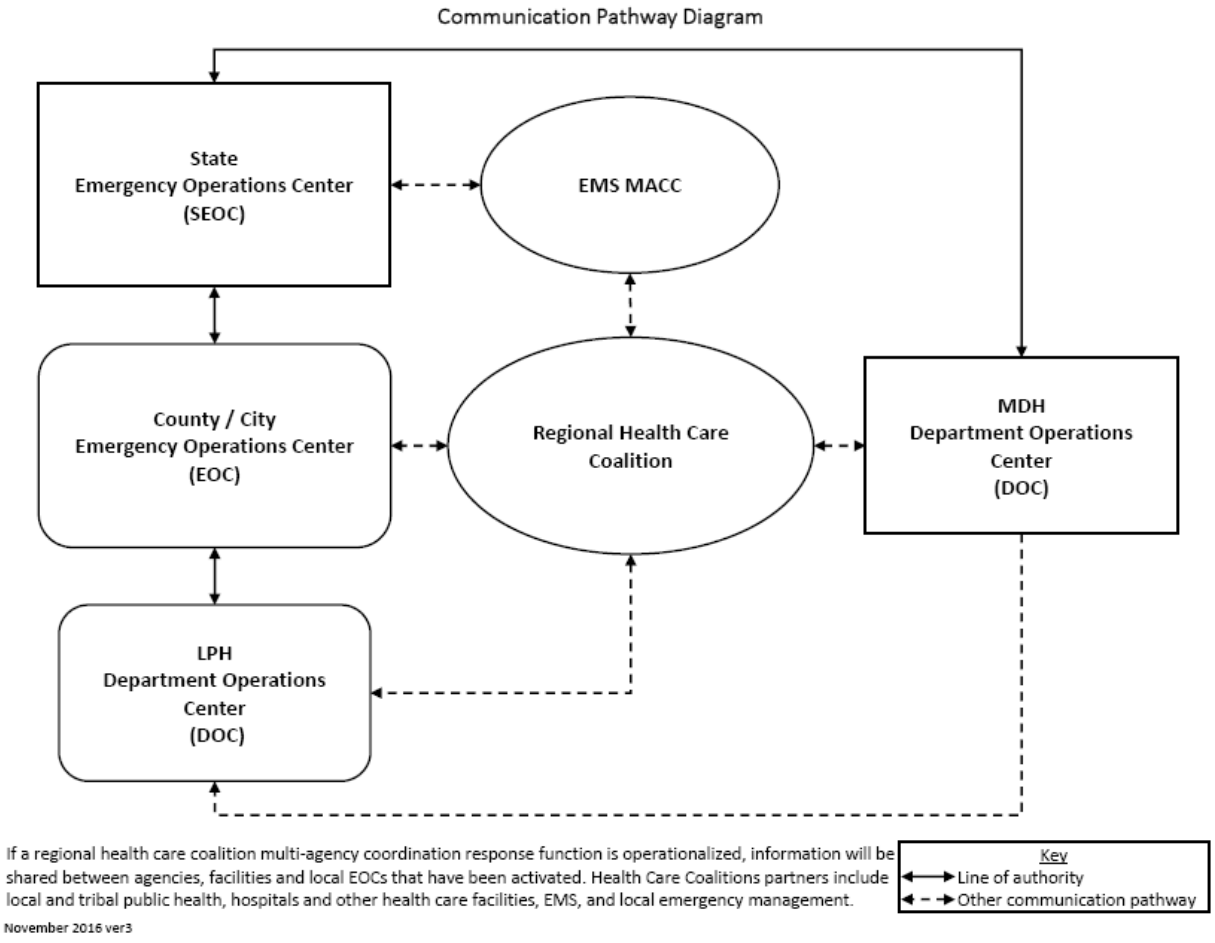
MDH will develop a mediation/performance improvement plan for facilities' who receive the CDC ICAR Assessment Tool, provide on-going training/technical assistance, conduct subsequent follow-up site visit to ascertain the overall impact of proposed activities; assess progress toward goals; and provide information about successes and challenges to help modify activities. On-going follow-up activities include, but are not limited to: (a) tracking and reporting of outcomes for all strategies; (b) Collecting and sharing success stories; (c) participation in MDH evaluation activities; and (d) use of standardized tools and protocols developed by CDC.

In addition, MDH Health Care-Associated Infection (HAI) staff is working to: Develop a sustainable training program based on CDC guidance and technical assistance to perform training, prioritize on-site train-the-trainer programs in key domains of infection control, including the incorporation of hands on evaluations and competency assessments of best practices and a system to monitor ongoing compliance and competency.

Appendix N: Initial Alert and Notification

For Internal Use Only

Appendix O: Communication Pathways Between MDH and Health Care Coalitions



Appendix P: Administrative Preparedness During 2014-2016 Outbreak

During the 2014-2016 response, MDH worked with the Minnesota Department of Administration to activate Minnesota Statute Chapter 16 for Ebola to allow MDH emergency authorization to purchase and contract in order to protect health, life, property and the function of government.

MDH used the Minnesota Department of Administration's approval of the state authority, Minnesota Statute Chapter 16, to purchase and contract for Ebola and other emergencies without having to follow the standard purchasing rules, including bidding. This did require reporting back to Minnesota Department of Administration after the response was over.

Appendix Q: Requirements for Trainings/Drills/Exercises

As outlined in the Funding Opportunity Announcement (FOA) for Ebola,[97] there are a number of training requirements for health care entities in Minnesota. This section will outline the requirements for trainings, drills, and exercises. In addition to the requirements, the entities will ensure they are hitting the performance measures related to exercises, drills, and trainings.

Concept of Operations

The ConOps will be maintained and exercised annually throughout the five-year period of the grant. This annual exercise will include patient transfer to UMMC-West Bank, the HHS Region V Regional Ebola Treatment Center.

Regional Health Care Coalitions

Each of the eight regional health care coalitions in Minnesota will conduct annual coalition level exercises with, at a minimum, frontline facilities and EMS. Regions with treatment centers and assessment hospitals will include these entities in their exercises. The grant guidelines note, "Exercises in the first year should be specific to Ebola and will not necessarily satisfy the annual HPP-Public Health Emergency Preparedness (PHEP) exercise requirements. If in subsequent years, there are no global outbreaks of Ebola, exercises may address other infectious diseases, such as Middle East Respiratory Syndrome Coronavirus (MERS-CoV) and measles, and may satisfy the annual HPP-PHEP exercise requirements upon approval of your Field Project Officer."[98] The regional coalitions will ensure they are able to meet the performance measures and will send AARs to MDH for review.

In addition, the regional coalitions will provide funding to EMS agencies within their jurisdiction, for Ebola preparedness activities, such as PPE, training, and drills and exercises.[99]

The health care coalitions will also "ensure the competency of health care workers, clinical laboratories, and EMS personnel in the coalition through supporting annual training and exercises."[100] Finally, the grant requires that all entities including the health care coalitions to have a "plan to maintain their readiness to care for an Ebola patient for the duration of the project period through annual staff trainings and exercises and sustainment of Ebola PPE."[101]

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[97] "EP-U3R-15-002; Hospital Preparedness Program (HPP) Ebola Preparedness and Response Activities: Development of a Regional Ebola and other special pathogen treatment center," HHS/ASPR, updated May 21, 2015, accessed April 25, 2016 (http://www.grants.gov/view-opportunity.html?oppId=274709)

[98] Ibid.

[99] Ibid.

[100] Ibid.

[101] Ibid.

Assessment Hospitals

Minnesota is served by two treatment centers that will serve as assessment hospitals if needed. Therefore, they will maintain training and exercise at the treatment center level.

State Ebola Treatment Center (Mayo Clinic Hospital-Rochester)

The State Ebola Treatment Center will conduct annual exercises (including after action reviews and corrective action plans), which should include unannounced first encounter drills for Ebola (and other infectious diseases, such as MERS-CoV and measles), patient transport exercises, and patient care simulations.[102] The facilities will ensure they test and meet the performance measures as well as completing AARs, which they will send to MDH.

Regarding training, the State Ebola Treatment Center will "provide hospital-level training of staff, specifically focusing on health care worker safety when caring for an Ebola patient (e.g., PPE donning/doffing, rapid identification and isolation of a patient, safe treatment protocols, and the integration of behavioral health support) and early recognition, isolation, and activation of the facility's Ebola plan."[103] Mayo Clinic Hospital-Rochester will also, "receive and participate in training, peer review, and an assessment of their readiness from the National Training and Education Center (to be established) to ensure adequate preparedness and trained clinical staff knowledgeable in treating patients with Ebola in the U.S."[104] The grant requires that all entities, including state Ebola Treatment Centers to "have a plan to maintain their readiness to care for an Ebola patient for the duration of the project period through annual staff trainings and exercises and sustainment of Ebola PPE."[105]

Finally, "Within 72 hours of the region's Ebola treatment center (*see Part B of this FOA*) accepting a confirmed Ebola patient, all state/jurisdiction Ebola treatment centers located within that region will begin their just-in-time trainings and final preparations, so they are able to accept a patient (in the event of a small cluster of cases)."[106]

Regional Ebola Treatment Center (UMMC-West Bank):

The regional Ebola treatment center will maintain a heightened state of readiness for at least the five-year project period by conducting quarterly staff trainings as well as staff drills and exercises. Specifically, UMMC-West Bank will "conduct quarterly exercises, including after action reviews and corrective action plans, which should include unannounced first patient encounter drills for Ebola (and other infectious diseases, such as MERS-CoV and measles),

[102] Ibid.

[103] Ibid.

[104] Ibid.

[105] Ibid.

[106] Ibid.

patient transport exercises, and patient care simulations."[107] UMMC -West Bank will send MDH their AARs and will ensure that they are meeting the performance measures to confirm they maintain their readiness and capabilities to handle an Ebola patient.

Regarding training, UMMC-West Bank will "train staff at least quarterly, specifically focusing on health care worker safety when caring for an Ebola patient (e.g., PPE donning/doffing, rapid identification and isolation of a patient, safe treatment protocols and behavioral health considerations) and early recognition, isolation, and activation of the facility's Ebola plan."[108] UMMC-West Bank will also "receive and participate in training, peer review, and an assessment of their readiness from the National Training and Education Center (to be established) to ensure adequate preparedness and trained clinical staff knowledgeable in treating patients with Ebola in the U.S."[109] UMMC -West Bank will also, "develop, maintain, and exercise policies and procedures to ensure health care worker readiness and safety, including behavioral health considerations, associated with caring for an Ebola patient for the five-year project.[110] Finally, the grant requires that all entities (Ebola treatment centers, assessment hospitals, and health care coalitions) receiving funding through Part A have a plan to maintain their readiness to care for an Ebola patient for the duration of the project period through annual staff trainings and exercises and sustainment of Ebola PPE.[111]

[107] Ibid.

[108] Ibid.

[109] Ibid.

[110] Ibid.

[111] Ibid.

Appendix R: Definition of Terms

Administrative Procedures

The process of ensuring fiscal and administrative authorities and practices that govern funding, procurement, contracting, hiring, and legal capabilities necessary to mitigate, respond to, and recover from public health emergencies can be accelerated, modified, streamlined, and accountably managed at all levels of government.

Concept of Operations (ConOps)

A conceptual overview of the processes and steps envisioned in the proper functioning of a system or in the proper execution of an operation. This overview also can include responsibilities and authorities, available resources, and methods to improve communications and coordination.

Doffing

The process of removing used personal protective equipment.

Donning

The process of putting on clean personal protective equipment

Elevated Risk

In relation to EVD, an elevated risk may be determined by 1) Outbreak status in another country 2) A confirmed case of EVD within the United States.

Ebola Collaborative

The Ebola Collaborative is a coalition of MDH, MHA, Metro and Southeast regional coalitions, and the four assessment and treatment hospitals in Minnesota that came together to share best practices and updates during the Ebola Virus Disease outbreak from 2014-2016.

Ebola virus disease (EVD)—previously known as Ebola hemorrhagic fever

A rare and deadly disease caused by infection with one of the Ebola virus strains. Ebola can cause disease in humans and nonhuman primates (monkeys, gorillas, and chimpanzees).

MDH Health Care Preparedness Program

A program managed by Minnesota Department of Health's Health Care Preparedness Program Manager, which provides leadership and funding through grants and cooperative agreements to states, territories, and eligible municipalities to improve surge capacity and enhance community and hospital preparedness for public health emergencies.

Outbreak Scenario:

In this plan, MDH is using WHO's definition of an outbreak as the occurrence of cases of disease in excess of what would normally be expected in a defined community, geographical area or season. An outbreak may occur in a restricted geographical area, or may extend over several countries. It may last for a few days or weeks, or for several years. An outbreak may be a single case of a communicable disease long absent from a population.

Person Under Investigation (PUI)

A person who has both consistent signs or symptoms and risk factors as follows should be considered a PUI:

- Elevated body temperature or subjective fever or symptoms, including severe headache, fatigue, muscle pain, vomiting, diarrhea, abdominal pain, or unexplained hemorrhage

AND

- An epidemiologic risk factor within the 21 days before the onset of symptoms

Tiered Hospital System in the United States

To create a coordinated networked approach, state and local health officials, in collaboration with hospital and health care facility executives, may designate health care facilities across the state to serve in one of three suggested roles outlined in this guidance document. Frontline hospitals screen, isolate and transfer for testing and possibly treatment. Assessment hospitals screen, isolate, conduct differential and confirmatory testing and transport to treating facility. Ebola treatment center can screen, isolate, conduct all testing and offer treatment under research protocols.

Appendix S: Ebola Virus Disease (EVD) Resources[112]

Note: *Other than the resources provided by MDH or the U.S. Federal Government, the Minnesota Department of Health (MDH) does not endorse one Ebola Virus Disease (EVD) model, training, or resource for first responder Personal Protective Equipment (PPE) over another. These documents/websites are provided for information, and as samples for your review and reference.*

MDH Reporting

Organization	*Name of Document or Website*	*Date Published/Updated*	*Web Link*
MDH (Minnesota Department of Health)	"24-7" Phone Reporting	1/9/2014	http://www.health.state.mn.us/divs/idepc/dtopics/reportable/forms/247phone.html

Ebola Overview

Organization	*Name of Document or Website*	*Date Published/Updated*	*Web Link*
CDC (Centers for Disease Control and Prevention)	Ebola (Ebola Virus Disease)	4/14/2016	http://www.cdc.gov/vhf/ebola/index.html
MDH	Ebola Virus Disease	3/16/2015	http://www.health.state.mn.us/divs/idepc/diseases/vhf/index.html
MDH	Ebola Virus Disease Information for Health Professionals	10/17/2014	http://www.health.state.mn.us/divs/idepc/diseases/vhf/hcp/index.html
National Ebola Training and Education Center (NETEC)	Ebola Overview	3/1/2017	http://netec.org/wp-content/uploads/2017/03/1-NETEC-Overview-Ebola-Outbreak.pdf

[112] Updated 5/26/2017

Ebola Overview continued

Organization	*Name of Document or Website*	*Date Published/Updated*	*Web Link*
NETEC Hospital Protocols (Bellevue, Emory, Nebraska Medical Center [NBMC])	Ebola Resources (Hospital Protocols)		http://netec.org/resources-repository/
OSHA (Occupational Safety and Health Administration)	Ebola Overview		https://www.osha.gov/SLTC/ebola/index.html

Fatality Management

Organization	*Name of Document or Website*	*Date Published/Updated*	*Web Link*
CDC	Guidance for Safe handling of Human Remains of Ebola Patients in U.S. Hospitals and Mortuaries	2/11/2015	http://www.cdc.gov/vhf/ebola/healthcare-us/hospitals/handling-human-remains.html
CDC/NIOSH	Mortuary Guidance Job Aid: Postmortem Preparation in a Hospital Room		http://www.cdc.gov/vhf/ebola/pdf/postmortom-preparation.pdf
NETEC (Bellevue, Emory, NBMC)	PowerPoint: Care of the Deceased	3/11/2017	http://netec.org/wp-content/uploads/2017/03/11-NETEC-Care-Deceased.pdf
NETEC (NBMC)	Body Sealer Basics (Bio-Hazardous Remains)	7/24/2012	https://www.youtube.com/watch?v=6ibFhbtXza4

Guidance on Travel Questions

Organization	*Name of Document or Website*	*Date Published/Updated*	*Web Link*
MDH	Guidance on Travel Questions	2016	http://www.health.state.mn.us/divs/idepc/dtopics/travel/hcp.html

Interfacility Transfer

Organization	*Name of Document or Website*	*Date Published/Updated*	*Web Link*
CDC	Guidance for Developing a Plan for Interfacility Transport of Persons Under Investigation or Confirmed Patients with Ebola Virus Disease in the United States	1/28/2016	https://www.cdc.gov/vhf/ebola/healthcare-us/emergency-services/interfacility-transport.html
CDC	Interfacility Transport Guidance (Patient Handoff SOP, Air-to-Ground Patient Handoff SOP, Ambulance Decontamination)	1/28/2016	https://www.cdc.gov/vhf/ebola/healthcare-us/emergency-services/patient-handoff.html
Nebraska Medical Center	Isopod Basics: Patient Care	3/6/2013	https://www.youtube.com/watch?v=6HCjYLcbLMY

PPE Donning/Doffing

Organization	*Name of Document or Website*	*Date Published/Updated*	*Web Link*
CDC	Video: Step-by-Step process on Donning/Doffing	11/17/2014	http://www.cdc.gov/vhf/ebola/hcp/ppe-training/comprehensive-ppe-training.html

Organization	Name of Document or Website	Date Published/Updated	Web Link
CDC	Step-by-Step process on Donning/Doffing	8/27/2015	http://www.cdc.gov/vhf/ebola/healthcare-us/ppe/guidance.html
MDH	Video: PPE Donning/Doffing	1/2/2015	https://www.youtube.com/watch?v=Zkx8sMyYfdY&feature=youtu.be
NETEC (Bellevue, Emory, NBMC)	PowerPoint: PPE	3/3/2017	http://netec.org/wp-content/uploads/2017/03/3-NETEC-PPE.pdf
NETEC (Emory)	Video: Donning		https://www.youtube.com/watch?v=F2i0P-8fybQ&feature=youtu.be
NETEC (Emory)	Video: Doffing		https://www.youtube.com/watch?v=NLGPy0GmCc8&feature=youtu.be
NETEC (Emory)	Video: Removing Gloves		https://www.youtube.com/watch?v=BOAb_cy3HxM&feature=youtu.be
NETEC (NBMC)	Video: Donning PAPR Level PPE	10/31/2015	https://www.youtube.com/watch?v=O04BuVFbhfE
NETEC (NBMC)	Video: Doffing PAPR Level PPE	10/31/2015	https://www.youtube.com/watch?v=8KwjSZjrvg4

Waste Management

Organization	Name of Document or Website	Date Published/Updated	Web Link
CDC	Waste Management for Hospitals	4/27/2015	http://www.cdc.gov/vhf/ebola/healthcare-us/cleaning/hospitals.html
NETEC (Bellevue, Emory, NBMC)	PowerPoint: Waste Management	3/10/2017	http://netec.org/wp-content/uploads/2017/03/10-NETEC-Waste-Management.pdf

Organization	***Name of Document or Website***	***Date Published/Updated***	***Web Link***
NETEC (Emory)	Video: Cleaning up Spills (Video)	12/3/2014	https://www.youtube.com/watch?v=rGk8s8tySew&feature=youtu.be
NETEC (Emory)	PowerPoint: Environmental Infection Control	3/10/2017	http://netec.org/wp-content/uploads/2017/03/9-NETEC-Environmental-Infection-Control.pdf
Johns Hopkins Hospital	Article on Autoclave Protocols	12/1/2016	http://jcm.asm.org/content/early/2016/12/01/JCM.02161-16.abstract
MPCA	MPCA Management Guidance for Storage and Decontamination Facilities	8/2015	(https://www.pca.state.mn.us/sites/default/files/w-sw4-32.pdf)
MPCA	MPCA Infectious Waste: Guidance for On-Site Treatment	9/4/2015	https://www.pca.state.mn.us/sites/default/files/w-sw4-33.pdf
OSHA	Safe Handling, Treatment, Transport of Ebola-Contaminated Waste	3/2016	https://www.osha.gov/Publications/OSHA_FS-3766.pdf

Appendix T: High Consequence Infectious Disease Supplement

Under Development