



High Consequence Infectious Diseases

Dr Alvine Laure Ekame | EPR-HPP  
April 10, 2019

**m** DEPARTMENT OF HEALTH

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Objectives

- Review the Minnesota Ebola Concept of Operation
- Management of a PUI
- Notification call to MDH

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MN EBOLA CONCEPT OF OPERATIONS

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## State of Minnesota Concept of Operations: Ebola Virus Disease

AN ANNEX TO THE MDH ALL-HAZARDS RESPONSE AND RECOVERY PLAN

- What is it?  
*A structure for how the MDH and its federal, tribal, state, and local partners would operate if there was an Ebola outbreak.*
- What does it say?  
*Roles and Responsibilities, transfer of Ebola patient, alert and notification chart, monitoring travelers.*

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## State ConOps Promising Practices

- Future plans for the ConOps  
*Revise the document to focus on HCID vs just Ebola.*
- Development of state HCID ConOps
- Worked with EMS to develop HCID toolbox for EMS
- Mystery patient Drills
- Access and functional needs

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## How to Manage a PUI

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## Overcome the “Mental Fog”



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## Think of a Big Pie



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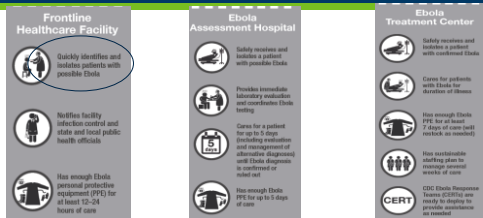
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## A Tiered Approach to HCID Preparedness



Every facility is a Frontline facility  
3 critical roles: Identify, Isolate, Inform

Mayo Clinic  
UMMC-Fairview

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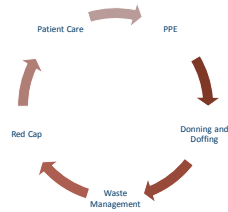
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## Management of a PUI

- Patient care
- PPE
- Donning and doffing
- Waste management
- Special Considerations for Health Care Workers and Other Potential Occupational Exposure to Ebola Virus



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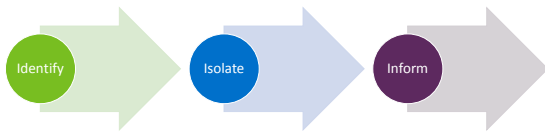
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## The 3 Is



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## Identify

- Signage
- Triage practices

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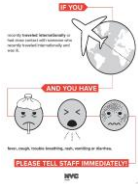
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## Identify

### ATTENTION ALL PATIENTS



- Early recognition leads to early isolation and is another key to preventing the spread of infection.
- Screening should be done immediately upon patient arrival or in advance if possible.

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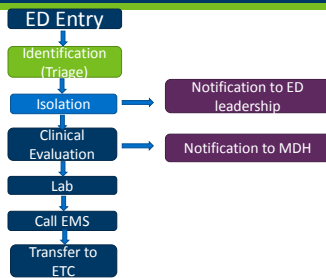
## Isolate

Identification to isolation <5 minutes

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## Inform



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### At Patient Presentation

- Whether in ED or outpatient, a provider will need to have suspicion for an HCID
- Once suspected
  - Conferring with colleagues
  - Discussion with nursing
  - Isolation precautions
  - Inform Hospital Leadership, IP team; Crisis Management team as indicated.
- Initiating call with MDH

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### EMS request Protocol

#### REQUEST PROTOCOL

1. *Regardless of circumstance, please follow your **normal protocol** and contact your hospital's usual EMS hospital to hospital transport provider.*
2. *If your usual EMS hospital to hospital transport provider is not one of the identified Ebola/HCID services they will contact an appropriate service.*
3. Please **Do Not** attempt to contact an identified Ebola/HCID EMS Service on your own. **This Will Create a DELAY in PATIENT TRANSPORT.**

If there are any clinical questions while awaiting transport, please contact the Infectious Disease Epidemiology, Prevention and Control Division at MDH at 651-201-5414 or 1-877-676-5414 and ask for the Medical Director 24 hours a day, 7 days a week.

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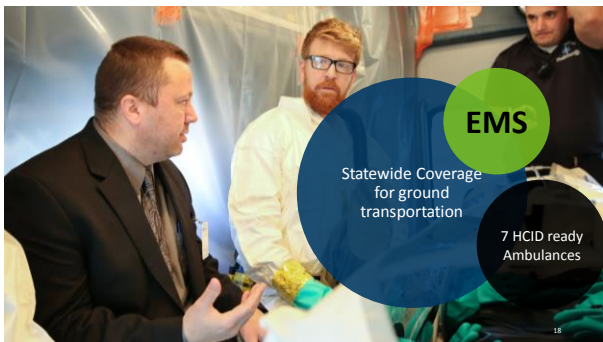
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## Notification to MDH



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## What key information will MDH ask for when notified of possible HCIDs?

- It is not critical to collect every last detail before calling infection prevention and MDH about a suspected HCID
- Additional helpful information will vary by disease(s) of concern

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## Communication Process from Frontline Facility to MDH

Hospital calls MDH  
(651.201.5414)



MDH helps assess  
and will advise

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### What key information will MDH ask for when notified of possible HCIDs?

- Name, date of birth, sex, residence
- Symptoms: onset date and description of illness progression
- Current clinical status (e.g., ICU, ventilated, vital signs)
- *If recent travel:* travel dates for each specific location, reason for travel
- Exposures to other ill persons
  - Symptoms, diagnoses, and travel dates/locations of ill contact
- Underlying medical problems
- Current medications (including malaria prophylaxis)
- Laboratory and radiological findings
- Differential diagnosis
- Current transmission-based precautions in use

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### Other Information

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### Ebola Virus Disease (EVD)

- Symptoms:
  - Fever (subjective or objective), headache, fatigue, muscle pain, vomiting, diarrhea, abdominal pain, unexplained bleeding
  - Onset 2-21 days after possible exposure
- Exposures of concern:
  - Body fluids of a person sick with or who has died from suspected or confirmed EVD
  - Objects contaminated with body fluids of a person sick with or who has died from suspected or confirmed EVD
  - Semen from a man who recovered from EVD
  - Handling wild animals or carcasses that may harbor Ebola virus (fruit bats, primates, duikers)
- "Recent travel to DRC" is not sufficient!
  - When was the patient there
  - Where were they specifically located
  - What were they doing there

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## Lassa Fever

- Symptoms:
  - Fever (subjective or objective), headache, fatigue, muscle pain, vomiting, diarrhea, abdominal pain, unexplained bleeding, facial swelling, sore throat, chest, back, or abdominal pain
  - Onset 6-21 days after possible exposure
- Exposures of concern:
  - Contact with urine and feces of rats in West Africa
  - Direct contact with persons ill with or who died from confirmed or suspected Lassa Fever

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## MERS

- Primary Symptoms:
  - Fever, chills, headache, cough, shortness of breath, muscle aches, sore throat, runny nose, vomiting
  - Onset 2-14 days after possible exposure
- Exposures of concern:
  - Travel to Arabian Peninsula in past 14 days
    - Including information on exposures to healthcare facilities, camels, and persons with confirmed MERS
  - Close contact of ill traveler from Arabian Peninsula

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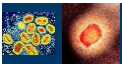
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## Smallpox, Monkeypox

- Presence of a febrile prodrome 1-4 days before rash onset
- Detailed description of skin lesions
  - Shape, firmness, evolution (e.g., macules, papules, pustules)
  - Location of first lesions and current distribution on body
  - Are lesions in same stage in a given part of the body?
- Exposures of interest:
  - Recent vaccinations
  - Ill contacts
  - Animal exposures (rodents are the likely monkeypox reservoir)

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### Everyone has to be flexible

- No two situations are the same
  - HCIDs are different
  - Risk of HCID varies
  - Capacity to care for a patient at a frontline facility will vary
  - People in all organizations vary from one day to the next
- Key is to prioritize clear, timely, and accurate information flow to the people that need it.

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## Thank you!

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