Monkeypox Toolkit
Resource Guide

How to use this document:

This document is a compilation of resources to support your organization’s planning for high consequence infectious diseases (HCIDs) requiring airborne isolation + contact isolation + eye protection for healthcare workers and other staff who encounter the patient. Pathogens that fall into this category include Middle East Respiratory Syndrome (MERS), Severe Acute Respiratory Syndrome (SARS), the 2019 novel coronavirus, and monkeypox.

“Easy to use resources and templates to enhance your organization’s ability to follow the CDC’s Identify, Isolate, and Inform algorithm.”

Guidance from the Centers for Disease Control and Prevention and your state and local Departments of Public Health supersede the information in these documents. The information included is meant to serve as a template to facilitate planning and preparedness activities.

When developing plans, policies, and procedures for your organization, we suggest including representatives from the following groups: clinicians (all levels), infection control, infectious disease, supply chain/materials management, emergency preparedness, laboratory, environmental services, occupational health, and key organizational leadership positions.
Planning Documents

- **Identify, Isolate, and Inform Algorithm (page 6)**
  - This document is intended to guide healthcare workers in screening for high consequence infectious diseases (HCIDs) at portals of entry to your facility (e.g. Emergency Department, OB triage). This can be done by clinicians or others depending on decisions made at your institution. The goal is to establish an epidemiological risk (exposure to the pathogen) and couple that information with symptoms.
    - Additionally, this concept can be adapted for use in telephonic screening prior to ambulatory visits and other areas of your facility.
  - The **Inform** component of the algorithm should include both internal notification as well as notification to your state/local public health authority. Early contact with public health can facilitate determining which patients do or do not meet person under investigation (PUI) criteria.
    - Identifying subject matter expertise within your organization is beneficial in this process, providing a consistent and appropriate resource for clinicians and staff to access when they have identified a patient is crucial.
  - This tool should be adapted to your local workflows and practices/policies.

- **Current Infectious Disease Outbreaks of Concern (page 8)**
  - This document should be maintained by an Infection Control Practitioner or an Infectious Disease Provider with specialty knowledge of HCIDs. It supports the information gathered in the travel history during screening. Just like the algorithm supplied above, this document should be updated to reflect the facility-specific practices. For this document to be a useful resource it requires regular maintenance to remain relevant.
  - Additionally, we encourage appropriate isolation of patients with signs of diseases transmissible in healthcare settings even if they aren’t associated with travel.

- **Monkeypox Considerations for Planning (page 9)**
  - In addition to the other resources located in this toolkit this section includes additional planning consideration your institution establishes the response plans and procedures to support the potential identification, testing, and management of MPX patients at your entities.

- **Monkeypox Fact Sheet (page 12)**
• This document can be used to provide a high-level overview of monkeypox for staff.

• *Monkeypox First Steps Guide for Clinicians (page 14)*
  - This document can be utilized by clinicians to help guide infection control practices, placement of Persons Under Investigation (PUIs), and testing. Note the last revision date on this resource—it can be updated as needed.

• *Monkeypox Specimen Collection Guidance (page 20)*
  - This document helps guide clinicians with specimen collection, including materials needed for collecting confirmatory specimens to CDC. This resource guides on specimen collection only. Additional items such as requisition forms and additional paperwork may be available through your local public health authority, we recommend clarifying the processes and paperwork required in advance.

• *PPE Doffing Checklists for Airborne Isolation + Contact Isolation + Eye Protection using N95 respirators and Powered Air Purifying Respirators (page 22)*
  - Doffing is the most important part of safely utilizing personal protective equipment (PPE). These checklists demonstrate the appropriate doffing sequence when using either an N95 respirator or a Powered Air Purifying Respirator (PAPR). Adaptation will need to be made based on your organization’s PPE. Here we demonstrate single-use disposable gowns designed to break away.
  - The PAPR set-up shown utilizes two HEPA filters, providing wearers with equivalent protection to that offered by an N95 respirator.
  - Guidance from the CDC, OSHA, NIOSH, and the product manufacturer should be reviewed when developing your policies and procedures for the use of PPE. These checklists are designed for single patient, single encounter use of PPE, including respiratory protection. Many components of the respiratory protection depicted in these documents (PAPR) are reusable and able to be cleaned and disinfected if appropriate guidelines are developed and followed.
    - We always recommend collaborating with clinicians, infection control practitioners, emergency preparedness, and your supply chain management to develop your policies and procedures on the safe and effective use of PPE.
  - Training of clinicians can be supported by videos—here are links to example videos using the included checklists.
• PPE Donning: 
  https://www.youtube.com/watch?v=52NqOvWygMY&list=PL0ANKHLVrNEGCeEhTTTXsY7PHfWH7gxJ&index=2

• PPE Doffing: 
  https://www.youtube.com/watch?v=5orqrFCP3ss&list=PL0ANKHLVrNEGCeEhTTTXsY7PHfWH7gxJ&index=3

• Monkeypox Talking Points (page 24)
  o This document can be used for staff to get more information on monkeypox infection and possible treatment options. This is especially helpful for local leadership to use when speaking with staff.

• Policy for Managing Patients with HCIDs Requiring Airborne Isolation + Contact Isolation + Eye Protection (page 26)
  o This policy template provides language for sections of a policy or procedure on managing confirmed or suspected cases and establishes a topical outline of sections that should be considered for inclusion in a policy.
  o This policy can be used to direct care in the Emergency Department and inpatient areas as well, should the patient require admission.
  o *Public health guidance specifically pertaining to Monkeypox is evolving with regards to isolation requirements.
Identify - Isolate - Inform Algorithm

How to use this document
This document is designed to serve as a template to be edited/updated with your institutional-specific policies and plans. You can also link to internal and external resources to give your staff quick access to additional information. Consider adding pager numbers or other contact information to the diagram to make it easy for staff to identify and contact the predesignated person/group quickly.

Legend
- Nurse In Charge is the designated nurse leader, position is staffed/available 24/7.
- ED/Clinic Administrator is the designated administrator with vested institutional authority to activate Hospital Incident Command System
- Personal Protective Equipment (PPE) are gowns, gloves, respiratory protection (surgical mask, N95, PAPRs), other protective devices as selected and detailed by your institution
- Surgical Mask refers to a simple or procedural mask that does not require respiratory clearance or fit testing to be worn
- N95 is a respiratory protection device that, if properly fitted, blocks 95% of 0.3 micron particles
- PAPR or a Powered Air Purifying Respirator uses a blower to move air through purifying filters; the filters selected determine the protection conferred

Identify
1. Travel outside of US in past 30 days? If yes, check your hospital’s resource to identify areas of travel and current outbreaks of concern (insert link if applicable)
2. Positive Symptom Screen? (i.e. fever, rash, cough, vomiting, diarrhea)

Isolate
- Instruct patient to don surgical mask
- Isolate patient 6 feet from staff, other patients, and visitors

Inform
- Contact the Nurse in Charge

Nurse in Charge:
- Notify Attending physician & appropriate clinicians
- Contact ED/Clinic Administrator or appropriate individual
- Secure an Airborne Infection Isolation (negative pressure) room for the patient

ED/Clinic Administrator:
- Notify appropriate departmental leadership (examples to consider in your planning are Infectious Disease Attending Physician, Hospital Epidemiologist)

Airborne Infection Isolation available within 15 min?
- Patient can remain in place with surgical mask on and 6 ft from other visitors until being moved
- Escort patient to a closed-door room to wait for All room availability
- Notify attending physician and nurse to don appropriate PPE and begin patient interview and evaluation per institutional protocol

When Airborne Infection Isolation Room is available:
- Ensure negative pressure (i.e. visual indicator or tissue test)
- Ensure all staff entering the room wear appropriate PPE and have been trained in donning/doffing
- Escort patient to All room, keeping staff and visitors 6 ft away
- Place appropriate institutional signage on the door

Usual Triage Protocol
NO CONCERN
HCID IS POSSIBLE

Isolation Precautions Needed:
Viral Hemorrhagic Fever or Small Pox PPE precautions detailed on page 2.

If protocols/procedures exist for specific HCIDs, refer to those here.
Refer/link to CDC or appropriate institutional policies for guidance on level/type of isolation precautions to implement.
Ebola Virus Disease or other Viral Hemorrhagic Fevers

Identify

The patient has been identified as a Person Under Investigation (PUI) or confirmed with Viral Hemorrhagic Fever.

Isolate

- The patient has been masked
- Staff not in PPE must remain >6ft from patient
- Transport to private room with bathroom or commode; Airborne Infection Isolation (AII) room preferred & required for aerosol generating procedures
- Only staff trained in PPE will enter room
- Discuss with identified institutional representative (may be an assigned attending physician, or local or state public health) for guidance on determination of level of PPE required and plan for patient

Inform

Unplanned Arrival of Patient

AMBULANCE EMS/REFERRAL/AMBULATORY WALK-IN ARRIVAL

- The nurse in charge will assign roles to ED/clinic staff as soon as patient identified:
  - Retrieve the institutional EVD protocol including prepared checklist for plan and assign Site Manager
  - Page a nursing supervisor or other designated individual to coordinate the initial response
  - An appointed Site Manager receives appointment from the nurse in charge; obtains the hospital outlined EVD protocol and Site Manager checklist/toolkit

Job Action Sheets/Checklists should include:
- A. ending physician to contact appropriate institutional leadership
- Notify Hospital Security to secure perimeter of the ED/Clinic and specified area of treatment.
- Ensure ED/clinic staff are ready to safely receive the patient in a designated negative pressure room.
- Trained Observer: Overseer PPE donning/doffing for ED staff
- Doffing Buddy in doffing area in appropriate to assist with doffing
- ED/Clinic Administrator notifies necessary departments of the EVD Patient Arrival

Planned Arrival of Patient

AMBULANCE ARRIVAL/TRANSFER

Job Action Sheets/Checklists should include:
- A ending physician to contact appropriate institutional leadership
- A Site Manager is assigned per the hospital EVD protocol and retrieves Site Manager checklist/toolkit
- Notify Hospital Security to secure the perimeter of the ED/clinic and the specified area of patient treatment
- Notify the appropriate institutional and departmental leadership.
- Activate appropriate personnel to support management of patient.
High Consequence Infectious Disease (HCID): Emergency Department (ED)

Current Infectious Disease Outbreaks of Concern

Last Updated: 05/25/2022

How to use this document

This document provides front-line clinicians with the tools to take a targeted travel history for patients who may be at risk for HCIDs. It is not intended to be exhaustive or replace a full travel history but is focused on HCIDs circulating as of the date above.

For the diseases listed below, clinicians should ask whether the patient has 1) a history of travel to an affected area within the appropriate timeframe and 2) symptoms that are possibly consistent with the disease of concern. (Click on the link to the right to see the case definitions to be used for any of the infections listed).

Monkeypox is an evolving situation for the latest information please visit the CDC website.

For questions or concerns regarding these diseases

Contact the Biothreats Pager (institution’s SME, i.e., ID on call) available 24/7 at pager number XXX.

For routine (non-HCID) Infection Control guidance

Contact (phone number) or visit the IC website at link to website (links to your institution resources or CDC sites).

<table>
<thead>
<tr>
<th>Country Traveling From</th>
<th>Surveillance Window (max time from US arrival to symptom onset)</th>
<th>Disease(s)</th>
<th>Case Definition and Guidance (note these are hyperlinks to resources)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bahrain</td>
<td>14 Days</td>
<td>MERS</td>
<td>CDC MERS</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>10 Days</td>
<td>Avian/Novel Influenza</td>
<td>CDC Avian Flu</td>
</tr>
<tr>
<td>Benin</td>
<td>21 Days</td>
<td>Lassa Fever</td>
<td>CDC Lassa</td>
</tr>
<tr>
<td>China</td>
<td>10 Days</td>
<td>Avian/Novel Influenza</td>
<td>CDC Avian Flu</td>
</tr>
<tr>
<td>Democratic Republic of Congo (Congo, DRC)</td>
<td>21 Days</td>
<td>Ebola</td>
<td>CDC Ebola</td>
</tr>
<tr>
<td>Egypt</td>
<td>10 Days/14 Days</td>
<td>Avian/Novel Influenza/M</td>
<td>CDC Avian Flu</td>
</tr>
<tr>
<td>Gaza</td>
<td>14 Days</td>
<td>MERS</td>
<td>CDC MERS</td>
</tr>
<tr>
<td>Guinea</td>
<td>21 Days</td>
<td>Lassa Fever</td>
<td>CDC Lassa</td>
</tr>
<tr>
<td>Indonesia</td>
<td>10 Days</td>
<td>H5N1</td>
<td>CDC Avian Flu</td>
</tr>
<tr>
<td>Iran</td>
<td>14 Days</td>
<td>MERS</td>
<td>CDC MERS</td>
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<tr>
<td>Iraq</td>
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<td>MERS</td>
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<td>Israel</td>
<td>14 Days</td>
<td>MERS</td>
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<td>MERS</td>
<td>CDC MERS</td>
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<tr>
<td>Liberia</td>
<td>21 Days</td>
<td>Lassa Fever</td>
<td>CDC Lassa</td>
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<tr>
<td>Nepal</td>
<td>10 Days</td>
<td>H5N1</td>
<td>CDC Avian Flu</td>
</tr>
<tr>
<td>Nigeria</td>
<td>21 Days</td>
<td>Lassa Fever</td>
<td>CDC Lassa</td>
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<tr>
<td>Oman</td>
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<td>MERS</td>
<td>CDC MERS</td>
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<td>MERS</td>
<td>CDC MERS</td>
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<td>14 Days</td>
<td>MERS</td>
<td>CDC MERS</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>21 Days</td>
<td>Lassa Fever</td>
<td>CDC Lassa</td>
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<tr>
<td>Syria</td>
<td>14 Days</td>
<td>MERS</td>
<td>CDC MERS</td>
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<tr>
<td>United Arab Emirates (UAE)</td>
<td>14 Days</td>
<td>MERS</td>
<td>CDC MERS</td>
</tr>
<tr>
<td>Vietnam</td>
<td>10 Days</td>
<td>Avian/Novel Influenza</td>
<td>CDC Avian Flu</td>
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<tr>
<td>West Bank</td>
<td>14 Days</td>
<td>MERS</td>
<td>CDC MERS</td>
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<tr>
<td>Yemen</td>
<td>14 Days</td>
<td>MERS</td>
<td>CDC MERS</td>
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</table>
Monkeypox Considerations for Planning
Last updated: 5/27/2022

Purpose:
In addition to the other resources located in this toolkit, this section outlines additional considerations for your institution as you establish the response plans and procedures to support the potential identification, testing, and management of MPX patients at your entities.

Coordination with Public Health Officials
As demonstrated in prior infectious disease-related responses, public health guidance is anticipated to change as our medical and public health officials gain additional knowledge around the infectious agent and the necessary steps to identify and manage patients. Early coordination with local and public health officials will help inform your planning and response efforts and any unique considerations.

Considerations include, but are not limited to:
- Management of waste for suspected or confirmed MPX cases (e.g., Category A vs Category B)
- Escalation pathway for reporting suspected cases and process for determining if MPX testing is required
- Epidemiological and clinical criteria that define what is a considered a Person Under Investigation (PUI)
- The protocol for specimen collection and sending samples for testing
- Pathway that updated public health guidance will be shared with your institution

Collaborative Planning
As with any potential emergency event, early engagement with the appropriate multidisciplinary stakeholders is key to ensuring a coordinated response at your institution. Planning meetings will allow the opportunity to review existing plans, identify gaps, review public health guidance, and establish next steps at your institution.

Below is a list of disciplines that should be considered in developing your infectious disease preparedness and response plans:

- Infection Control
- Emergency Medicine
- Emergency Preparedness/Management
- Infectious Disease
- Nursing
- Occupational Health
- Communications
- Environmental Services
- Laboratory
- Key organizational leadership positions
Communications (Internal and Staff)
As was seen throughout the COVID-19 pandemic, providing employees with concise reference documents in an easy-to-access location (such as an intranet) can help to increase situational awareness during rapidly evolving situations. Coordinating communications with your local public health officials will be important as with other areas of your response planning. Pointing all role groups to a central location can help to provide staff with a single source for updated content and guidance. This toolkit does include examples of first steps, clinical communications, and need-to-know documents.

However, when developing communication resources, consider including:

- National information and guidance
- Centers for Disease Control and Prevention infection control recommendations and resources
- Isolation protocols to be used within your facility
- Training resources
- Personal Protective Equipment (PPE) checklists
- Employee assistance programs and wellness services
- Guidance on exposures and self-monitoring practices
- Commonly asked questions for staff and how to answer patient questions

In times of uncertainty, the importance of clear, routine communications to all staff cannot be understated. Communications should be designed to offer concise messages of immediate need-to-know information as well as when staff can expect to see further communications. Huddles amongst individual disciples is also encouraged to ensure a common message with coordinated talking points is heard by all.

External Communications (Patient and Community)
When developing a communications plan, it is important to consider how messages and updates will be shared with patients and the broader community who may look to your institution as a trusted source of information. Below is a breakdown of considerations for your patients and the broader community.

- Ensuring coordinated communications and messaging with public health partners
  - Example: In the event of a confirmed or suspected patient with MPX, coordination with public health authorities is important to ensure consistent messaging and verification of what details may be shared
- Patient-facing Communications:
  - Determine the intent of the communication (e.g., situational awareness messaging versus action-oriented)
    - Will your communication lead to more questions? If so, how will you manage questions that may arise and do staff have the resources to support questions
  - Consider how you will support translation into multiple languages to meet the needs of your patient-populations
  - Assess what resources can be created (e.g., FAQ, external website, etc.) to answer patient questions
- Community-facing Communications:
  - If you anticipate potential media inquiries, how will you manage those requests?
    - Consider which local subject matter experts are most appropriate to answer any questions
**Incident Command Activation: Considerations**

Even a single Person Under Investigation will require a robust multidisciplinary response to ensure staff have access to the appropriate resources. Activation of your institution’s Emergency Operations Plan and use of your pre-established emergency response framework, such as the Hospital Incident Command System, should be considered as it provides a structure by which the response and associated resources can be mobilized. The core sections of the Hospital Incident Command System and examples of their roles and key objectives are listed below. These descriptions are intended to serve as a basic outline of the types of roles and responsibilities necessary to provide sufficient support for an emergency response.

<table>
<thead>
<tr>
<th>HICS Position</th>
<th>Role Description</th>
<th>Key Objectives</th>
</tr>
</thead>
</table>
| **Command**   | • Sets the incident objectives, strategies, and priorities and has overall responsibility of the incident  
• Responsible for all functions, may elect to perform all functions or delegate them out  
• Delegation does not relieve the Commander from responsibility | • Lead overall response  
• Establish response priorities/objectives  
• Lead briefings  
• Advocate for appropriate resources and support  
• Ensure diligent monitoring of patient and staff safety, address potential concerns immediately |
| **Operations** | • Conducts operations to carry out the plan  
• Develop the tactical objectives and organization, and direct all tactical responses | • Continue to ensure safe patient care and operations  
• Observe all staff for signs of fatigue/stress  
• Identify additional resources with Logistics Section Chief to secure and distribute resources |
| **Planning**   | • Collect and evaluate information, maintain situational awareness and documentation for incident records | • Draft and distribute Incident Action Plan documentation  
• Organize labor pool to assist with staffing needs as appropriate |
| **Logistics**  | • Provide support and all other services needed to meet the operational objectives | • Ensure adequate supplies to support the response |
| **Finance**    | • Monitor costs related to the incident | • Track costs related to additional staff needs and overtime hours  
• Calculate any recovery related costs |

What is Monkeypox and why is it called Monkeypox?
Monkeypox is a rare disease that is caused by infection with a virus. The virus is similar to the variola virus which causes smallpox and the cowpox virus. This virus was first discovered in 1958 when the disease occurred in monkeys being used for scientific research. Because the new disease was first seen in monkeys, it was called Monkeypox. The first time a human was diagnosed with Monkeypox was in 1970 in central Africa. Since then, Monkeypox has been seen in a number of other central and western African countries, although there have also been cases in a few European countries. Cases that have occurred in other countries are linked to international travel and contact with imported animals from areas where the disease is more common. United States monkeypox cases are very rare. In 2021, there were 2 cases in the US, both in individuals with documented travel to west Africa. Currently, we are learning about cases in multiple countries that are not clearly connected to travel to west Africa or exposure to infected animals.

What is Monkeypox and how is it spread?
Monkeypox is a virus that can be spread from person to person through close contact. This can happen by touching the sores (lesions) of a person who is infected, by touching clothing, bed linens, or equipment that have been contaminated by fluid from infected lesions, or through respiratory droplets when people are in face-to-face contact. Sexual contact with someone who is symptomatic is also considered to pose a higher risk for transmission.

What are the symptoms of Monkeypox?
Symptoms of monkeypox can begin between 5 to 21 days after infection. It is most common that symptoms occur between 7 and 14 days after infection. Symptoms usually begin with a fever, headache, muscle aches, backache, swollen lymph nodes, chills, and exhaustion. A rash that usually begins on the face and then spreads to other parts of the body begins within 1 to 3 days (sometimes longer) after having a fever. The rash changes over time from marks or spots on the skin to raised blisters that are tender. The rash will dry into scabs that eventually fall off. Monkeypox usually lasts for 2 to 4 weeks. Although the disease is usually mild, it has resulted in death for a very small proportion of people.

How is Monkeypox treated?
Currently, there is no proven, safe treatment for monkeypox virus infection. For purposes of controlling a monkeypox outbreak in the United States, smallpox vaccine, antivirals, and vaccinia immune globulin (VIG) can be used.

How are we protecting our staff?
Staff use the appropriate personal protective equipment and protocols to provide care to all patients at our facility.

Where can I find the most up to date information?
Massachusetts Department of Public Health: https://www.mass.gov/orgs/department-of-public-health
Centers for Disease Control and Prevention: https://www.cdc.gov/
Background

Monkeypox (MPX) is a rare disease caused by infection with the monkeypox virus. This virus is part of Orthopoxvirus genus, which also includes variola virus (cause of smallpox). In humans, the symptoms of monkeypox are similar to but milder than the symptoms of smallpox. There are two types of monkeypox: The “Central African Clade” and the “West African Clade.” The “West African Clade” is associated with milder disease. The current monkeypox outbreak in the US and Europe is associated with the West African Clade. The natural reservoir of monkeypox is not known. It is thought to be African rodents and non-human primates. To date, the majority of cases have occurred in West and Central Africa, however there have periodically been cases outside of Africa which until recently were all related to travel in Africa or contact with animals imported from Africa.

Since May 2022, several hundred cases, have been reported in non-endemic countries among individuals without a history of travel or animal exposure (first identified in Europe but now reported worldwide). Based on initial public health investigations, an epidemiological risk factor in these new clusters of cases is a history of sex between men who have sex with men (MSM). Public health authorities have recommended clinicians consider Monkeypox in differential diagnosis of individuals with compatible signs and symptoms, particularly if they have a relevant exposure history.

Clinical Syndrome

Monkeypox may start with a “prodrome” of fevers, headache, muscle aches, and exhaustion, as well as lymph node swelling. Lymph node swelling is a finding particular to monkeypox that may help differentiate it from smallpox, varicella, and herpes family virus infections. The incubation time from infection to symptoms is typically 7-14 days but can range from 5-21 days. This is why individuals with exposure are monitored for 21 days. About 1-3 days after the onset of fevers, patients develop a rash. The rash often starts on the face and the spreads primarily to the arms, legs, palms, and soles. The rash typically progresses from macules to papules to vesicles to pustules that eventually scab over. People are considered infectious from symptom onset until all lesions are completely scabbed over and the scabs have fallen off. The total duration of illness is usually 2-4 weeks. Note that not all patients have a prodrome. Systemic symptoms sometimes only appear at the same time as the rash – this has been reported to be the case for some patients diagnosed during the current outbreak. Similarly, some patients during the current outbreak have only developed lesions on their genitalia.
**Transmission**

The virus rarely spreads between people but is spread is possible with direct contact with the body fluids or skin lesions of an infected person, or through contact with contaminated bedding/linens. It is also possible for the virus to be spread through respiratory droplets via inhalation or deposition, however this is thought to require prolonged (> 3 hours) face-to-face contact. Sexual contact with someone who is symptomatic is also considered to be a risk for transmission.

**Person Under Investigation for Monkeypox**

The following describes the epidemiological and clinical criteria that define an individual who is considered a Person Under Investigation (PUI) for Monkeypox. The CDC is urging clinicians in the U.S. to be alert for patients who have rash illnesses consistent with monkeypox, regardless of whether they have travel or specific risk factors for monkeypox and regardless of gender or sexual orientation; if a clinician is assessing a patient who does not meet the PUI definition but for whom they consider MPX a possibility should review with the appropriate individuals as detailed in site specific guidance.

<table>
<thead>
<tr>
<th>Person Under Investigation for Monkeypox</th>
<th>Both epidemiological and clinical criteria must be met.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Epidemiological Criteria</strong></td>
<td>(one of the following) within 21 days of symptom onset</td>
</tr>
<tr>
<td>1. Reports having contact with a person or people with a similar appearing rash or who received a diagnosis of confirmed or probable monkeypox or</td>
<td></td>
</tr>
<tr>
<td>2. Had close or intimate in-person contact with individuals in a social network experiencing monkeypox activity, this includes men who have sex with men (MSM) who meet partners through an online website, digital application (“app”), or social event (e.g., a bar or party)</td>
<td></td>
</tr>
<tr>
<td>3. Traveled outside the US to a country with confirmed cases of monkeypox (BNO News) or where MPXV is endemic (Cameroon, Central African Republic, Cote d’Ivoire, Democratic Republic of the Congo, Gabon, Liberia, Nigeria, Republic of the Congo, and Sierra Leone), or</td>
<td></td>
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<tr>
<td>4. Had contact with a dead or live wild animal or exotic pet that is an African endemic species or used a product derived from such animals (e.g., game meat, creams, lotions, powders, etc.)</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Criteria</strong></td>
<td>A new and otherwise unexplained skin rash (exhibiting macular, papular, vesicular, or pustular lesions; generalized or localized; discrete or confluent). The CDC provides images that can assist with clinical recognition here.</td>
</tr>
</tbody>
</table>

*Note that patients may present with a flu-like illness (e.g., fever, chills, malaise, headache, muscle aches) prodrome and new lymphadenopathy (periauricular, axillary, cervical, or inguinal). Illness could be clinically confused with a sexually transmitted infection like syphilis or herpes, or with varicella zoster virus.*

**Source:** Control and Prevention Case Definitions for Use in the 2022 Monkeypox Response, 6/3/2022, accessed 6/7/2022 [https://www.cdc.gov/poxvirus/monkeypox/clinicians/case-definition.html](https://www.cdc.gov/poxvirus/monkeypox/clinicians/case-definition.html).
# MPX-related Infection Statuses, Isolation Statuses, Cohorting, and Resolution

<table>
<thead>
<tr>
<th>Patient Description</th>
<th>Infection Status</th>
<th>Isolation Status</th>
<th>Cohorting Permitted</th>
<th>Resolution of Infection Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient with confirmed monkeypox infection, during their infectious period.</td>
<td>MPX</td>
<td>Airborne + Contact Isolation, Eye Protection, AIIR</td>
<td>With confirmed MPX of same clade only; and at the discretion of Infection Control in consultation with public health authorities</td>
<td>At the discretion of Infection Control in consultation with public health authorities</td>
</tr>
<tr>
<td>Patient with symptoms consistent with monkeypox infection; may meet formal PUI criteria or may be in the process of undergoing evaluation to determine if PUI criteria have been met</td>
<td>MPX-Risk</td>
<td>Airborne + Contact Isolation, Eye Protection, AIIR</td>
<td>No</td>
<td>At the discretion of Infection Control in consultation with public health authorities</td>
</tr>
<tr>
<td>Patient with confirmed exposure to MPX within the exposure window being cared for in a healthcare setting.†</td>
<td>MPX-Exp</td>
<td>Airborne + Contact Isolation, Eye Protection</td>
<td>No</td>
<td>21 days, as long as remains asymptomatic.</td>
</tr>
</tbody>
</table>

† In the setting of asymptomatic HCP with MPX-Exp receiving post-exposure prophylaxis in vaccine clinics, standard precautions in addition to Universal Mask, applies.

## Infection Control

**Patients Presenting to Emergency Department, Inpatient, and Ambulatory Locations**

1. **Initiate Airborne + Contact Isolation + Eye Protection.** Patients with suspected or confirmed Monkeypox are subject to policies requiring Airborne Isolation, Contact Isolation, Eye Protection, and Airborne Infection Isolation Room (AIIR) placement.
2. **Take immediate action.** As soon as Monkeypox is suspected:
   a. Ensure the patient is wearing a facemask
   b. Put the patient in an Airborne Infection Isolation Room (AIIR, “negative pressure”). Validate negative airflow (e.g., local protocols may include a tissue test, observation of a visual indicator such as a ping pong ball, or observation of pressure monitors).
      i. If an AIIR is immediately available, place the patient (wearing a facemask) in a standard room with the door closed and arrange for movement of the patient to an AIIR as soon as possible.
ii. If the patient is in a semi-private at the time of identification as a PUI, ensure both patients are masked, close the curtain, and provide both patients with a commode to use—they should not share the bathroom.

3. Implement and Order Airborne + Contact Isolation + Eye Protection + AIIR
   a. Isolation includes Airborne + Contact + Eye Protection (e.g., goggles or face shield). Ensure clear signage is placed on the patient room door.
   b. Clinicians must wear a respirator (either a fit-tested N95 respirator or PAPR), gown, gloves and eye protection (e.g., goggles or a face shield) to enter the room for any suspected or confirmed case of Monkeypox.

4. Limit staff in the room for any aerosol-generating procedures.

5. Doff/remove PPE correctly. Doff PPE in the following order and then perform hand hygiene.
   Use the doffing checklist provided in this toolkit.
   a. Gloves and Gown in a single step
   b. Eye protection
   c. N95 respirator or PAPR (outside of the room)

6. Next steps depend on patient location.
   a. Emergency Department:
      i. If using Epic, consider incorporating the .monkeypox SmartLink and follow the instructions provided in a separate section of this toolkit. If the patient meets current PUI criteria, consider outlining next steps, following local public health guidance. This may include contact with either the state epidemiologist or Infection Control/Infectious Disease per facility procedures.
   b. If the patient is in the inpatient setting: Contact Infection Control/Infectious Disease per facility procedures.
   c. If the patient is in an ambulatory setting:
      a. Minimize contact with the patient
      b. Provide a facemask for the patient to put on
      c. Escort the patient to a private room, maintaining a distance of 3-6 feet
      a. Contact Infection Control/Infectious Disease per facility procedures.

7. Evaluation and management of potential exposures. Consider having Infection Control and/or Occupational Health Services to work with public health authorities as appropriate to identify and evaluate potentially exposed individuals.

8. Waste Management. Waste management techniques depend on the clade of Monkeypox. Waste (i.e., bodily fluids such as urine, stool, blood, sharps, and trash) generated from a patient confirmed to be infected with the “West African Clade” or if the patient was exposed to someone confirmed to be infected with the “West African Clade” is managed as regular hospital medical waste. Waste generated from a patient confirmed to be infected with the “Central African Clade”, was exposed to a patient with the “Central African Clade.”

At this time during the current MPX outbreak, public health authorities have advised that waste from all MPX, MPX-Risk, and MPX-Exp patients is to be managed as Routine/Normal Waste.
<table>
<thead>
<tr>
<th>Description</th>
<th>Infection Status</th>
<th>Isolation Type</th>
<th>Room Turn Over</th>
<th>Waste Management</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>West African Clade or Individuals Evaluated During Current 2022 MPX Outbreak</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confirmed case</td>
<td>MPX</td>
<td>Contact + airborne isolation + Eye Protection, AIIR</td>
<td>Per contact + airborne isolation Policy plus laundering of curtains</td>
<td>Routine/Normal</td>
</tr>
<tr>
<td>PUI exposed to MPX West African Clade</td>
<td>MPX-Risk</td>
<td>Contact + airborne isolation + Eye Protection, AIIR</td>
<td>Per contact + airborne isolation Policy plus laundering of curtains</td>
<td></td>
</tr>
<tr>
<td>Asymptomatic individual exposed to MPX West African Clade</td>
<td>MPX-Exp</td>
<td>Contact + airborne isolation + Eye Protection</td>
<td>Per contact + airborne Isolation Policy</td>
<td></td>
</tr>
<tr>
<td><strong>Central African Clade</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confirmed case</td>
<td>MPX</td>
<td>Contact + airborne isolation + Eye Protection, AIIR</td>
<td>Per contact + airborne isolation Policy plus laundering of curtains</td>
<td>Category A</td>
</tr>
<tr>
<td>PUI exposed to known MPX Central African Clade</td>
<td>MPX-Risk</td>
<td>Contact + airborne isolation + Eye Protection, AIIR</td>
<td>Per contact + airborne isolation Policy plus laundering of curtains</td>
<td></td>
</tr>
<tr>
<td>Asymptomatic individual exposed to MPX Central African Clade</td>
<td>MPX-Exp</td>
<td>Contact + airborne isolation + Eye Protection</td>
<td>Per contact + airborne isolation Policy plus laundering of curtains</td>
<td></td>
</tr>
</tbody>
</table>

**Patients Who Have Not Presented to Care (i.e., calls to the practice or clinician)**

If the patient is contacting the clinic with signs or symptoms consistent with MPX, is not on campus, and is clinically stable, the clinic should obtain the clinical and epidemiological history over the phone/virtual visit and instruct the patient to isolate at home. If using Epic, consider utilizing the .monkeypox SmartLink to obtain the necessary information. Follow information from your individual facility and local public health authorities to determine if the patient meets the criteria for a PUI and determine the plan for patient location and specimen procedures.
Patients calling practices asking for general information about Monkeypox should be directed to the CDC website.

**Testing**

1. **Consultation with Infectious Disease/Infection Control per facility protocol** if there is concern for Monkeypox.

2. If the patient is determined to meet criteria for testing based on clinical presentation and epidemiological risk factors, obtain approval through local public health authority. The types of specimens collected will be directed by the public health authorities but will potentially include the following:
   a. Tonsillar swab collection
   b. Nasopharyngeal swab collection
   c. Lesion fluid collection (aspiration vs. swab)
   d. Lesion roof collection
   e. Lesion scab/crust collection
   f. Acute/convalescent serum

   **Guidance on specimen collection technique is included in a separate section of this toolkit.** Ensure you have connected with local public health authorities to fill out all required paperwork.

**Resources**

- [CDC Monkeypox, 2022.](#)
Suspected Monkeypox: Specimen Collection Instructions

**Purpose:** This document helps guide clinicians with specimen collection, including materials needed for collecting confirmatory specimens to CDC. This resource guides on specimen collection only. Additional items such as requisition forms and additional paperwork may be available through your local public health authority, we recommend clarifying the processes and paperwork required in advance.

Note that the numbers of swabs and tubes/containers provided is based on the number of samples that may be obtained. Prior to obtaining the samples, ensure that you have the right number of swabs and tubes/containers for the number of specimens you plan to obtain.

**Vesicular/pustular fluid lesion swab from intact vesicle or pustule/de-roofed vesicle or pustule**

**NOTE:** 2 swab samples will be needed per anatomical site

**Materials needed:**
- Disposable scalpels with number 10 blade, or
- Sterile 26-gauge needle
- 2 Sterile screw-capped plastic tubes with O-ring (1.5-2ml) (black screw top tubes)
- 2 Sterile dry polyester (Dacron) or rayon swabs
- Multiple alcohol wipes

**Procedure:**
- Sanitize the closed fluid-filled vesicle or pustule with an alcohol wipe – allow to dry
- Using the disposable scalpel or the 26-gauge needle, open and remove the top of the vesicle or pustule
  - Dispose of the scalpel or needle in appropriate container
  - Retain lesion roof for testing and place in its own sterile tube as a separate sample type
- Swab the open area with the sterile dry polyester or rayon swab ensuring all fluid is absorbed
- Break off end of applicator into the black screw-capped tube with O-ring.
- Take the second sterile polyester or rayon swab and swab the base of the lesion again to obtain a duplicate sample – this sample will potentially be used for confirmatory testing at the CDC
- DO NOT ADD ANY VIRAL TRANSPORT MEDIA

**Swab from an open vesicle/pustule with crusts/fluid or an open, wet lesion**

**NOTE:** 2 swab samples will be needed per anatomical site

**Materials needed:**
- 2 Sterile dry polyester (Dacron) or rayon swabs
- Sterile screw-capped plastic tube with O-ring (1.5-2ml)
• Sterile saline

Procedure:
• Use the dry polyester/rayon swab to gently scrape crust material from around the vesicle edge or over a weeping lesion. A dry, crusty lesion maybe moistened with sterile saline. DO NOT moisten the swab for an open, wet lesion.
• Break off end of applicator into the screw-capped tube with O-ring.
• Take the second sterile polyester or rayon swab and swab the base of the lesion again to obtain a duplicate sample – this sample will potentially be used for confirmatory testing at the CDC
• DO NOT ADD ANY VIRAL TRANSPORT MEDIA

Scab

Materials needed:
• Disposable scalpels with number 10 blade, or
• 26-gauge needle
• Sterile screw-capped plastic tube with O-ring (1.5-2ml) (black screw-top tube)

Procedure:
• Use the disposable scalpel, or the 26-gauge needle, to remove the scab
  o Dispose of the scalpel or needle in appropriate container
• Place the scab into a screw-capped tube with O-ring.
• DO NOT ADD ANY VIRAL TRANSPORT MEDIA
**STRICT ISOLATION – DOFFING CHECKLIST**

**DISPOSABLE GOWN AND SHORT HOOD PAPR**

Except for PAPR, remove PPE at doorway or in anteroom if present. Remove PPE in the following sequence. **Avoid touching face.**

<table>
<thead>
<tr>
<th>#</th>
<th>Step</th>
<th>Location</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Gown and Gloves</strong>&lt;br&gt;To facilitate gown and glove removal, remove belt from waist. Do not turn off blower.&lt;br&gt;Hang blower motor &amp; belt on a hook or place on stable surface.</td>
<td><strong>Doorway</strong> (inside or outside patient room-with door closed) OR in <strong>Anteroom</strong> (with patient room door closed)</td>
<td><strong>Step 1</strong>&lt;br&gt;Gown and Gloves&lt;br&gt;Remove belt from waist. Do not turn off blower.&lt;br&gt;Hang blower motor &amp; belt on a hook or place on stable surface.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Step 2</strong>&lt;br&gt;Gown and Gloves&lt;br&gt;Once blower motor &amp; belt are secured, remove gown &amp; gloves in a single step.&lt;br&gt;Roll gown into itself, peeling off gloves at the same time.&lt;br&gt;Hold gown away from your body and discard*.</td>
</tr>
<tr>
<td>2</td>
<td><strong>PAPR – Outside room or in Anteroom</strong>&lt;br&gt;Perform hand hygiene - don clean gloves. Lean forward, do not touch front of hood.&lt;br&gt;Remove hood by grasping above ears while bending forward. Lift and pull forward away from your face.&lt;br&gt;Disconnect breathing tube from blower unit, shut off blower. Discard hood and hose.&lt;br&gt;Belt and blower unit must be wiped down with hospital-approved disinfectant and stored. Plug blower into charging cord</td>
<td><strong>Doorway</strong> (inside or outside patient room-with door closed) OR in <strong>Anteroom</strong> (with patient room door closed)</td>
<td><strong>Step 3</strong>&lt;br&gt;PAPR – Outside room or in Anteroom&lt;br&gt;Perform hand hygiene - don clean gloves. Lean forward, do not touch front of hood.&lt;br&gt;Remove hood by grasping above ears while bending forward. Lift and pull forward away from your face.&lt;br&gt;Disconnect breathing tube from blower unit, shut off blower. Discard hood and hose.</td>
</tr>
<tr>
<td>3</td>
<td><strong>Remove gloves perform Hand Hygiene</strong>&lt;br&gt;Cal Stat or wash with soap and water (if indicated), dry, then disinfect with Cal Stat</td>
<td><strong>Outside room</strong></td>
<td><strong>Step 4</strong>&lt;br&gt;Remove gloves perform Hand Hygiene&lt;br&gt;Cal Stat or wash with soap and water (if indicated), dry, then disinfect with Cal Stat</td>
</tr>
</tbody>
</table>

*Disposable PPE is discarded in regular waste*
### DOFFING CHECKLIST

**DISPOSABLE GOWN AND N-95 RESPIRATOR**

Except for Respirator, remove PPE at doorway or in anteroom if present. Remove PPE in the following sequence. Avoid touching face.

<table>
<thead>
<tr>
<th>#</th>
<th>Step</th>
<th>Location</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Remove gown &amp; gloves first - in a single step. Roll gown into itself, peeling off gloves at the same time. Hold gown away from your body and discard*.</td>
<td>Doorway</td>
<td>Avoid touching face shield. Remove by grasping sides or back of strap then pull forward over head</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(inside or outside patient room- with door closed) or Anteroom</td>
<td>Avoid touching front of goggles. Remove by grasping sides and pull away from your face</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Outside room</td>
<td>Do NOT touch front of mask Pull bottom strap first then top strap over head- without touching respirator Discard in trash</td>
</tr>
<tr>
<td></td>
<td>Perform Hand Hygiene</td>
<td>Outside room</td>
<td>Alcohol-based hand rub (ABHR) or wash with soap and water (if indicated), dry, then disinfect with ABHR.</td>
</tr>
</tbody>
</table>

*Discard all PPE in regular waste*
Monkeypox Talking Points for Staff
last updated: 5/27/2022

**Purpose:** This document can be used for staff to get more information on monkeypox infection and possible treatment options. This is especially helpful for local leadership to use when speaking with staff.

---

**What is Monkeypox?**

- Monkeypox is a rare disease that is caused by infection with a virus.
- It is most common in central and western African countries. Some cases have occurred in a few European countries.
- Cases in the United States are very rare. In 2021, there were 2 cases in the US, both in individuals who had traveled to west Africa.
- We are now learning about cases in multiple countries that are not clearly connected to travel to west Africa or exposure to infected animals.

**Why is it called Monkeypox?**

- It is called Monkeypox because the new disease was first seen in research monkeys in 1958.

**How is Monkeypox spread?**

- It can be spread from person to person through close contact including:
  - Touching or having other skin to skin contact with the lesions (sores/blisters) of a person who has Monkeypox.
  - Touching clothing, bed linens, or surfaces that have fluid from infected lesions (sores/blisters).
  - Respiratory (breathing) droplets when fact to face

**What are the symptoms of Monkeypox?**

- Symptoms of monkeypox can begin between 5 to 21 days after infection but most often between 7 to 14 days after infection. They include:
  - Fever, headache, muscle aches, backache, swollen lymph nodes, chills, and exhaustion.
  - A rash that usually begins on the face and then spreads to other parts of the body begins within 1 to 3 days after having a fever.
  - The rash changes over time from marks or spots on the skin to raised blisters that are tender. The rash will dry into scabs that eventually fall off.
  - Monkeypox usually lasts for 2 to 4 weeks.
  - Although the disease is usually mild, it has resulted in death for a very small number of people.

**How is Monkeypox treated?**
Currently, there is no proven, safe treatment for monkeypox virus infection. For purposes of controlling a monkeypox outbreak in the United States, smallpox vaccine, antivirals, and vaccinia immune globulin (VIG) can be used.

Where can I get more information about Monkeypox?

Massachusetts Department of Public Health: https://www.mass.gov/orgs/department-of-public-health

Centers for Disease Control and Prevention: https://www.cdc.gov/
**Overview and Background**
For the purposes of this document, HCID refers to pathogens such as Middle East Respiratory Virus Syndrome, Severe Acute Respiratory Syndrome, Avian/Novel Influenza, and Monkeypox. This document details the response plan for suspect or confirmed patients with HCIDs requiring airborne isolation + contact isolation + eye protection.

**Location of Care**
The location of care for patients with suspected of confirmed HCIDs depends upon the age of the patient (adult or pediatric), the patient’s clinical care needs (i.e., whether they require care in an intensive care unit or general ward), and whether there are special circumstances such as would occur in a pregnant patient.

For adult, non-critically ill, non-pregnant patients, care under airborne isolation + contact isolation + eye protection will be delivered in an Airborne Infection Isolation (AII) room in [a specified location], as well as patients at less than 22 weeks’ gestation. All rooms provide the negative pressure ventilation required to isolate patients with airborne spread infections. All rooms with ante-rooms may be preferentially considered for the purposes of donning and doffing Personal Protective Equipment (PPE).

Critically-ill adult patients with HCIDs will be cared for in AII rooms in intensive care units, preferably ones with anterooms. Non-critically ill pediatric patients will be cared for on a pediatric floor with an AII room, critically ill pediatric patients will be cared for in the Pediatric Intensive Care Unit. Pregnant patients greater than 22 weeks gestation will be cared for in an AII room on the Labor and Delivery floor.

**Special Pathogens Care Locations**
[Consider describing here the patient care areas in further detail that patients with HCIDs could be treated and how these rooms/locations are activated and who may be involved with an activation at the hospital leadership level.]

**Activation: Personnel, Staffing, and Leadership**
During activation of a special pathogens [room/area/unit], clinical, administrative, and support departments will continue to be unit-based, with additional support provided by [Consider: Emergency Management, Infection Control (IC), Infectious Diseases (ID), and the Incident Management Team (IMT), as needed]. [Define here who will coordinate communications with local, state, and national authorities as needed and required].

The Attending of Record for care of the HCID patient is drawn from the [Hospital Medicine Unit] and the [Clinician Educator Service]. [Consider eliminating trainees from direct care of the HCID patient].

Staff assigned to the care of this patient will include:
- Attending physicians from the Hospital Medicine Unit and Clinician Educator Service
- Patient Care Services including Registered Nurses (RNs), Unit Service Associates (USAs), Respiratory Therapists (RTs), Patient Care Associates (PCAs), and other clinical therapies (i.e., Occupational Therapy), as indicated.
Other care team members, such as Case Management, may consult without direct patient contact.
- Infectious Disease Attending will be drawn from the ID Consult Service general teams
- Staff who are fit-tested for N95 respirators

**HCID Patient Admissions and Daily Operations**

When non-critical beds are used to deliver care for a patient with suspected or confirmed HCIDs, unit clinical and administrative leadership remains intact. Additional support will be provided from Infection Control and the Emergency Management upon admission of a PUI or confirmed HCID patient requiring airborne isolation + contact isolation + eye protection.

When the Emergency Department, any ambulatory care setting, or inpatient provider identifies a patient or a group of patients for rule-out of an HCID, the patient(s) will be immediately isolated under airborne isolation + contact isolation + eye protection where they are located, and communications regarding the admission will occur as outlined [per established hospital communication chains]. Immediate determination will be made as to whether the patient’s clinical status requires ICU-level care.

**Adult Inpatient General Care Unit Level Admission to the Special Pathogens Unit**

- [An identified infectious disease clinician or delegate] will be contacted by the attending physician treating the patient to determine if the patient meets criteria as a PUI or is confirmed as having an HCID based on current public health guidance.
- If the patient meets PUI criteria or is confirmed to have an HCID, the infectious disease clinician or delegate will initiate a huddle among the treating attending physician and other identified parties to discuss the following:
  - Overview of the patient’s presentation
  - Discussion about risks of the potential pathogen
  - Develop a proposed patient care plan and identify care team
  - Determine type of Isolation indicated (i.e. Airborne alone or Airborne + Contact + Eye Protection)
  - Discuss notifying Emergency Management as appropriate
- If the patient is an outpatient, it is expected that the patient will generally require evaluation and care in an Emergency Department prior to admission to the hospital.
- If the patient is in the Emergency Department and the huddled group decides to admit the patient, the ED will place an admission order and a delegated party will page the floor nursing supervisor to notify them of the decision to admit.
- If the patient is already admitted to the hospital outside of the designated admitting area for a patient with an HCID, Infection Control will consider placing a monitor at door of current patient location to provide “just in time” training (JIT) in airborne isolation + contact isolation + eye protection to staff entering the room until patient is moved.
- Once the nursing supervisor has been contacted regarding the HCID patient admission, the following actions will take place:
  - The Nursing Supervisor will call Admitting Services to initiate the bed search, and coordinate placement.
  - Patients fourteen years of age or older may be admitted to an adult general unit bed or adult ICU bed, with support from other services, including pediatric nurses and physicians.
  - When a surge of HCID patients exceeds available ICU capacity, those patients stabilized in ICUs on ventilators may be transferred to designated general beds in All Rooms.
Clinical Decompensation, Rapid Responses and Codes in the SPU

After a patient is admitted to the SPU, it may become clear that their clinical trajectory is worsening. In this case, there should be a low threshold to transfer the patient to a higher level of care before clinical decompensation occurs. Early involvement of the critical care attending and the nursing supervisors can aid in triage decision making, and every effort should be made to transfer a patient to a higher level of care if they are decompensating. If a Rapid Response is needed, activate the rapid response team through the usual process. If a rapid response is called, the goal is to provide the necessary care with only essential personnel physically in the room. One of the nursing supervisors will be designated at the door to the anteroom to ensure that only essential team members enter the room and to ensure proper donning when the rapid response is completed. Infection control will provide Just in Time precaution training for essential team members at the time of HCID patient admittance.

A. Essential team members for Rapid Response team in the room:
   a. Medical senior resident on for the house
   b. Attending of record (to provide clinical information and act as back up for the senior resident)
   c. Primary nurse
   d. Nursing supervisor
   e. Respiratory therapy

B. Rapid response team members outside the room:
   a. Pharmacy
   b. Back up senior resident.

C. Special considerations for rapid responses in an HCID patient room:
   a. If a Rapid Response is called, the patient should be transferred to the MICU when stabilized
   b. If the rapid response is due to a respiratory decompensation, consider intubation on the floor prior to transfer to the MICU depending on clinical status and oxygen requirements at the time of transfer.

As above, every effort should be made to identify a patient requiring a higher level of care and transfer early in the clinical course. If a patient is clinically decompensating, goals of care should be addressed daily. If a patient undergoes a sudden cardiac or respiratory arrest, the goal as above should be to provide necessary care with only essential personnel in the room. As above, one of the nursing supervisors will be designated at the door of the anteroom to ensure that only needed personnel enter and that proper donning/doffing procedures are followed.

A. Essential team members for Code Team present in room:
   a. Medical senior resident on for the house
   b. Attending of record (to provide clinical information and act as back up “code whisperer” for the senior resident)
   c. Primary nurse
   d. Nursing supervisor
   e. Respiratory therapy
   f. RICU Attending and RICU resident
   g. Critical care attending
   h. Additional floor RN as needed for chest compressions

B. Code team members outside the room:
   a. Pharmacy
   b. Back up senior resident

C. Special considerations for codes in an HCID patient room:
   a. Interns normally provide chest compressions. To minimize people in the room, other code team members will be expected to rotate to provide chest compressions.
b. Depending on the presumed etiology of the code, consideration should be given to early cessation of resuscitation efforts if the patient does not attain ROSC after 10-15 minutes.

Admission to Hospital Locations Outside of Non-Critical Care All Rooms
Intensive Care Unit Admission
If the patient's clinical status requires critical care, patients will preferentially be admitted to the MICU. If there is no available capacity to admit the patient to the MICU, additional patients may be admitted to other ICU All rooms. There are two All rooms in the Pediatric ICU (PICU).

<table>
<thead>
<tr>
<th>Table 2. All rooms with ICU care capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedicated ICU</td>
</tr>
<tr>
<td>Location</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
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<td></td>
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<tr>
<td></td>
</tr>
</tbody>
</table>

Management of Family and Visitors
Visitors will be limited to 2 designated persons who are necessary for the support of the patient. Visits must be scheduled and controlled to allow for screening for symptoms of acute respiratory illness before entering the unit. See airborne isolation + contact isolation + eye protection policy for detailed procedures for managing visitors. All visitors must report to Nurses Station to ensure that visitors have been screened before entering patient room. Public health authorities may impose restrictions on movement of family and visitors to the patient.

Training in Infection Control Principles and Practice
The purpose of training in Infection Control principles and practice is to ensure that staff can safely care for patients with a suspected or confirmed HCID, including maintaining competency in the donning and doffing of PPE. Training will include both didactic and practical sessions (Table 3).

<table>
<thead>
<tr>
<th>Table 3. Training Methods and Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
</tr>
<tr>
<td>Didactic</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Practical</td>
</tr>
</tbody>
</table>
Initial Training
Training will include an overview of infection control principles and airborne isolation + contact isolation + eye protection paired with live demonstration of donning and doffing of required PPE, with return demonstration by all staff. Verification of proficiency will be by either Infection Control Unit staff or Unit-based trainers. Initial training may include a combination of on-line in addition to in-person training and education.

A HealthStream module on PAPR use will be required for healthcare workers (HCWs) unable to be fit-tested. Additional training will be conducted to include PAPR cleaning. Staff will be educated regarding symptom monitoring and reporting to Occupational Health.

Ongoing Training
Staff from the floors where an HCID patient may be admitted may receive ongoing training as needed. Staff may participate in trainings, drills, and exercises, as indicated.

JIT Training
With low frequency, high risk events, periodic training after initial training is necessary to ensure proficiency. Infection Control will deploy and execute JIT training when admitting an HCID patient.

JIT Training will include the following:
- Overview of specific disease
- Review of airborne isolation + contact isolation + eye protection including Visitor Policy, Staff Entry Log and Tracking, and Symptom Monitoring
- Review of Donning and Doffing PPE and demonstration/observation
- Review response to occupational exposure
- Review available resources
- Review infection control aspects in setting of emergent resuscitation
- Confirmation of fit-testing of staff involved in care within the year

Operations
Supply of Personal Protective Equipment
Initial response supplies will be available from unit daily PAR levels. Resupply of PPE will be coordinated by PCS Clinical Support Services as per usual operations, with support from Materials Management, as needed.

Staffing Considerations
Staffing will be at the discretion of local clinical leadership. The PPE required and donning and doffing procedures for airborne isolation + contact isolation + eye protection may impact the patient:nurse ratio.

Use of staff who are able to wear N-95 respirators for patient care may be favored over staff who require PAPRs due to challenges associated with doffing and management of used equipment. Staff who can be fit-tested for an N-95 respirator will be preferentially assigned to patients on airborne isolation + contact isolation + eye protection. If there are HCWs who need to wear a PAPR and there are patients in rooms without an anteroom, those HCWs will be preferentially assigned to rooms with an anteroom.
Surge Capabilities/Considerations
In the event of an outbreak creating a surge of PUI or confirmed HCID patients, there will be an increased requirement for AII rooms beyond the capacity of the pre-identified beds potentially utilizing other ICU beds. Consider spaces where entire units can be converted to negative airflow space as a last resort in a full-scale infectious disease outbreak.

Occupational Health
Public health authorities may require active monitoring of HCWs caring for HCID patients. If HCW symptom monitoring is required, the frequency, duration and follow-up will be the responsibility of Occupational Health Services. If exposure is suspected for any HCWs involved in patient care, Occupational Health will investigate in consultation with the Infectious Diseases Attending MD. Staff interacting with HCID patients will be required to document their daily interaction on a Room Entry Log or other tracking method.

General Approach to Clinical Care
Clinical care for patients with diseases such as MERS, SARS, and Novel Influenza may be, for the most part, supportive therapy. Experimental therapeutics may be considered and internal and external subject matter experts may relay updates with respect to treatment.

Early diagnostics to either confirm or rule out patient with HCID are essential.

Patients should receive standard diagnostics as relevant to their clinical needs. When possible, patient transport should be kept to a minimum, but if needed, should follow the airborne isolation + contact isolation + eye protection policy guidance.

Demobilization
Discontinuation of airborne isolation + contact isolation + eye protection will be determined after consultation with Infectious Diseases, Infection Control, and public health authorities, as required. Demobilization of the unit in settings of multiple admissions and patient discharge will involve the same consultative groups.