
MONKEYPOXVIRUS

INFECTION PREVENTION
AND CONTROL

HEALTHCARE SETTING



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CONFLICT OF INTEREST DISCLOSURE

I, Kai Bryant, have no actual or potential conflict of interest in relation to this conference, program, or presentation.

ACKNOWLEDGEMENT

Effective implementation of infection prevention and control measures requires collaboration and trust from senior leadership, medical staff, department managers, engineering and environmental services.

TOGETHER, as a team, we improve outcomes for the patients, staff and visitors we serve.

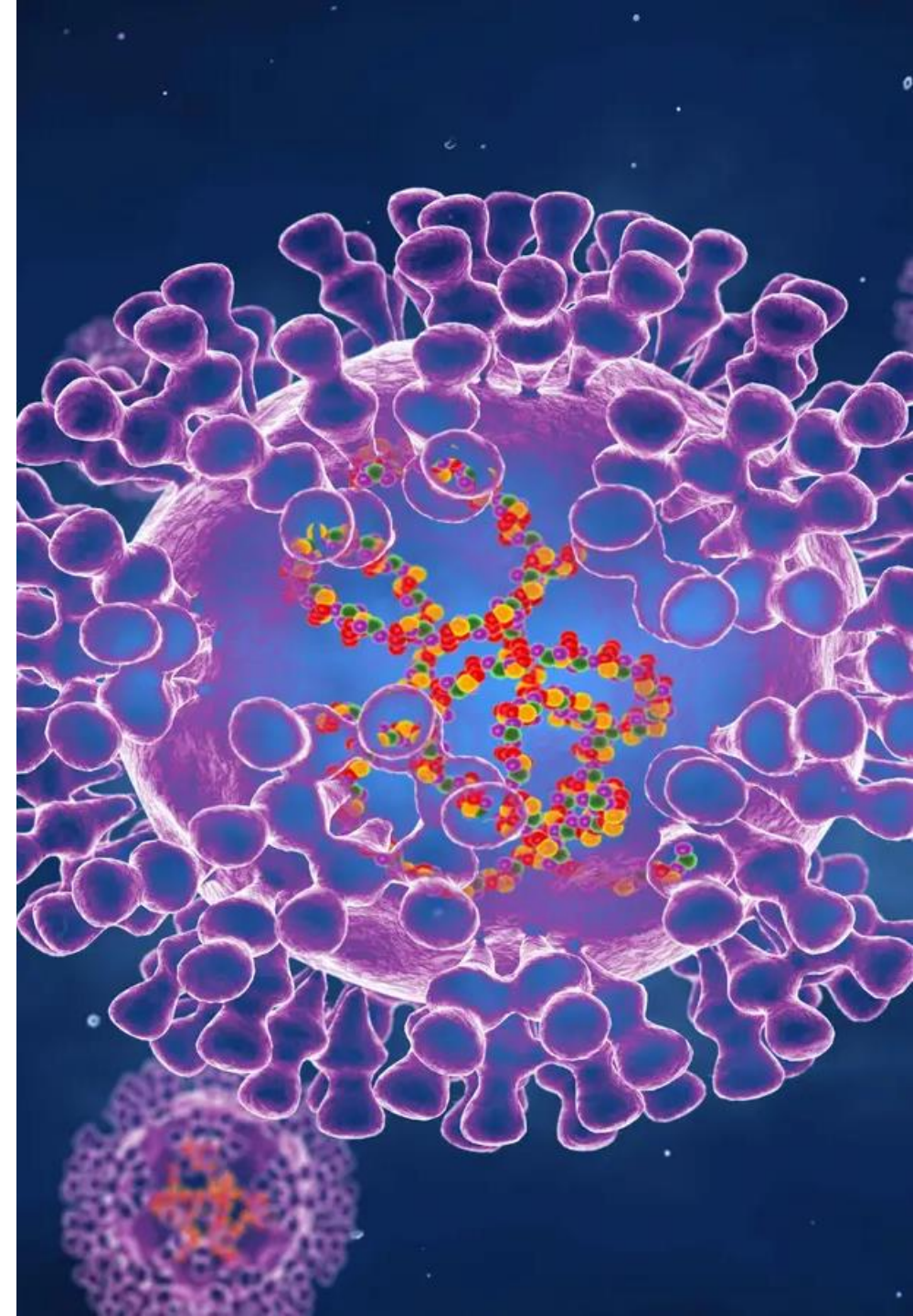


LEARNING OBJECTIVES

1. Participants will be able to explain the importance of surveillance and early detection of Monkeypox Virus (MPX).
2. Participants will be able to summarize role of infection prevention measures in preventing spread of suspected and confirmed MPX cases in the community and healthcare facilities.
3. Participants will be able to describe methods for rapid education and information dissemination in the setting of an infectious disease outbreak.

BACKGROUND

- Monkeypox
 - Monkeypox is caused by monkeypox virus, a member of the Orthopoxvirus genus.
 - It is part of the same family of viruses as variola virus, the virus that causes smallpox
- Monkeypox is a viral zoonotic disease that occurs primarily in tropical rainforest areas of central and west Africa.
 - First identified: captive (laboratory) monkeys, 1958, Copenhagen
 - 1st human case of monkeypox was recorded in 1970
- Prior to the 2022 outbreak, monkeypox had been reported in people in several central and western African countries
 - The 2022 outbreak appears genetically related to cases first seen Nigeria 2017 and in the UK 2019



CURRENT OUTBREAK TIMELINE

Current outbreak first identified in UK on 7 May 2022 in an individual who returned to the United Kingdom of Great Britain and travel to the Federal Republic of Nigeria.

7 May 2022

17 May 2022

4 Aug. 2022

22 Aug. 2022

30 Aug. 2022

US declared public health emergency August 4, 2022

First US Death Reported August 30, 2022

First US case reported May 17, 2022 in Boston, MA

MPX reported in all 50 states as of August 22, 2022

IDENTIFY, ISOLATE, AND INFORM

Identify via ED, Urgent Care, or Telehealth

- Classic presentation of monkeypox infection includes:
 - Flu-like illness lasting a few days, followed by the appearance of a characteristic rash.
 - Presenting symptoms can include:
 - fever, chills, a distinctive rash, and/or
 - new lymphadenopathy;
 - rash that has evolved rapidly and sequentially from macules (lesions with a flat base) to papules (slightly raised firm lesions), vesicles (lesions filled with clear fluid), pustules (lesions filled with yellowish fluid), and crusts which dry up and fall off.
- No alternate diagnosis



**SCREENING/
SURVEILLANCE**

IDENTIFY, ISOLATE, AND INFORM

Role of Telehealth in Infection Prevention and Control

Telehealth services help to reduce staff and patient exposure to infectious disease, preserve personal protective equipment (PPE), and minimize the impact of patient surges on facilities.

Pan American Health Organization -PAHO highlights teleconsultations as a safe and effective way to assess potentially infectious cases and to guide the patient's diagnosis and treatment. Telemedicine enables many of the key clinical services to continue to operate regularly and without interruption during a public health emergency.



**SCREENING/
SURVEILLANCE**

IDENTIFY, ISOLATE, AND INFORM

Identify via Screening Questions

- Ask the patient: Within the last 21 days, have you:
 - Traveled to a country with recent monkeypox cases, one that's experienced prior/current outbreaks?
 - Had close or intimate contact with someone with a similar rash or confirmed monkeypox infection?
 - Had close or intimate contact with someone in a social network experiencing monkeypox infection?
- Patient Education:
 - Most U.S. cases have been among gay, bisexual, and other men who have sex with men; many of whom had anonymous sex with someone they met on dating apps or sex with multiple partners at commercial sex venues or events where anonymous sex is common.



**SCREENING/
SURVEILLANCE**

IDENTIFY, ISOLATE, AND INFORM

Collaborate with Local & State Public Health Departments



County Public
Health Department

Epidemiology

- Provided Direction
- Established Case Criteria

Laboratory

- Testing Guidance
- Early Testing



State Public Health
Department

Facility Guidance

Case Updates/Counts

Treatment Guidance



**SCREENING/
SURVEILLANCE**

INFECTION PREVENTION

PPE

What

- Droplet Mask on Patient
- N95 Respirator
- Gown
- Gloves
- Eye/Face Shield

When

- Targeted and Appropriate Use PPE

How

- Donning & Doffing Where and How

**INFECTION
PREVENTION
ISOLATION**

September 2022

STOP

*Enhanced Respiratory
& Contact Precautions*

HAND



HYGIENE

EYE



PROTECTION

N95



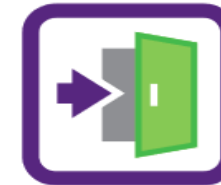
RESPIRATOR



GLOVES



GOWN



CLOSE DOOR

100-NS8720-291 (8/22/22)

**INFECTION
PREVENTION
ISOLATION**

September 2022

STOP

Airborne & Contact Precautions

HAND



HYGIENE

EYE



PROTECTION

N95



RESPIRATOR



GLOVES



GOWN



**CLOSE DOOR
(w/ neg pressure)**

INFECTION PREVENTION ENVIRONMENT

- Collaborate with Engineering & Environmental Services
 - Air Handling Protocols
 - Daily and Terminal Cleaning Protocols
 - Linen Handling
 - Waste Protocols
 - Utensil Protocols



INFECTION PREVENTION ISOLATION

After the patient's visit:

- Cleaning and disinfection:
 - In rooms where a suspected or confirmed case was examined, disposable covers of the physical examination bed should be discarded carefully without shaking. Beds and other room furniture that may have been contaminated with material from the rash should be cleaned with disinfectant with virucidal activity.
 - Common areas should be cleaned as per standard procedures using detergent products. Avoid vacuuming and dry sweeping. Ensure that frequently touched surfaces in common areas (e.g., waiting rooms) are cleaned regularly (and disinfected if there is a risk of contamination with body fluids or lesion material).

INFECTION PREVENTION REPORTING



Public Health Liaison (Early)

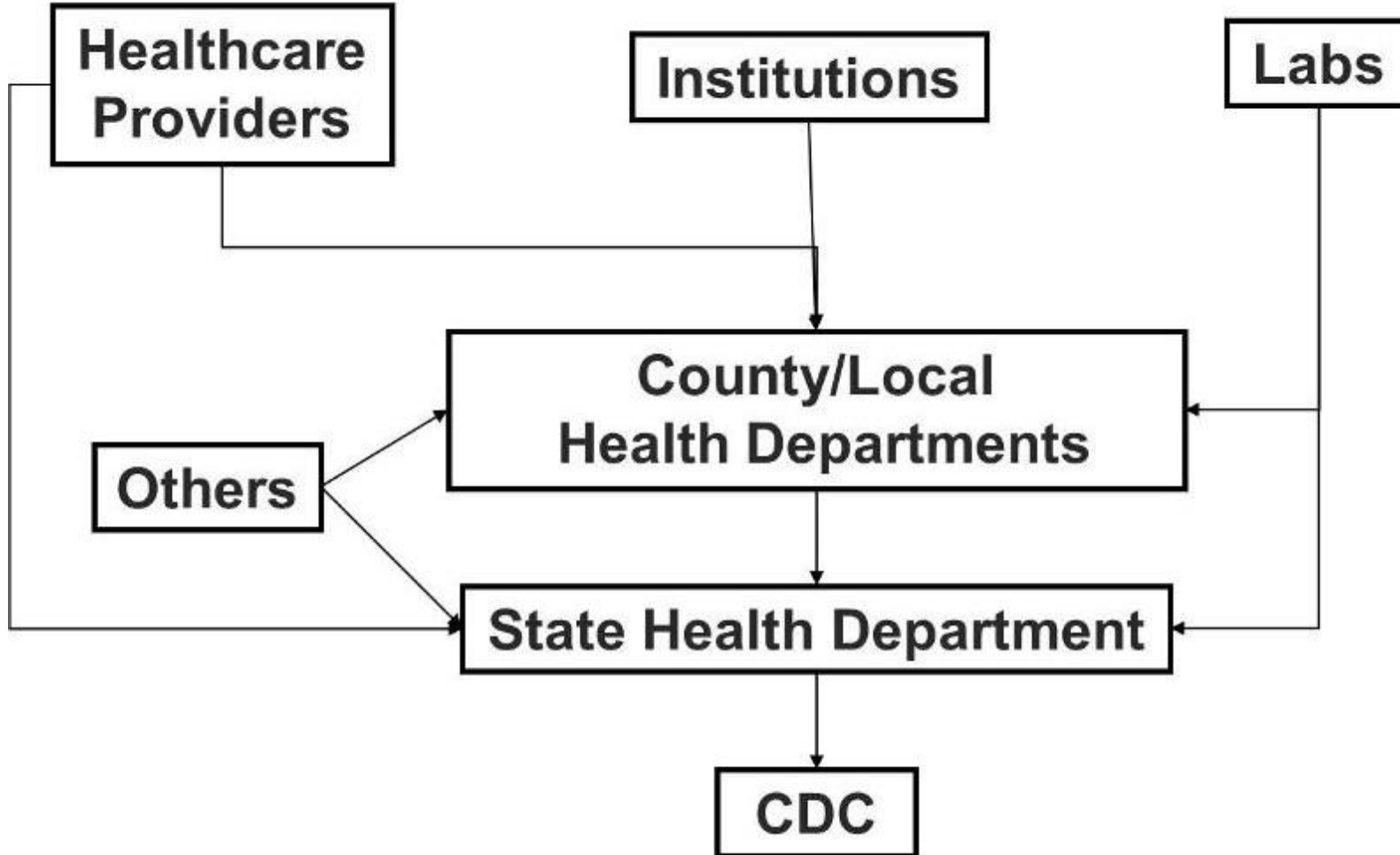
Case Criteria
Sample Submission
Results



Reference Laboratory

Clinician Discretion
Sample Collection
Results Reporting
Public Health Reporting

Disease Reporting Pathway



**INFECTION
PREVENTION
REPORTING**

INFECTION PREVENTION EMPLOYEE CONTACT TRACING



Risk Assessment

High/Moderate
/Low Risk
Exposure



Symptom Monitoring



Employee Support



Work Deferral

INFECTION PREVENTION TRAINING

Situation Background Assessment Recommendation

Clinical Practice Alerts

Standard Work

Isolation Signage

TERMINAL ROOM CLEANS FOR PATIENTS with SUSPECTED OR CONFIRMED Monkeypox Virus

Room cleaning is dependent on the type of ISOLATION PRECAUTIONS that patient is in, not the type or location of the room. **ALL Enhanced Respiratory and Contact precaution AND Airborne and Contact precaution patients must don a Surgical/procedure mask.**

EVS staff to check signs on doors and check with Charge Nurse

Inpatient / ED Rooms /Operating Rooms/ Procedure Rooms (Endo, Cath Lab, IR) / Imaging Modality Rooms / Urgent Care/ Outpatient Clinics/ Equipment

Isolation Precautions	Room Vacancy Period	PPE Required	Standard Work
Enhanced Respiratory & Contact (without aerosol generating procedures)	Private room: Door to remain closed. Special air handling and/or room closure not required.	Staff: N95 respirator, isolation gown, gloves, Eye Protection (EyeShieldORFaceShield <u>NOT Both</u>) Patient: wear surgical/procedure mask at all times when HCWs are in the room) Handwashing or Alcohol-based Hand Rub methods of hand hygiene	<ul style="list-style-type: none"> Staff clean the equipment and patient contact areas after each patient using EPA list Q approved hospital disinfectant (List below) using two-wipe process Terminal clean with EPA List Q approved disinfectant immediately after discharge (List below) using two-wipe process Tru-D at end of day *if patient flow permits
Airborne and Contact (with aerosol generating procedures)	Private room: Door to remain closed Negative pressure room, if available. Single patient room, if negative pressure room not available. Room closure for 1-2 hours post discharge per protocol.	Staff: N95 respirator, isolation gown, gloves, Eye Protection (EyeShieldORFaceShield <u>NOT Both</u>) Patient: wearing surgical/procedure mask at all times when HCWs are in the room) Handwashing or Alcohol-based Hand Rub methods of hand hygiene	<ul style="list-style-type: none"> Staff clean the equipment and patient contact areas after each patient using EPA list Q approved hospital disinfectant (List below) using two-wipe process Terminal clean with EPA List Q approved disinfectant immediately after discharge

EDUCATION/ INFORMATION



	<p>Δ EVS Team may enter room during closure period with full PPE.</p>		<p>(List below) using two-wipe process</p> <ul style="list-style-type: none"> • Tru-D at end of day *if patient flow permits
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EPA List Q Scripps Hospital Approved Disinfectants

- **Virex Plus - Contact time: 5 Minutes @1:256**
- **Super Sani-Cloth Germicidal Wipes - Contact time: 2 Minutes**
- **Sani-Cloth Bleach Wipes - Contact time: 1 Minute**
- **PurTabs NaDCC – Contact time: 1 Minute**
- **Micro-Kill Bleach Wipes - Contact time: 30 Seconds**
- **Oxivir TB H2O2 Spray - Contact time: 1 Minute**
- **Tru-D if available**

EDUCATION/INFORMATION

Clinical Practice Alert
Attention: Inpatient Clinical Staff
Monkeypox Infection

REQUIREMENT	<ul style="list-style-type: none"> • Isolate patients suspected of having monkeypox upon admission. <ul style="list-style-type: none"> – Airborne & Contact Precautions [Aerosol Generating Procedures (AGP)]  – Enhanced Respiratory & Contact Precautions (non-AGP)  • Isolation order is triggered in Epic when the Monkeypox PCR test is ordered. <ul style="list-style-type: none"> – If suspicion of Monkeypox, but test not ordered yet, the precaution can still be ordered. • Suspect cases for monkeypox include anyone with <ul style="list-style-type: none"> – A new characteristic rash which progresses through specific sequential stages—macules, papules, vesicles, pustules, and scabs. OR – One of the epidemiological criteria and has a high clinical suspicion for monkeypox. <i>Follow reference links below for more information.</i> • Discuss any concerns with physician and Infection Prevention Staff. • Do not reuse or extend use of PPE (gown/gloves/mask) as this may facilitate transmission of monkeypox. • Maintain precautions until all lesions have crusted, those crusts have separated, and a fresh layer of healthy skin has formed underneath. • If the patient is transported outside the room, they should wear a surgical mask and have any skin lesions covered with clean linens and gown. • Clinical Staff should leave all precaution signs posted after discharge so that EVS knows what type of cleaning is needed. • Hospital approved environmental cleaning products are effective against Monkeypox. Refer to standard work for terminal cleaning for patients with monkeypox for contact times.
RATIONALE	<p>A worldwide public health emergency has been called due to monkeypox infections spreading from person to person. Monkeypox can spread to anyone through <i>close, personal, often skin-to-skin contact</i>, including:</p> <ul style="list-style-type: none"> • Direct contact with monkeypox rash, scabs, or body fluids from a person with monkeypox. • Touching objects, fabrics (clothing, bedding, or towels), and surfaces that have been used by someone with monkeypox. • Contact with respiratory secretions. <p>• The current monkeypox outbreak is a different variant than is typical, so information is still developing.</p>
REFERENCE	<ul style="list-style-type: none"> • Scripps Connect Clinical Updates Page Monkeypox (sharepoint.com) • Centers for Disease Control www.cdc.gov • Clinical Alert: Transmission-based Precautions • Policy: Standard and Transmission-based Precautions (S-FW-IC-0002) • TERMINAL ROOM CLEANS FOR PATIENTS with SUSPECTED OR CONFIRMED Monkeypox Virus Standard Work Document located on Monkeypox (sharepoint.com)

Please contact your site Infection Prevention Department if you have any questions.

INFECTION PREVENTION TRAINING

**Beginning on August 13, 2022, Medical Management Resources
For hospitalized patients with Monkeypox viral infection**

Situation	A worldwide public health emergency has been called due to monkeypox infections spreading from person to person. This year there have been more than 25,000 cases of monkeypox (MPX) in more than 70 countries across the globe with the United States alone having more than 6,300 cases. The monkeypox virus is spreading mostly through close, intimate contact with someone who is infected with the monkeypox virus. See Scripps intranet webpage under Clinical Updates for the latest and updated information on monkeypox policies and procedures internal to Scripps.
Background	Monkeypox is a rare disease caused by infection with the monkeypox virus. Monkeypox virus is part of the same genus (orthopoxvirus) as variola virus, the virus that causes smallpox.
Assessment	Most cases are self-limited infections without a need for treatment, but there are some who benefit from medication and/or vaccination. Inpatient care is rarely ever needed but can occur with disseminated pustules involving internal organs as well the need for pain control. When inpatient care is required, specific recommendations will be offered to ensure proper management of resources is provided.
Recommendation	<p>Scripps ID Council is recommending to screen and isolate patients at risk for <i>monkeypox upon admission</i>. Per the Centers for Disease Control (CDC) webpage: Suspect cases for monkeypox include anyone with</p> <ol style="list-style-type: none"> 1. A new characteristic rash* OR 2. Meets one of the epidemiological criteria and has a high clinical suspicion for monkeypox. <p>*Epidemiological Criteria (within 21 days of illness onset)</p> <ul style="list-style-type: none"> • Reports having contact with a person or people with a similar appearing rash or who received a diagnosis of confirmed or probable monkeypox OR • 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) OR • Traveled outside the US to a country with confirmed cases of monkeypox or where <i>Monkeypox virus</i> is endemic OR • 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.) <p>The admitting team shall do an initial screening on patients being admitted to an inpatient unit. If the patient meets screening criteria: Inpatients will be isolated (type and name of isolation signs are in progress. Continue current isolation practices or consult with your site Infection Preventionist) and:</p> <ul style="list-style-type: none"> • Infectious Disease Consult should be obtained. • Prior to ID Consult, a swab can be taken and sent to lab if indicated and not already completed in the ambulatory setting prior to admission. <p>Monkeypox PCR Epic ordering process (next page)</p> <ul style="list-style-type: none"> • Order monkeypox PCR • Change source as needed to describe swabbed body sites

INFECTION PREVENTION TRAINING

INFECTION PREVENTION TRAINING

September 2022

STOP

Enhanced Respiratory & Contact Precautions

HAND



HYGIENE

EYE



PROTECTION

N95



RESPIRATOR



GLOVES



GOWN



CLOSE DOOR

100-NB8720-291 (8/22/22)

September 2022

STOP

Airborne & Contact Precautions

HAND



HYGIENE

EYE



PROTECTION

N95



RESPIRATOR



GLOVES



GOWN



CLOSE DOOR
(w/ neg pressure)

100-NB8720-290 (8/15/22)

**INFECTION
PREVENTION
DISSEMINATION
OF INFORMATION**

Internal

- Corporate Communications Email
- Facility Website

External


- Patient Portal
- Patient Email Notification

Monkeypox Tip Sheets

 Patient Testing Workflow for Monkeypox

 Employee Testing Workflow for Monkeypox

 Monkeypox Sample Collection & Lab Guide


 Monkeypox Ordering for Patients (non-employee)

 Monkeypox Ordering for Scripps Employees

 Monkeypox Standard Work

 Transmission-based Precautions

 Airborne & Contact Precautions Isolation Sign

 Enhanced Respiratory & Contact Precautions Isolation Sign

 SBAR for Monkeypox Inpatient Care

 Standard Work for Cleaning Monkeypox Rooms

**INFECTION
PREVENTION
DISSEMINATION
OF INFORMATION**

PATIENTS AND VISITORS

Monkeypox Information



Many people misunderstand what **monkeypox** is and how it's spread. Get the facts and learn how to stay well.

NEWS | JULY 14, 2022

What Is **Monkeypox**? Should I Be Worried?



Monkeypox is a viral illness that causes skin rashes and other symptoms. While it usually goes away on its own, cases are up in the U.S.

**INFECTION
PREVENTION
DISSEMINATION
OF INFORMATION**

IP LESSONS MONKEYPOX 2022 OUTBREAK

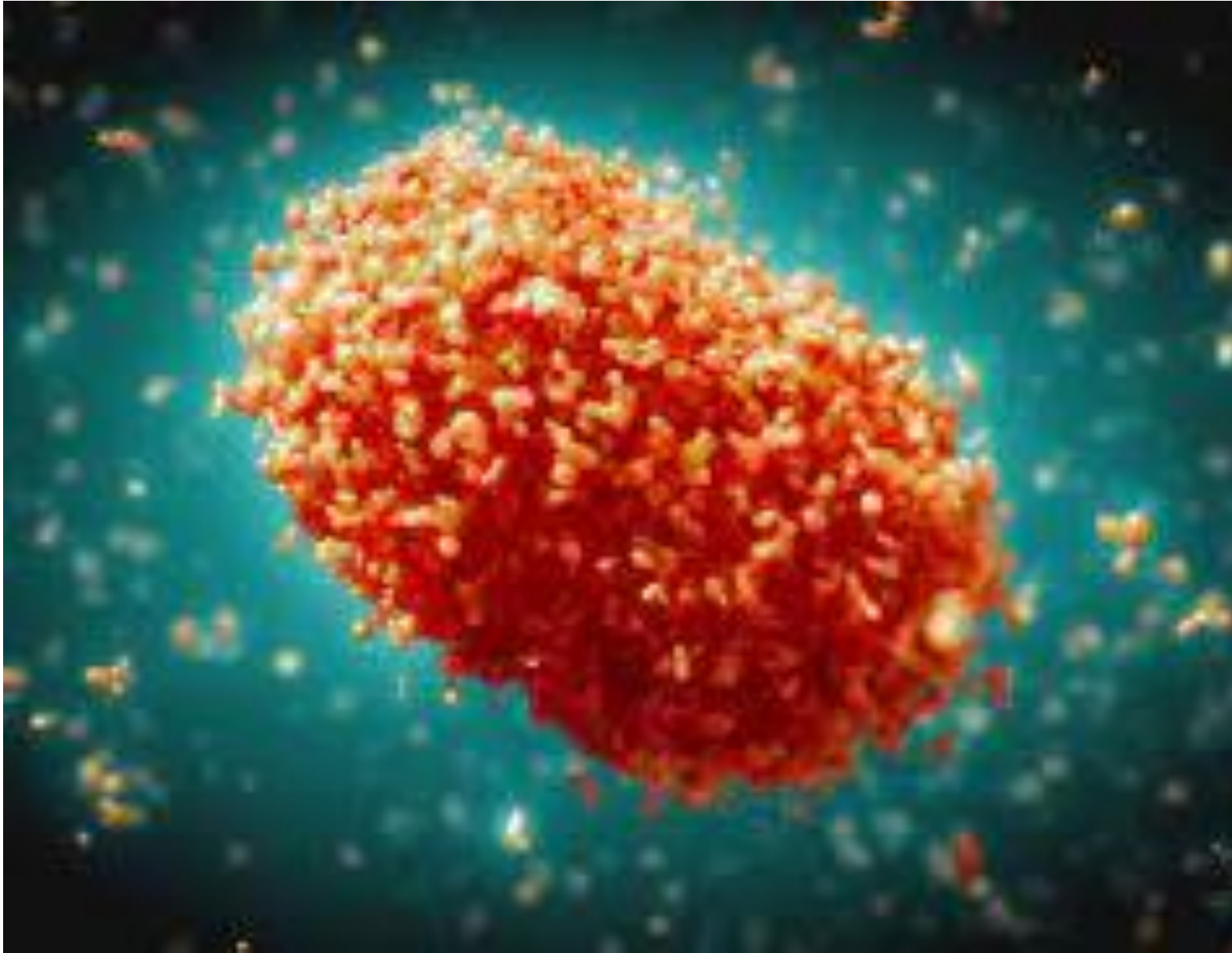
Early surveillance and information dissemination is key to reducing exposures.

Transmission during brief interactions (such as a brief conversation), between people in proximity and for a long duration is unlikely to spread monkeypox.

Direct skin-to-skin contact, including sexual and/or close intimate contact, has been identified as a predominant type of exposure for persons with monkeypox in the United States.

Most people with monkeypox have been adults and have not required hospitalization.

Deaths are rare and have occurred in individuals with underlying conditions.



**AN OUNCE OF
PREVENTION IS
WORTH A POUND
OF CURE.**

BENJAMIN FRANKLIN.

**THANK YOU FOR
PARTICIPATING**

