Infection Prevention and Control of Monkeypox in Healthcare Settings

Updated July 5, 2022

Summary of Changes

On 7/01/2022:

- The Waste Management section was updated to provide more detail on the handling of waste and align with the Department of Transportation website on waste management for monkeypox patients.
- Sections on management of healthcare personnel and patients with a monkeypox exposure, and visitation, were also added.

Human-to-human transmission of monkeypox virus occurs by direct contact with lesion material or from exposure to respiratory secretions. Reports of human-to-human transmission describe close contact with an infectious person. Transmission in healthcare settings has been rarely described.

Infection prevention and control recommendations for healthcare settings are provided in the Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings (2007). Recommendations and practices described in this 2007 guideline are intended to be used when providing care for any patient in a healthcare setting, including those with monkeypox infection. Additional supporting infection prevention and control information is provided below.

Precautions for Preventing Monkeypox Transmission

Standard Precautions should be applied for all patient care, including for patients with suspected monkeypox. If a patient seeking care is suspected to have monkeypox, infection prevention and control personnel should be notified immediately.

Activities that could resuspend dried material from lesions, e.g., use of portable fans, dry dusting, sweeping, or vacuuming should be avoided.

Patient Placement

A patient with suspected or confirmed monkeypox infection should be placed in a single-person room; special air handling is not required. The door should be kept closed (if safe to do so). The patient should have a dedicated bathroom. Transport and movement of the patient outside of the room should be limited to medically essential purposes. If the patient is transported outside of their room, they should use well-fitting source control (e.g., medical mask) and have any exposed skin lesions covered with a sheet or gown.

Intubation and extubation, and any procedures likely to spread oral secretions should be performed in an airborne infection isolation room.

Personal Protective Equipment (PPE)

PPE used by healthcare personnel who enter the patient's room should include:

- Gown
- Gloves
- Eye protection (i.e., goggles or a face shield that covers the front and sides of the face)
- NIOSH-approved particulate respirator equipped with N95 filters or higher

Waste Management

Waste management (i.e., handling, storage, treatment, and disposal of soiled PPE, patient dressings, etc.) should be performed in accordance with U.S. Department of Transportation (DOT) Hazardous Materials Regulations (HMR; 49 CFR parts 171-180.)

Required waste management practices and classification (i.e., assignment to a category under the HMR) currently differ depending on the monkeypox virus clade (strain). The DOT indicates that waste contaminated with the West African clade [PDF – 4.06 MB] of monkeypox virus should be managed as UN3291 Regulated Medical Waste (RMW) in the same manner as other potentially infectious medical waste (e.g. soiled dressings, contaminated sharps). The Congo Basin clade is classified as Category A under the HMR and should be managed accordingly. See the DOT website for more information. Facilities should also comply with state and local regulations for handling, storage, treatment, and disposal of waste, including RMW.
Pursuant to 49 CFR 173.134(a)(1)(i), classification of waste as a Category A substance for transportation must be based on the known medical history or symptoms of the patient, endemic local conditions, or professional judgment concerning the individual circumstances of patient.

During the ongoing 2022 multi-national outbreak of West African clade monkeypox, if a clinician or their public health authority determine that a patient does not have known epidemiological risk for the Congo Basin clade of monkeypox virus (e.g. history of travel to the Democratic Republic of the Congo, the Republic of Congo, the Central African Republic, Cameroon, or Gabon in the prior 21 days) it is appropriate to manage the patient's waste as Regulated Medical Waste. However, if epidemiological risk factors indicate a risk for Congo Basin clade monkeypox virus, waste should be managed as a Category A infectious substance pending clade confirmation, and while local and state public health authorities are consulted.

Environmental Infection Control

Standard cleaning and disinfection procedures should be performed using an EPA-registered hospital-grade disinfectant with an emerging viral pathogen claim. Products with Emerging Viral Pathogens claims may be found on EPA's List Q. Follow the manufacturer's directions for concentration, contact time, and care and handling.

Soiled laundry (e.g., bedding, towels, personal clothing) should be handled in accordance with recommended [PDF – 241 pages] standard practices, avoiding contact with lesion material that may be present on the laundry. Soiled laundry should be gently and promptly contained in an appropriate laundry bag and never be shaken or handled in manner that may disperse infectious material.

Activities such as dry dusting, sweeping, or vacuuming should be avoided. Wet cleaning methods are preferred.

Management of food service items should also be performed in accordance with routine procedures.

Detailed information on environmental infection control in healthcare settings can be found in CDC's Guidelines for Environmental Infection Control in Health-Care Facilities and Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings [section IV.F. Care of the environment].

Duration of Precautions

If a patient requires inpatient medical care and is isolated for monkeypox, decisions regarding discontinuation of isolation precautions in a healthcare facility should be made in consultation with the local or state health department. Isolation Precautions should be maintained until all lesions have crusted, those crusts have separated, and a fresh layer of healthy skin has formed underneath.

Management of healthcare personnel and patients with a monkeypox exposure

Healthcare personnel and patients in healthcare facilities who have had an exposure to monkeypox should be monitored and receive postexposure management according to current recommendations. Additionally, if an inpatient is unable to communicate symptom onset (e.g. a newborn, patient with delirium), they should be isolated for 21 days after their last exposure or until they are able to communicate symptom onset (e.g. following delirium resolution) and monitored for the remaining duration of their incubation period.

Visitation

Visitors to patients with monkeypox should be limited to those essential for the patient's care and wellbeing (e.g., parents of a child, spouse). Decisions about who might visit, including whether the visitor stays or sleeps in the room with the patient, typically take into consideration the patient's age, the patient's ability to advocate for themselves, ability of the visitor to adhere to IPC recommendations, whether the visitor already had higher risk exposure to the patient, and other aspects. In general, visitors with contagious diseases should not be visiting patients in healthcare settings to minimize the risk of transmission to others.

Additional Resources

- Personal Protection Equipment (PPE)
- Sequence for Donning and Removing Personal Protective Equipment [PDF – 3 pages]
- Hand Hygiene in Healthcare Settings
- Source Control [PPT – 7 MB]

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