

# Interim Infection Prevention and Control Guidance for Monkeypox in Health Care Settings

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## 1. Scope

This information is intended for health-care workers in health care settings, programs and services, where patient care is delivered. This includes acute care/inpatient settings, primary and community clinics, pre-hospital, home health and long-term care. Other non-health care settings are beyond the scope of this guidance.

These recommendations are based on current knowledge and will be updated when more information becomes available and as needed.

For recommendations for the general public, refer to the [BCCDC's website on Monkeypox](#).

## 2. Background

Monkeypox is a zoonotic disease caused by the monkeypox virus: a double-stranded DNA virus belonging to the *Orthopoxvirus* genus.<sup>1</sup> The genus also includes the smallpox and cowpox viruses.<sup>2</sup> The disease is usually present in Central and West African regions with sporadic travel-related cases reported internationally.<sup>1,2</sup> Recently, numerous community acquired cases have been reported in several countries including Canada, indicating human-to-human transmission of the disease beyond endemic countries.<sup>3</sup>

Guiding principles of care, from the World Health Organization, recommend that patients with monkeypox should receive respectful, patient-centred care that maintains dignity, privacy, and confidentiality, while ensuring appropriate and adequate protection of health care workers, visitors, and other patients.<sup>4</sup>

Additional information is available on the following:

- For information on clinical presentation, diagnosis, testing, handling specimens, and treatment, refer to the BCCDC's [information for healthcare providers about monkeypox](#) webpage.<sup>5</sup>
- For monkeypox definitions for confirmed, probable and suspected cases, refer to the [BCCDC monkeypox case definition webpage](#).
- For information on community monkeypox case and contact management guidelines refer to BCCDC's interim guidance for public health management for monkeypox cases and contacts within the [Communicable Disease Control Manual](#).

## 3. Transmission

Transmission of the monkeypox virus can occur from:

- Animals-to-humans through close contact with infected animals (e.g., direct contact with blood, body fluids, cutaneous or mucosal lesions, bites, scratches, or ingesting inadequately cooked meat).<sup>1</sup>
- Human-to-human transmission through direct contact with blood, body fluids, cutaneous or mucosal lesions, indirect spread through contaminated fomites (e.g., linens or clothing), or respiratory droplets from prolonged face-to-face contact; however, monkeypox does not generally spread easily between people.<sup>1,2,5</sup> Vertical transmission of the virus can also occur via the placenta from mother to fetus or during close contact during and after birth.<sup>4</sup> The role of airborne transmission has not been extensively studied. There are uncertainties related to this mode of transmission due to its similarities with the small pox virus, involvement of the respiratory system, unexplained transmission in a small number of cases, as well as experiences in animal model studies.<sup>6-10</sup> However, based on recent cases in non-endemic areas, airborne

transmission has not been demonstrated and does not appear to be the primary mode of transmission.<sup>2,3,11</sup>

## 4. Clinical Presentation, Incubation and Communicable Period

The incubation period is usually from 7 to 14 days and can range from 5 to 21 days.<sup>5,11</sup>

Patients can present with fever and skin lesions that progress from macules, to papules, to vesicles, to pustules that eventually crust over.<sup>5,11</sup> Infections typically last 2-4 weeks before they resolve. A person is considered infectious during the symptomatic period, including the prodrome. Lesions are considered infectious until the scabs fall off and new skin can be seen.<sup>5,11</sup>

For more information on clinical presentation, refer to the BCCDC's [information for healthcare providers about monkeypox](#) webpage.<sup>5</sup>

## 5. Notification

- Notify the regional medical health officer (MHO) of any confirmed, probable, or suspected cases of monkeypox that are admitted for care, and/or have died while admitted. Refer to the Provincial Health Office [Advisory – Monkeypox Notice of Duty to Report](#).<sup>12</sup>
- Notify local infection prevention and control (IPAC) in health authority-operated facilities.

## 6. Infection Prevention and Control Measures

- Follow routine IPAC practices for all patients, including for patients who are clinically suspected or confirmed to have monkeypox.<sup>11,13</sup> Medically necessary care should not be restricted or delayed.
- Be diligent with routine practices including:
  - Conducting point of care risk assessments (PCRA)
  - [Hand hygiene](#)
  - Using [personal protective equipment \(PPE\)](#) appropriately
  - Following medication administration and medical sharps safety procedures
  - [Handling soiled linen safely](#)
  - [Cleaning and disinfection](#)
  - [Managing waste](#)
- Consult with IPAC, workplace health and safety (WHS), and public health (PH) for further guidance as needed.

### 6.1. Additional Precautions

- Implement **airborne, droplet, and contact precautions** for patients who are clinically suspected or confirmed to have monkeypox.<sup>11,13</sup>
- Have the patient wear a medical mask, if tolerated, and perform hand hygiene.

- Refer to your organizational procedures for additional precautions, or to [Public Health Agency of Canada's Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Healthcare Settings guidance](#).<sup>13</sup>
- Dedicate reusable, non-critical medical equipment and supplies to the patient, when possible. If shared patient care equipment is used (e.g. blood pressure cuffs, electronic thermometers, oximeters, stethoscope), it must be [cleaned and disinfected](#) after each patient use.
- Avoid activities that can re-suspend dried material from lesions (e.g., use of portable fans, dry dusting, sweeping or vacuuming).<sup>13</sup>
- Consult with IPAC in health authority-operated facilities and PH in community settings before discontinuing additional precautions. Generally, additional precautions should be maintained until all scabs have fallen off and new skin has formed.<sup>11</sup>

### 6.2. Patient Placement

- Post additional precautions signage for airborne, droplet, and contact precautions outside the room. Use precaution signs from your organization or precaution signs available on the [PICNet website](#).
- Place patients who are clinically suspected or confirmed to have monkey pox according to the following:
  - For outpatient clinics: A well-ventilated single occupancy room with the door closed or airborne infection isolation room (i.e., negative pressure room), if available.<sup>4,11</sup> Air clearance or settle times are not required.<sup>14,15</sup>
  - Inpatient settings: A well-ventilated single occupancy room with the door closed or an airborne infection isolation room (i.e., negative pressure room), when available.<sup>4,11,13,14</sup> Air clearance or settle times are not required. A dedicated patient washroom or commode should be provided.<sup>14,15</sup> Consult with organizational IPAC for optimal patient placement.
  - If an aerosol generating medical procedure is being performed or if there is respiratory tract involvement, an airborne infection isolation room is preferred.<sup>11</sup> Observing air clearance times is recommended.
  - When other airborne infections (e.g., measles, chickenpox) are being considered, an airborne infection isolation room and observing air clearance times is required.<sup>13</sup>

### 6.3. Hand Hygiene

- Diligent hand hygiene must be done using at least 70% alcohol-based hand rub (ABHR) or with plain soap and water. Use plain soap and water when hands are visibly soiled.
  - Refer to [PICNet video resources](#) for how to clean hands using ABHR or soap and water.

### 6.4. Personal Protective Equipment

- Health care workers should wear the following PPE when providing care to and before entering the room of a patient suspected or confirmed of having monkeypox:
  - Gloves

- Gowns
- Current fit-tested and seal checked respirator (e.g., N95 respirator or equivalent)
- Eye protection (e.g., face shield or goggles)
- Health care workers should be trained on procedures for safe donning and doffing of PPE.<sup>4</sup>
  - Refer to [PICNet video resources](#) for donning and doffing PPE.

#### 6.5. Patient Transport

- If a patient who is clinically suspected or confirmed to have monkeypox requires transportation, the patient must:
  - Clean their hands
  - Be provided with and wear a medical mask if tolerated, and shown how to put it on so that it fully covers their nose and mouth
  - Have their lesions covered as much as possible (e.g., with a clean patient gown, clean sheet, or dry dressing).
- Ensure that the receiving department/facility and transporting personnel are informed of the need for airborne, droplet, and contact precautions prior to the patient's arrival.

#### 6.6. Cleaning and Disinfection

- Use hospital-grade disinfectants that have a Health Canada issued Drug Identification Number (DIN) for equipment and environmental cleaning and disinfection.
- Follow standard health authority and organizational procedures and manufacturer's recommendations for concentration, contact time, safe use, and the compatibility of materials being cleaned and disinfected.
- Clean and disinfect all surfaces that were in contact with the patient including chairs, exam tables and washroom used by the patient.

#### 6.7. Laundry

- Wear appropriate PPE (gloves, gown, eye protection, and respirator) during collection and bagging of used and soiled laundry at point of use.
- Carefully handle used and soiled laundry (e.g., bedding, towels, and patient gowns) by holding items away from you and by avoiding excessive shaking or flipping to prevent environmental or self-contamination.
- Place laundry in impermeable, leak-proof soiled linen bags and tightly seal before transporting to the medical laundering area or facility. If these are not available, the items can be washed in a standard washing machine using hot water (70 degrees Celsius) with detergent and must be completely dried in a dryer.<sup>11</sup>

#### 6.8. Waste Management

- Follow organizational guidelines and municipal requirements for containment and disposal of general and biohazardous waste.<sup>11</sup> Medical waste or disposable items that may have come into contact with a patient's secretions, biological fluids or skin lesions should be disposed of in biohazardous waste containers in health care facilities or double bagged in the community (e.g.,

home health).<sup>16</sup> These may include blood or body fluids, gloves, patient dressings, and paper exam table covers.

- Medical or clinical waste that is generated during the provision of care of a patient with monkeypox is considered to be Category A waste under Transportation of Dangerous Goods regulations. Please refer to [Additional Resources](#) below.

## 7. Contact Management

- For patients who have been exposed to monkeypox, consult with organizational IPAC in health authority operated facilities or PH in community settings for follow-up. Depending on the exposure risk level, patient contacts remaining in health care facilities may need to be monitored for the development of signs and symptoms of monkeypox for the duration of the incubation period and may be placed on additional precautions. Notify PH of patient contacts who are discharged into the community.
- Refer to BCCDC's interim guidance for public health management for monkeypox cases and contacts within the [Communicable Disease Control Manual](#).
- Refer to the [National Advisory Committee on Immunization's interim guidance on the use of Imvamune in the context of monkeypox outbreaks in Canada](#).

## 8. Additional Resources

- [Monkeypox: Information for healthcare providers \(bccdc.ca\)](#)
- [Monkeypox: For health professionals - Canada.ca](#)
- [Monkeypox Fact Sheet \(who.int\)](#)
- [Clinical management and infection prevention and control for monkeypox: Interim rapid response guidance, 10 June 2022 \(who.int\)](#)
- [Information For Healthcare Professionals | Monkeypox | Poxvirus | CDC](#)
- [Transportation of Dangerous Goods Act, 1992 \(justice.gc.ca\)](#)
- [Transportation of Dangerous Goods Regulations \(justice.gc.ca\)](#)
- [TDG Bulletin: shipping\\_infectious\\_substances.pdf \(canada.ca\)](#)
- [CAN/CGSB-43.125 Packaging of Category A and Category B infectious substances \(Class 6, Division 6.2\) and clinical, \(bio\) medical or regulated medical waste \(canada.ca\)](#)

## 9. References

1. World Health Organization (WHO). Monkeypox Fact Sheet 19 May 2022. Accessed June 8, 2022. <https://www.who.int/news-room/fact-sheets/detail/monkeypox>
2. US Centers for Disease Control and Prevention (CDC). Monkeypox | Poxvirus | CDC Jun 7, 2022. Accessed June 8, 2022. <https://www.cdc.gov/poxvirus/monkeypox/index.html>
3. Public Health Agency of Canada [PHAC]. Monkeypox: Outbreak update June 8, 2022. Accessed June 8, 2022. <https://www.canada.ca/en/public-health/services/diseases/monkeypox.html>

4. World Health Organization (WHO). *Clinical Management and Infection Prevention and Control for Monkeypox: Interim Rapid Response Guidance, 10 June 2022*.  
<https://www.who.int/publications/i/item/WHO-MPX-Clinical-and-IPC-2022.1>
5. BC Centre for Disease Control (BCCDC). Monkeypox: Information for healthcare providers about monkeypox June 6, 2022. Accessed June 8, 2022. <http://www.bccdc.ca/health-professionals/clinical-resources/monkeypox>
6. Adler H, Gould S, Hine P, et al. Clinical features and management of human monkeypox: a retrospective observational study in the UK. *Lancet Infect Dis*. 2022;0(0). doi:10.1016/S1473-3099(22)00228-6/ATTACHMENT/D0AB7E0A-26D1-4573-AB01-E977F3CBCCF/MMC1.PDF
7. Nakoune E, Lampaert E, Ndjapou SG, et al. A Nosocomial Outbreak of Human Monkeypox in the Central African Republic. *Open Forum Infect Dis*. 2017;4(4). doi:10.1093/OFID/OFX168
8. Vaughan A, Aarons E, Astbury J, et al. Human-to-Human Transmission of Monkeypox Virus, United Kingdom, October 2018 - Volume 26, Number 4—April 2020 - Emerging Infectious Diseases journal - CDC. *Emerg Infect Dis*. 2020;26(4):782-785. doi:10.3201/EID2604.191164
9. Yinka-Ogunleye A, Aruna O, Dalhat M, et al. Outbreak of human monkeypox in Nigeria in 2017–18: a clinical and epidemiological report. *Lancet Infect Dis*. 2019;19(8):872-879. doi:10.1016/S1473-3099(19)30294-4
10. U.S. Centers for Disease Control and Prevention. Monkeypox: Past U.S. Cases and Outbreaks, Jun 2022. Accessed June 24, 2022. [https://www.cdc.gov/poxvirus/monkeypox/outbreak/us-outbreaks.html?CDC\\_AA\\_refVal=https%3A%2F%2Fwww.cdc.gov%2Fpoxvirus%2Fmonkeypox%2Foutbreak.html](https://www.cdc.gov/poxvirus/monkeypox/outbreak/us-outbreaks.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fpoxvirus%2Fmonkeypox%2Foutbreak.html)
11. Public Health Agency of Canada (PHAC). Interim guidance on infection prevention and control for suspect, probable or confirmed monkeypox within Healthcare settings – 27 May 2022. Accessed June 8, 2022. <https://www.canada.ca/en/public-health/services/diseases/monkeypox/health-professionals/interim-guidance-infection-prevention-control-healthcare-settings.html>
12. Office of the Provincial Health Officer. Advisory – Monkeypox Notice of Duty to Report May 20, 200. Accessed June 14, 2022. [https://www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/public-health/communicable-disease-prevention/pho\\_cd\\_advisory\\_-\\_monkeypox.pdf](https://www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/public-health/communicable-disease-prevention/pho_cd_advisory_-_monkeypox.pdf)
13. Public Health Agency of Canada (PHAC). Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Healthcare Settings November 2016. Accessed June 8, 2022. <https://www.canada.ca/content/dam/phac-aspc/documents/services/publications/diseases-conditions/routine-practices-precautions-healthcare-associated-infections/routine-practices-precautions-healthcare-associated-infections-2016-FINAL-eng.pdf>
14. US Centers for Disease Control and Prevention (CDC). Monkeypox: Information For Healthcare Professionals Jun 6, 2022. Accessed June 8, 2022. <https://www.cdc.gov/poxvirus/monkeypox/clinicians/index.html>
15. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Infection



- Prevention and Control (IPAC) Recommendations for Monkeypox in Health Care Settings May 2022. Accessed June 8, 2022. [https://www.publichealthontario.ca/-/media/Documents/M/2020/monkeypox-ipac-recommendations-healthcare-settings.pdf?sc\\_lang=en](https://www.publichealthontario.ca/-/media/Documents/M/2020/monkeypox-ipac-recommendations-healthcare-settings.pdf?sc_lang=en)
16. Public Health Agency of Canada [PHAC]. Pathogen Safety Data Sheets: Infectious Substances – Monkeypox virus 18 Feb 2011. Accessed May 19, 2022. <https://www.canada.ca/en/public-health/services/laboratory-biosafety-biosecurity/pathogen-safety-data-sheets-risk-assessment/monkeypox-virus.html>