MONKEYPOX

Federal Bureau of Prisons

Clinical Guidance

August 2022

TABLE OF CONTENTS

1. PURPOSE 1

2. ETIOLOGY 1

3. MODE OF TRANSMISSION 1

4. CLINICAL PRESENTATION 1

5. INFECTIOUS AND INCUBATION PERIODS 2

6. DIAGNOSIS 2

Reporting 3

7. TREATMENT 3

8. SPECIAL POPULATIONS 4

Immunocompromised Patients 4

Pregnancy 4

9. PREVENTION AND CONTROL 5

10. CONTACT INVESTIGATION 7

Defining and Determining Close Contacts 7

Management of Close Contacts 8

Institution Management Following a Confirmed Monkeypox Diagnosis 8

11. VACCINATION 9

REFERENCES 9

APPENDIX 1. MEDICAL ISOLATION AND QUARANTINE SIGNAGE 10

APPENDIX 2. MONKEYPOX AEROSOL-GENERATING PROCEDURES (AGPS) GUIDANCE 12

Nebulizer Treatments 12

CPAP/BiPAP 12

Supplemental Oxygen 13

Pulmonary Function Testing (PFT) and Peak Flows 13

Switching to a Non-Vented Full-Face Mask for CPAP and BiPAP 14

APPENDIX 3. MONKEYPOX PRE AND POSTEXPOSURE RISK TABLE 15

APPENDIX 4. MONKEYPOX INFECTION PREVENTION AND CONTROL (IP&C) MEASURES CHECKLIST 17

1. PURPOSE

The purpose of the BOP Clinical Guidance for *Monkeypox* is to provide recommended procedures for detection, diagnosis, treatment, and prevention of monkeypox in the correctional setting.

2. ETIOLOGY

MONKEYPOX is caused by the same family of viruses as smallpox. Monkeypox is not related to chickenpox. For general information concerning monkeypox, see *https://www.cdc.gov/poxvirus/monkeypox/about.html*.

3. MODE OF TRANSMISSION

TYPICAL SPREAD

- Person-to-person viral spread occurs primarily through direct contact with infectious sores, scabs, or body fluids. As such, monkeypox can spread during activities that include close, personal contact with an infected person (e.g., cuddling, sexual activity) and during activities with prolonged face-to-face contact involving respiratory secretions (e.g., kissing).
- Indirect transmission can occur through contact with materials, such as clothing or linens, that have been contaminated with infectious material from body fluids or sores.
- The virus can also infect a fetus by crossing the placenta from the mother.

LESS LIKELY SPREAD

- Animal-to-human transmission is possible and is typically acquired through contact with infected animal body fluids or a bite, or through preparation of raw or minimally processed infected animal meat or other animal products.

4. CLINICAL PRESENTATION

TYPICAL PRESENTATION

- **FLU-LIKE ILLNESS:** Symptoms may include fever, headache, myalgia, fatigue, chills, respiratory symptoms (e.g., sore throat, nasal congestion, cough), and swollen lymph nodes which may be localized or generalized. When present, these symptoms may last up to 5 days and either precede, follow, or occur at the same time as the rash.
- **RASH:** Lesions appear as pimples or blisters in various parts of the body, including the inside of the mouth and anus causing proctitis. While they may not be in the same stage of development throughout the body, they begin as 2 to 5 mm diameter macules and evolve to papules, vesicles, and then pustules. After 7 to 14 days of rash onset, the lesions crust over, and the crusts dry up and fall off. The rash is often painful, but when crusted, it can become itchy.

➔ ***Clinical features of monkeypox may be confused with other conditions and rash illnesses,*** *such as scabies, chickenpox, herpes simplex virus, secondary syphilis and other sexually transmitted infections, measles, and other pox viruses (e.g., Orf virus).*

DISEASE COURSE

- Illness is typically self-limited and rarely fatal with symptoms lasting 2 to 4 weeks, although underlying immune deficiencies, pregnancy, breastfeeding, active exfoliative skin conditions (e.g., eczema), and atopic dermatitis may lead to worse outcomes. Complications may include secondary infections, bronchopneumonia, encephalitis, sepsis, and infection of the cornea with ensuing loss of vision.

➔ *For additional information (including rash photographs), see Signs and Symptoms | Monkeypox | Poxvirus | CDC and Clinical Recognition | Monkeypox | Poxvirus | CDC.*

ORAL HEALTH CONSIDERATIONS

- Based on data from past monkeypox outbreaks, dentists should recognize that the rash is more concentrated on the face (95% of cases) and affects the oral mucous membranes in 70% of cases.
- When a skin rash is absent but intraoral lesions are present, dentists should rule out other lesions, such as aphthous ulcers and herpetic lesions, by monitoring the patient for improvement. Herpetic lesions are typically present on keratinized tissue and resolve in 7 to 10 days, whereas aphthous ulcerations are present on non-keratinized tissue and typically resolve in 7 to 14 days. Refer patients with unexplained oral mucous membrane lesions to medical providers.

➔ *Follow CDC and BOP guidelines concerning dental infection prevention and control practices at Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care (cdc.gov) and https://www.bop.gov/resources/pdfs/infection_control_in_dental_healthcare_guidance.pdf*

5. INFECTIOUS AND INCUBATION PERIODS

- **INCUBATION PERIOD:** The incubation period is approximately 1-3 weeks, during which a person is NOT infectious.
- **INFECTIOUS PERIOD:** Persons infected with monkeypox virus are infectious from the time symptoms start until the rash has fully healed with formation of a fresh layer of healthy skin after the scabs have fallen off. This usually occurs in 4 to 21 days.

6. DIAGNOSIS

All patients should be screened at intake for symptoms and signs of monkeypox.

- A **PRESUMPTIVE DIAGNOSIS** is based on:
  - Clinical suspicion (e.g., presence of a rash or other symptoms that could be consistent with monkeypox), **AND**
  - Epidemiologic risk factors for infection (e.g., close contact with a person suspected or known to have monkeypox).

- Diagnosis of monkeypox should also be suspected in patients who present with genital ulcer disease or proctitis that does not respond to empiric treatment for typical sexually transmitted infections.

- A **CONFIRMATORY DIAGNOSIS** is based on a positive monkeypox DNA qualitative viral PCR.
  - Utilize the Monkeypox DNA qualitative viral PCR collected in viral transport medium via swab sample.
  - This laboratory test is active in BEMR and is processed through Quest. Testing supplies can be ordered through Quest.

Patients who are symptomatic or suspected of having monkeypox and placed in medical isolation pending diagnosis confirmation should be coded in BEMR with ICD-10 code B04-I. Patients with a confirmed diagnosis of monkeypox should be coded in BEMR with ICD-10 code B04 "Monkeypox".

REPORTING

ALL cases of inmate monkeypox infection should be reported via the **BOP Reportable Infectious Disease (RID)** system and to the local public health department per state requirements.

Per Program Statement 6701.01, all employees are required to report a monkeypox diagnosis to their institution human resource department for forwarding to the Health Services Division Occupational Safety & Health Branch.

7. TREATMENT

A general overview of treatment considerations, including vaccination, is provided in this section. BOP is collaborating with the CDC on the best public health strategy for vaccination, testing, and treatment and more information will be forthcoming as it becomes available.

- **There are currently no FDA-approved treatments for monkeypox virus infection** and treatment is symptomatic. However, vaccines for pre and post exposure prophylaxis developed to protect against smallpox may be effective and have been approved or authorized against monkeypox under Emergency Use Authorization (EUA). Refer to *Section 11. Vaccination* for information regarding vaccinations for monkeypox.
- Patients who meet criteria under the FDA compassionate use program, may be considered for antiviral treatment.
- Institutions should NOT reach out to the CDC or manufacturers directly and should refer questions regarding obtaining vaccinations or medications for treatment to their institution pharmacist or Regional Chief Pharmacist.

MILD DISEASE

- Most patients have mild disease and recover without medical intervention. Supportive care is the mainstay treatment, which may include hydration and treatment of secondary bacterial infection.

MODERATE TO SEVERE DISEASE

- **Supportive care requiring hospitalization may be needed** for those who have or are at risk for dehydration (e.g., nausea, vomiting, dysphagia), those who require pain management, and those experiencing severe disease or complications.
- **Antiviral therapy and vaccination may be indicated for those at risk for severe disease.** This includes those younger than 8 years of age; persons with a history or presence of atopic dermatitis or other active exfoliative skin conditions, such as eczema; persons who are pregnant or breastfeeding; and those who are immunocompromised.

➔ *For additional information, see Treatment Information for Healthcare Professionals | Monkeypox | Poxvirus | CDC and Considerations for Monkeypox Vaccination | Monkeypox | Poxvirus | CDC.*

8. SPECIAL POPULATIONS

IMMUNOCOMPROMISED PATIENTS

- Immunocompromised patients, including those with HIV who are not virologically suppressed, may present with an atypical, more severe, or more prolonged course of illness related to a monkeypox infection.
- Per the CDC, patients with HIV who are virologically suppressed and otherwise not immunocompromised are not at increased risk of severe disease.
- Exposure prophylaxis (vaccinations) and treatment may be considered for patients who are immunocompromised; however, there is currently insufficient data to define when vaccinations or treatment are indicated. Per the CDC: *Until more is known, clinicians should exercise clinical judgement to assess the extent of immunosuppression (from HIV or any other sources) and the risk for severe monkeypox illness. The patient's clinical team is best positioned to determine the degree of immune compromise and, with the input of public health practitioners, the need for prophylaxis (including vaccination) and treatment. The decision to treat and monitor an immunocompromised person in their home or an inpatient setting should likewise be individualized.*

PREGNANCY

Women who are pregnant are at significantly increased risk for adverse outcomes if infected with monkeypox, since the virus can cross the placenta and cause pregnancy loss or stillbirth. A low threshold for suspicion should be exercised when evaluating women with potential monkeypox symptoms and signs.

If a monkeypox infection is diagnosed, the patient should be urgently scheduled for a high-risk OB/GYN appointment ***OR*** immediately transported to an emergency room for follow-up and treatment.

9. PREVENTION AND CONTROL

PROMOTE HEALTHY HABITS

The following measures will help protect against the spread of any infectious diseases, including monkeypox:

- Regular hand washing with soap and water or 60% alcohol-based hand rub.
- Emphasize cleaning of high-touch surfaces (e.g., doorknobs, hand rails, telephones, keys, computer keyboards)
- Avoid close physical contact with suspected or known individuals.

PROACTIVE PREVENTION MEASURES

- Screen all new arrivals for rash illnesses, influenza-like illness, and inquire about past and present sexually transmitted infections.
- **MEDICAL ISOLATION:** Patients with symptoms or signs suspicious for monkeypox should be housed in medical isolation cells with solid walls, solid doors, and a dedicated bathroom. Patients can be cohorted together and separated from non-symptomatic individuals.
  - If placement in single cells is necessary, psychology staff should be consulted to ensure patients are evaluated for their suicidality risk and/or to make recommendations.
  - Medical isolation should continue while awaiting diagnosis confirmation until either monkeypox has been ruled out or an alternative diagnosis made.
  - Once monkeypox is confirmed, patients will remain in medical isolation until the rash has fully healed with formation of a fresh layer of healthy skin after the scabs have fallen off. This usually occurs in 4 to 21 days.
  - While in medical isolation, patients should undergo daily temperature checks and medical assessments to monitor progression of disease and receive symptomatic treatment as needed.
  - Do NOT transfer patients out of the facility while they are in medical isolation.
- Consider housing new arrivals who may be pregnant or who are breastfeeding in cells that offer less exposure risk to potentially infected individuals who are not showing symptoms (e.g., avoid open bay units).

PERSONAL PROTECTIVE EQUIPMENT (PPE) AND INFECTION CONTROL MEASURES

The following guidelines should be followed while patients are in **QUARANTINE** or **MEDICAL ISOLATION** for monkeypox:

- Post the **CONTACT/DROPLET/RESPIRATORY PRECAUTIONS** sign on the door of the **MEDICAL ISOLATION**, **QUARANTINE,** or **AEROSOL GENERATING PROCEDURES** (AGPs) cell or if utilizing cohorting, post at the entrance to the unit.
  ➔ *See Appendix 1 for an example of a sign.*
- Refer to the **BOP Monkeypox Guidance for Personal Protective Equipment** on the BOP intranet monkeypox web page for specific PPE requirements.

- Refer to *Appendix 2. Aerosol Generating Procedures (AGPs)* for guidance on the use of nebulizers, CPAP/BiPAP, oxygen supplementation and pulmonary function tests for patients who are in monkeypox quarantine or medical isolation.
- Refer to *Table 2. Institution Operations* on the following page for guidance on mitigation measures to reduce the spread of monkeypox virus.
- For **MEDICAL ISOLATION**: Patients should wear a surgical mask and completely cover any skin lesions when outside their room before their medical isolation period has ended and when any other individuals enter the room.
- Institutions should post signage throughout the facility to remind all individuals to perform hand hygiene and other infection control measures regularly.

TABLE 2. INSTITUTION OPERATIONS

	QUARANTINE/ISOLATION	GENERAL POPULATION
CLEANING AND DISINFECTION	• Use only wet cleaning methods, such as spraying or mopping with warm water and detergent. Avoid cleaning activities that can spread dried material from lesions (e.g., vacuuming, dry sweeping, use of fans). • Perform disinfection using an EPA-registered disinfectant with an *Emerging Viral Pathogens* claim, which may be found on EPA's *List Q*. Follow the manufacturer's directions for concentration, contact time, and care and handling.	• In institutions with confirmed or suspected monkeypox diagnosis: ○ The frequency of cleaning for communal areas and high touch surfaces (e.g., chapel, meeting rooms, recreation equipment) should be increased. ○ Individuals should be reminded to wipe down equipment after each use and wash hands frequently.
TRASH	• Waste from patients in isolation should be disposed of in a manner consistent with regulated medical waste. • Waste from patients on quarantine should be double bagged in clear garbage bags.	Normal operations
LAUNDRY	• Laundry from patients on isolation or quarantine must be double bagged in the yellow degradable bags that go straight into the washer (Facilities orders these degradable bags) and handled in such a manner so as not to disperse infectious material. • The first bagging should be done by the source individual who will drop the affected bag into the secondary bag held by un-infected individual. • Linens may be laundered using regular detergent and warm water.	Normal operations

(Table continues on next page)

	QUARANTINE/ISOLATION	GENERAL POPULATION
FOOD SERVICE	• Food Service should use disposable clamshells. • Use routine practice – no additional PPE required.	Normal operations
BARBER/ BEAUTY SHOP	• All patients in Quarantine or Medical Isolation will not receive these services.	Normal operations
EDUCATION, PSYCHOLOGY, RELIGIOUS SERVICES, LEGAL VISITS	• All patients in Quarantine or Medical Isolation will not routinely receive these services in group settings. • Alternative means may be acceptable such as provision of educational and religious materials, door-to-door interaction, and use of phone or video for court-ordered legal visit.	
VISITATION	• All patients in Quarantine or Medical Isolation will not receive in-person visitation. Phone or video visits may be allowed in special circumstances.	
RECREATION	• All patients in Quarantine or Medical Isolation will not participate in group activities in recreation.	

10. CONTACT INVESTIGATION

Prompt contact investigation is indicated IMMEDIATELY whenever a monkeypox case is diagnosed.

DEFINING AND DETERMINING CLOSE CONTACTS

CLOSE CONTACTS include any person who had skin-to-skin contact; cellmates; and those with potential exposure to the patient's clothing, bed linens, or towels. **It is critically important to identify all contacts.**

- Ask the source individual to identify other persons who, during the time the source individual had symptoms, may have engaged in the following activities:
  - Shared skin-to-skin contact of any kind (e.g., handshakes)
  - Had contact with the source individual's personal belongings
  - Shared headphones, hats, gloves, scarves, or shoes
  - Spent time together in sports or recreation that involved physical contact
  - Had any shared clothing practices
- Visit the housing unit and interview individuals to identify all possible contacts.
- Conduct an environmental assessment of the quarters of the monkeypox case and contacts by visiting the cell or dormitory where the patient is housed:
  - DORMITORIES: Identify ALL adjacent beds and consider patients in those beds as contacts. Identify owners of clothing items hanging on the bunk belonging to the monkeypox case.
  - CELLS: Cellmates are ALWAYS considered contacts.
  - It may be necessary to discard excess property, trash, and torn plastic or vinyl mattresses and pillows:
    - Monkeypox case: discard as regulated medical waste.
    - Contacts: discard after double bagging in clear plastic bags.

MANAGEMENT OF CLOSE CONTACTS

➔ *The Regional and Central Office Infection Prevention & Control Specialists should be consulted regarding monkeypox outbreak management.*

- **Assess all close contacts to determine whether exposure was high, intermediate, or low as per CDC guidelines.**
  ➔ *For more information on exposure levels, see* https://www.cdc.gov/poxvirus/monkeypox/clinicians/monitoring.html *and* Appendix 3. Monkeypox Pre and Post-Exposure Risk Table.
- For those with **HIGH** or **INTERMEDIATE EXPOSURES**, consult the Institution Clinical Director (for patients) or contact Occupational Safety and Health (for staff) to determine whether postexposure prophylaxis is indicated.
- **Place all close contacts in EXPOSURE QUARANTINE and perform daily monitoring for** selective signs and symptoms of monkeypox, including fever ≥ 100.4°F, chills, new lymphadenopathy, and new skin rash through 21 days after last exposure to the case-patient or their materials.
  - Place on MEDICAL HOLD (SENTRY/BEMR) for the duration of the quarantine period.
  - Add ICD-10 Code B04-Q to BEMR for the duration of quarantine.
  - Post the **CONTACT/DROPLET/RESPIRATORY PRECAUTIONS** sign on the door of the **QUARANTINE** cell, or if utilizing cohorting, post at the entrance to the unit.

  ➔ *See Appendix 1 for an example of a sign.*
  - If suspicious signs or symptoms develop (e.g., rash), move the patient into **MEDICAL ISOLATION** (separate from those diagnosed with monkeypox) until monkeypox has been diagnosed or ruled out. If monkeypox is diagnosed, those quarantined with the patient start a new 21-day quarantine period.
    - For those diagnosed with monkeypox, add ICD-10 Code B04 monkeypox

INSTITUTION MANAGEMENT FOLLOWING A CONFIRMED MONKEYPOX DIAGNOSIS

- The **MONKEYPOX INFECTION PREVENTION AND CONTROL (IP&C) MEASURES CHECKLIST should be carefully planned and fully implemented** as described in *Appendix 4.*
- Assess patient's exposure risk (see *Appendix 3*)
- **When a case of monkeypox has been identified, heightened surveillance for early detection of new cases is crucial.** It may be necessary to conduct interviews and visual inspections of large groups of potential inmate contacts.
- **LONG-TERM SURVEILLANCE for monkeypox following an identified case is imperative for the eradication of monkeypox from an institution.** For at least 3 weeks following the last monkeypox case, clinicians should remain alert for signs and symptoms of monkeypox and utilize a low threshold of suspicion.

11. VACCINATION

Because monkeypox virus is closely related to the virus that causes smallpox, smallpox vaccines can protect people from getting monkeypox. There is no data available yet on the effectiveness of these vaccines on the current monkeypox outbreak.

Currently, there are two vaccinations, approved or authorized by the FDA, for the prevention of monkeypox infection:

- **JYNNEOS** is a live non-replicating vaccine administered as two injections four weeks apart. People who receive JYNNEOS TM are not considered vaccinated until 2 weeks after they receive the second dose of the vaccine.
- **ACAM2000** is a live vaccine that should not be used in persons who are immunocompromised, have certain skin conditions or who are pregnant. Individuals who receive vaccination with ACAM2000 must take precautions to prevent the spread of the vaccine virus and are considered vaccinated within 28 days.

The BOP is currently working with the CDC to obtain vaccinations and determine indications for use in the congregate setting. Vaccination is recommended for post-exposure (within 4 days of exposure) in select groups of high-risk patients. Institution providers should refer to their Regional IP&Cs and Medical Directors to discuss the potential use of vaccinations in their institution.

➔ *Refer to Considerations for Monkeypox Vaccination | Monkeypox | Poxvirus | CDC for more information regarding monkeypox vaccination.*

REFERENCES

Centers for Disease Control and Prevention [home page on the internet]. Monkeypox. Page last updated July 29, 2022. Available at: *https://www.cdc.gov/poxvirus/monkeypox/index.html*

Centers for Disease Control and Prevention [home page on the internet]. Monkeypox – Preventing Monkeypox Spread in Congregate Settings. Page last updated June 16, 2022. Available at: *https://www.cdc.gov/poxvirus/monkeypox/specific-settings/congregate.html*

World Health Organization [fact sheet]. Monkeypox. Page last updated May 19, 2022. Available at: *https://www.who.int/en/news-room/fact-sheets/detail/monkeypox*

APPENDIX 1. MEDICAL ISOLATION AND QUARANTINE SIGNAGE

The following **CONTACT/DROPLET/RESPIRATORY PRECAUTIONS** signage in English and Spanish, can be copied (in color or black and white) for use in the facility. Signage should be posted on the door of room(s) or units(s), if utilizing cohorting, where patients with diagnosed or suspected monkeypox are isolated or close contacts are quarantined. Lamination is recommended, if feasible.

Contact/Droplet/Respiratory Precautions

PRECAUCIONES de aislameiento médico

ANYONE ENTERING THIS ROOM SHOULD USE: ***todas las peronas que entren e esta habitacion tienen que:***	
	**HAND HYGIENE** ***Hygiene De Las Manos***
	**N-95 RESPIRATOR (fit-tested)** ***Respirador N-95***
	**GOWN** ***Bata***
	**EYE PROTECTION** ***Protección para los ojos si contacto cercano***
	**GLOVES** ***Guantes***
	**PATIENT WEARS WELL-FITTING DISPOSABLE MASK AND KEEPS ALL LESIONS COVERED WHEN OTHERS ENTER ROOM AND DURING MOVEMENT.** ***Lleva cubierta de tela para la cara y cubre los lesiones.***
	**KEEP DOOR CLOSED AT ALL TIMES!** ***Mantenga la puerta cerrada en todo momento***

APPENDIX 2. MONKEYPOX AEROSOL-GENERATING PROCEDURES (AGPS) GUIDANCE

Institutions should minimize, to the greatest extent possible, the use of AGPs to mitigate the risk of monkeypox transmission for all patients who are in either monkeypox quarantine or medical isolation.

Among the AGPs that may be utilized within a BOP institution are nebulizer treatments, continuous positive airway pressure (CPAP), bi-level positive airway pressure (BiPAP), oxygen supplementation, and pulmonary function testing (PFT).

NEBULIZER TREATMENTS

To the greatest extent possible, the use of a metered dose inhaler (MDI) should be used instead of a nebulizer. Even in the acute setting, the use of an MDI with a spacer has been shown to be at least as effective as a nebulizer when used correctly. It may be necessary to use more doses per event, or more frequent dosing than the baseline prescription for the medication.

If a nebulizer MUST be used:

- Administer the treatment in an airborne infection isolation (AII) room when possible. If an AII room is not available, use a single room with solid walls and a solid door.
- Attach an in-line viral filter (e.g., Airlife 001851) at the end of the 6-inch flex tube that extends from the nebulizer kit.
- Minimize the number of staff involved in administering the nebulizer, and the amount of time the staff spends in the room.
- When in the room, staff should use appropriate PPE (refer to **BOP Monkeypox Guidance for Personal Protective Equipment** on the BOP intranet monkeypox web page).
- The room and equipment must be disinfected when finished (refer to *Section 9. Prevention and Control* for guidance on cleaning and disinfection).

CPAP/BIPAP

Most patients who use a CPAP machine do so for sleep apnea. In some cases, and for a short period of time during active infection, it may be reasonable to consider if the risks of aerosolization (leading to transmission) outweigh the risks of the short-term discontinuation of CPAP use during the medical isolation or quarantine period; this is a clinical decision, and as such at the discretion of the attending physician.

MILD TO MODERATE SLEEP APNEA

In cases where CPAP is used for mild to moderate sleep apnea with no significant co-morbidities, it may be reasonable to interrupt CPAP during medical isolation or quarantine to minimize transmission.

SEVERE SLEEP APNEA WITH CO-MORBIDITIES

In patients with severe sleep apnea with co-morbidities—such as morbid obesity, pulmonary hypertension, cardiomyopathy, etc.—even the temporary discontinuation of BiPAP or CPAP may

constitute a higher risk. When the decision is made to allow the patient to continue using CPAP/BiPAP, the following procedures should be considered to mitigate the spread of monkeypox:

- It is preferable that CPAP wearers be single-celled in a room with solid walls and a solid door that closes. Psychology Services staff should be consulted any time a patient is being considered for placement in a single cell, to ascertain whether the patient is considered high risk for suicide or has any mental health condition to preclude him/her from single-cell placement.
- The door should be closed when BiPAP or CPAP is in use.
- When in the room, and CPAP/BiPAP are in use, staff should use appropriate PPE. (Refer to the **BOP Monkeypox Guidance for Personal Protective Equipment** on the BOP intranet monkeypox web page for proper use of PPE.)
- A Contact/Droplet/Respiratory Precautions sign (see *Appendix 1*) should be posted on the door to alert staff to the PPE required for entering the room.
- Minimize the number of staff and the amount of time spent in rooms when CPAP/BiPAP are in use.
- Room and equipment must be disinfected prior to a new patient occupying a room previously used by a CPAP/BiPAP user.
- If single cells are limited, prioritize use of these rooms to patients in quarantine or medical isolation.
- Cohort CPAP/BiPAP wearers to one area of a unit in a lower bunk.
- House CPAP/BiPAP wearers maximally distanced from others.

SET-UP AND USE OF CPAP/BIPAP

- If possible, CPAP/BiPAP should be set up and used with a full-face, non-vented CPAP mask with an in-line viral filter attached to the intake and exhalation ports. The viral filters should be changed daily.
  - ➔ *See diagram at the end of this appendix for installation of an in-line viral filter attachment.*
- There will be cases when the above set up is not available or tolerated by the patient. When this occurs the attending physician will decide what is in the best interest of the patient and utilize their clinical judgement in mitigating the aerosolization accordingly .

SUPPLEMENTAL OXYGEN

- Within BOP institutions, the use of supplemental oxygen is typically LOW FLOW via the use of nasal cannula. This is NOT considered to be an AGP and should NOT require specific precautions.
- Use of HIGH FLOW OXYGEN, HUMIDIFIED TRACH MASKS, or NON-REBREATHERS do involve AGPs and their use should be performed with the same precautions and measures described above for CPAP/ BiPAP use.

PULMONARY FUNCTION TESTING (PFT) AND PEAK FLOWS

- The performance of PFTs and peak flow testing for a patient with symptoms or confirmed monkeypox should be done at the discretion of the medical provider.

SWITCHING TO A NON-VENTED FULL-FACE MASK FOR CPAP AND BIPAP

A full-face mask for CPAP and BiPAP (ResMed Non-vented full-face mask – Small #61739, Med #61740, Lge #61741) covers mouth & nose and has no holes in the mask or elbow attachment on the mask

1. From the elbow on the mask, attach a **SWIVEL CONNECTOR** (Respironics #7041):

2. From there, attach a **VIRAL FILTER** (Airlife #001851):

3. From the viral filter, attach an **EXHALATION PORT** (Respironics #312149):

4. The remainder of the CPAP/BiPAP is unchanged.

APPENDIX 3. MONKEYPOX PRE AND POSTEXPOSURE RISK TABLE

PRE-EXPOSURE RISK[1]	DEFINITION	RECOMMENDATIONS
IMMUNOCOMPROMISED	• Refer to *Section 8. Special Populations* for discussion regarding definitions of immunocompromised patients in the context of monkeypox.	• Given the limited supply of JYNNEOS vaccine, at this time, the CDC recommends priority should be given to post-exposure vaccination. [2]
PREGNANCY	• All patients who are pregnant or of child-bearing age pregnancy testing on intake.	• Given the limited supply of JYNNEOS vaccine, at this time, the CDC recommends priority should be given to post-exposure vaccination. • Consider housing new arrivals who may be pregnant or who are breastfeeding in cells that offer less exposure risk to potentially infected individuals who are not showing symptoms (e.g., avoid open bay units).
POST-EXPOSURE RISK	**DEFINITION**	**RECOMMENDATIONS**
HIGH[#] (Direct contact with infected bodily fluid)	• Any unprotected contact (lacking proper PPE) with the infected person's skin lesions, bodily fluids, or contaminated materials, or resuspension of dried exudates (e.g., shaking of soiled linens).	• Place in Quarantine for 21 days • Daily temperature and symptom monitoring. • **Post-exposure prophylaxis: Recommended.** • Perform symptom check prior to release from Quarantine.
INTERMEDIATE[#] (Indirect contact with infected bodily fluids)	• Being within 6 ft for ≥3 hours of infected patient lacking proper PPE (non-contact, non-aerosolizing procedures) *OR* • Activities resulting in contact between sleeves and other parts of the infected person's skin lesions or bodily fluids, or their soiled linens or dressings (e.g., turning, bathing, or assisting with transfer) while wearing gloves *but not wearing a gown.*	• Place in Quarantine for 21 days • Daily temperature and symptom monitoring. • Post-exposure prophylaxis: should be discussed and informed clinical decision made on an individual basis to determine whether benefits of PEP outweigh risks. • Perform symptom check prior to release from Quarantine.

(Table continues on next page)

POST-EXPOSURE RISK	DEFINITION	RECOMMENDATIONS
LOW/UNCERTAIN (Unlikely contact with infected bodily fluids)	• Entered the patient room without wearing proper PPE on one or more occasions, regardless of duration of exposure *OR* • As further defined by the CDC *Monitoring People Who Have Been Exposed | Monkeypox | Poxvirus | CDC*	• Place in Quarantine for 21 days • Daily symptom monitoring for selective signs and symptoms of monkeypox including fever ≥ 100.4°F, chills, new lymphadenopathy, and new skin rash. • No post-exposure prophylaxis is indicated. • Perform symptom check prior to release from Quarantine.

[1] Given the limited supply of JYNNEOS vaccine, the national vaccine strategy for monkeypox is implementing a phased approach. During the initial phase, priority should be given to postexposure prophylaxis. In later phases, vaccine supply will increase and will make preexposure prophylaxis more feasible.

[2] When pre-exposure prophylaxis by vaccination is used, JYNNEOS should be used for people with HIV.

APPENDIX 4. MONKEYPOX INFECTION PREVENTION AND CONTROL (IP&C) MEASURES CHECKLIST

MONKEYPOX INFECTION PREVENTION AND CONTROL (IP&C) MEASURES CHECKLIST	
PROACTIVE MEASURES FOR PREPAREDNESS: STANDARD PRECAUTIONS	
	Promote healthy habits that include regular hand washing with soap and water or 60% alcohol-based hand rub.
	Emphasize cleaning of high-touch surfaces (e.g., doorknobs, handrails, keys, telephones, computer keyboards).
	Avoid close physical contact with persons who are known or suspected of having monkeypox.
PROACTIVE MEASURES FOR PREPAREDNESS: PATIENT SCREENING	
	Screen new arrivals for a rash, influenza-like illness symptoms, and inquire about past and present sexually transmitted infections as per the medical intake process. If monkeypox is suspected, immediately place the affected person in medical isolation while a medical work-up is in-progress and until monkeypox has been ruled out and another diagnosis made. Refer to *Table 2. Institution Operations* for additional guidance.
	Consider housing intakes who may be pregnant or who are breastfeeding in cells that offer less exposure risk (e.g., avoid open bay units).
MONKEYPOX MANAGEMENT: DIAGNOSED PATIENTS	
	Immediately place in medical isolation utilizing contact, droplet, and respiratory precautions with a dedicated bathroom. Patients diagnosed with monkeypox may be housed together.
	Staff to wear PPE according to the **BOP Monkeypox Guidance for Personal Protective Equipment** available on the BOP intranet monkeypox web page.
	Use ICD-10 Code B04-I for symptomatic/suspected cases waiting confirmation. **Use ICD-10 Code B04 for confirmed cases** during duration of illness.
	Daily temperature checks and medical assessments to monitor progression of disease and receive symptomatic treatment as needed.
	Pregnant patients who are diagnosed with monkeypox should be ***urgently scheduled for*** *a high-risk OB/GYN* ***OR immediately transported to*** *the emergency room for follow up and treatment*.
	Place on Medical Hold (SENTRY/BEMR) for the duration of the medical isolation period.
	Inform the local health department, Clinical Director, Regional QI/IPC, and Regional Medical Director.
	Create a RIDS entry for the patient.
	Initiate a contact investigation.
	Waste should be disposed of in a manner consistent with regulated medical waste.
	Cleaning and disinfection: Use only wet cleaning methods, such as spraying or mopping with warm water and detergent. Avoid cleaning activities that can spread dried material from lesions (e.g., vacuuming, dry sweeping, use of fans). • Perform disinfection using an EPA-registered disinfectant with an *Emerging Viral Pathogens* claim, which may be found on EPA's *List Q*. • Wear a gown, gloves, eye protection, and a well-fitting mask or N-95 respirator.
	In rare circumstances when a patient must leave the isolation area, they must wear a well-fitting surgical mask over their nose and mouth and completely cover any skin lesions. Escorting staff wear PPE according to the **BOP Monkeypox Guidance for Personal Protective Equipment** available on the BOP intranet monkeypox web page**.**
	The rash must be fully healed with a fresh layer of healthy skin after the scabs have fallen off before discontinuing medical isolation.

Table continues on next page

MONKEYPOX INFECTION PREVENTION AND CONTROL (IP&C) MEASURES CHECKLIST (CONTINUED)	
CONTACT INVESTIGATION: CLOSE CONTACTS*	
	Assess all close contacts to determine whether exposure was high, intermediate, or low as per CDC guidelines. For more information on exposure levels, see *Appendix 3* and *https://www.cdc.gov/poxvirus/monkeypox/clinicians/monitoring.html.* • For those with high or intermediate exposures, consult the clinical director (for patients) or BOP Employee Heath to determine whether postexposure prophylaxis or vaccination is indicated.
	Place all close contacts in quarantine and monitor for selective signs and symptoms of monkeypox (e.g., fever ≥ 100.4°F, chills, new lymphadenopathy, and new skin rash) through 21 days after last exposure to the case-patient or their materials. • Place on Medical Hold (SENTRY/BEMR) for the duration of the quarantine period. • **Add ICD-10 Code B04-Q** to BEMR for the duration of quarantine. If suspicious signs or symptoms develop (e.g., rash), move the patient into medical isolation (separate from those diagnosed with monkeypox) until monkeypox has been diagnosed or ruled out. If monkeypox is diagnosed, those quarantined with the patient start a new 21-day quarantine period.
MONKEYPOX MANAGEMENT: MANAGEMENT OF CLOSE CONTACTS*	
	Refer to *Appendix 3. Monkeypox Pre and Post-Exposure Risk Table* to determine severity of risk.
	Transfer patient to Exposure Quarantine if indicated.
	Perform daily temperature and symptom checks.
	Use ICD-10 Code B04-Q for patients in quarantine.
MONKEYPOX MANAGEMENT: SPECIAL CONSIDERATIONS	
	If any new concerning symptoms develop, inform the Clinical Director, Regional QI/IPC and Medical Director, and local health department.
	If a patient with suspected or diagnosed monkeypox is being escorted to the ER, the hospital should be alerted in advance, if possible. The patient must wear a well-fitting surgical mask over their nose and mouth and completely cover any skin lesions. Escorting staff wear PPE according to the **BOP Monkeypox Guidance for Personal Protective Equipment** available on the BOP intranet monkeypox web page.
	If a patient diagnosed with monkeypox has not completed medical isolation and is due for full term release, The Regional QI/IPC, Regional Medical Director, and the local health department should be notified in advance to coordinate housing and care.
***CLOSE CONTACTS** include any person who had skin-to-skin contact; cellmates; and those with potential exposure to the patient's clothing, bed linens, or towels.	