NT Health

Guideline

Due for review: 23/03/2028

Mpox (Monkeypox) Public Health and Clinical Management at Sexual Health Clinics

Contents

NORTHERN TERRITORY GOVERNMENT

Applicability

This guideline must be considered by all clinicians working in NT Health

Guideline statement

This guideline provides information to support clinicians in managing suspected mpox infections in the NT.

Policy suite

This guideline forms part of the following Sexual Health and Blood Borne Virus Units Clinical Management NT Health Policy Suite. Related documents are also listed below:

- Monkeypox virus infection – CDNA National Guidelines for Public Health Units | Australian Government Department of Health and Aged Care
- Australian Human monkeypox virus infection treatment guidelines (health.gov.au)
- atagi-clinical-guidance-on-vaccination-against-monkeypox-atagi-clinical-guidance-on-vaccination-against-monkeypox.pdf (health.gov.au)
- Monkeypox (who.int)
- Monkeypox Resources | British Association for Sexual Health and HIV (bashh.org)
- Hand Hygiene NT Health Guideline.DOCX Clinical and Related Waste Management TEHS Guideline.docx

Guideline details

Mpox (monkeypox) is a rare zoonotic viral infection which was most commonly seen in Central and West Africa. Previously, it was associated with travel to those areas.

Since May 2022, there has been a global increase in mpox cases reported from multiple countries where mpox is not usually seen.

Recent cases are predominantly in gay, bisexual and other men who have sex with men with no recent travel to Central or West Africa, meaning there is local community transmission in countries where mpox is not endemic.

Mpox is usually a mild self-limiting illness, that resolves without treatment and most cases recover within a few weeks. Some populations such as immunocompromised people, pregnant women and young people are at higher risk of getting a severe illness. UK data shows case fatality ratio of 1%.

Mpox is a notifiable condition in the NT. There are cases reported in Australia.

Transmission of mpox

Mpox transmits through close contact and human to human transmission may occur through

- direct mucosal or skin contact with monkeypox lesions or scabs

- respiratory droplets (coughing /sneezing) of a person with a monkeypox rash
- prolonged face to face contact
- contact with clothing or linen (e.g. bedding/towel) used by an infected person

Sexual contact appears to be a route of transmission in the majority of recent cases, even though mpox is not a classical sexually transmitted infection.

Incubation period

Between 5 and 21 days. (Usually 7-14 days)

Symptoms

Usually begins with a prodromal phase.

Symptoms may include:

- fever (greater than or equal to 38^0 C), chills, fatigue, exhaustion
- headache
- muscle aches (myalgia)
- back ache
- sore throat
- swollen lymph nodes (lymphadenopathy)

A rash typically follow those symptoms and goes through different stages.

- Starts as a raised spots, macular rash that is often itchy, may be painful, and develop into small vesicles that may ulcerate. It eventually form scabs that fall off leaving scars
- Skin lesions can occur in any part of the body but predominantly anogenital lesions and oral lesions are reported in majority of recent cases.

Atypical presentations include proctitis, tonsillitis and conjunctivitis

Symptoms generally last for 2 to4 weeks.

Differential diagnosis for rash

- chicken pox /shingles
- herpes simplex
- syphilis and other bacterial skin infections
- molluscum contagiosum

Additional questions during history taking

In addition to taking a general consultation for sexual history, ask about:

- symptoms listed above

- overseas/interstate travel in the last 21 days
- sexual partners who are overseas travellers, or from known higher prevalence areas
- festival attendance, large gatherings
- saunas/sex on premises venues (SOPV's)

Investigations and specimen collection

Testing for mpox (orthopox virus) – preliminary testing are done at Territory Pathology in the NT.

Samples to be obtained:

- Collect DRY swabs (red topped PCR tubes) from an open sore by rubbing the base of the sore or from the surface of vesicle/s. Acceptable sample types include lesion fluid, lesion tissue, lesion crust or skin biopsy. Vigorously rub the bottom of the lesion to ensure cellular material from the lesion base is collected. It may be necessary to de-roof the lesion
- Sample from more than one lesion where possible, but avoid excessive sample collection.
- Separate swab for mpox if able. Preferably fluid from unroofed vesicles
- Collect a separate swab from each vesicle.
- Obtain a clinician collected throat swab (red topped swab)
- Anal swab in patients with proctitis.
- Following collection, the primary receptacle (appropriately labelled) should be placed in a specimen bag, followed by another secondary specimen bag prior to transport (double bagged). Do not add transport medium.
- In the pathology request form, write "Monkeypox testing " and detail clinical signs.
- Make sure full Blood Borne Virus (BBV) and Sexually Transmissible Infection (STI) check is performed, including 2nd PCR swab of lesion sent for syphilis.

Samples should be submitted to the testing laboratory as soon as possible. If there is a delay in transport to the laboratory, samples should be stored refrigerated **or** frozen at −20 °C or lower.

Pathology Specimens

- Health Care Professional (in PPE) cleans specimen container with two in one detergent and disinfectant wipes (Clinell® wipes), then places specimens into pathology bag.
- Health Care Worker outside clinic room gathers 2nd specimen pathology bag and holds with two hands, turning top of bag outward over hands to receive specimen by double bagging.
- Pathology form is placed in the side pocket of the specimen collection bag, and clearly states 'Monkeypox specimen'.
- Pathology specimen is transported manually to pathology where possible or otherwise follow place based appropriate pathology transport arrangements.

It is necessary to inform Territory Pathology 28685, before sending samples.

Special considerations

Keep the patient in a dedicated clinic room and provide an N95 mask while consulting clinic manager/ Sexual Health Physician/ Infectious Diseases clinician on call.

An NT Infectious Disease Specialist is available for consultation through the Royal Darwin Hospital switchboard on 8922 8888.

Personal Protective Equipment

Appropriate personal protective equipment (PPE) should be worn as per PPE Donning and Doffing Poster.pdf (nt.gov.au) while collecting samples from patients suspected of monkeypox virus infection.

This includes:

- Fluid repellent surgical mask
- Gloves
- Disposable fluid resistant gown
- Eye protection – face shields and goggles
- Health workers may consider applying a fit-checked particulate filtrate respirator (PFR) – P2/N95 or equivalent, when taking specimens. A fit check should be performed each time the PFR is applied

Detailed PPE and Infection Control procedures can be found in the COVID-19 Infection Prevention and Control NT Health Guideline.docx

Clinician support and case interview

All clinicians, in particular Clinic 34 (Sexual Health) clinicians, need to be particularly alert for the disease, as presentations have presented at sexual health clinics across Australia and overseas.

Clinicians are asked to look out for signs and symptoms of mpox, especially in returned travellers, or contacts of returned travellers and those with a clinically compatible rash.

- Providers to use appropriate PPE for the assessment and treatment of patients presenting with possible mpox. Clinicians should implement standard contact and droplet precautions if monkeypox is suspected
- If client has presented at Clinic 34, staff need to inform Clinic 34 Manager and Sexual Health Physician for appropriate support before consulting with the patient
- You may contact the infectious diseases physician on-call/Microbiologist via Royal Darwin Hospital switchboard 8922 8888 to discuss the case before collecting specimens
- The client interview should include symptom history including onset date; travel history, exposure to a confirmed or probable case, nature of contact with a confirmed or probable case, history of sexual contact and intimate partners within the 21 days prior to symptom onset; smallpox vaccination status; and other relevant clinical findings to exclude other common causes of rash.
- Identify the likely source of infection.
- Alert doctors and laboratories in the area where a monkeypox case has been infectious.

- Implement public health management of confirmed cases and their contacts and report to Centre for Disease Control (CDC) for notification.

Infection control precautions

- Confirm with clinic manager about the agreed procedure for sending samples to Territory Pathology
- PPE must doff and don between patients
- All patient equipment should be disinfected with Clinell® wipes
- Ensure appropriate cleaning and disinfection and disposal of sharps in clinic room in consultation with Clinic Manager

Client Management

Supportive measures/Treatment

Mpox is generally a self-limiting infection. Most cases will not require specific treatment other than supportive management or treatment of complications (e.g. antibiotics for secondary cellulitis, antipyretics: ibuprofen and or paracetamol).

General measures

- Hydration
- Salt baths if ulcers/rash
- Avoid plaster/tape use

Pain relief

- Paracetamol 1g QID as required

Topical therapy

- Proctosedyl cream in consultation with a staff specialist

Bacterial super infection

- Appropriate antibiotics in consultation with a staff specialist

STI co-infection management

- As per NT STI Treatment Guidelines

If antiviral treatment is indicated: major indications are severe disease or risk of severe disease (immunosuppression), it should be initiated in consultation with a sexual health or infectious disease physician.

- Tecovirimat antiviral medication for 14 days is the preferred treatment when treatment is necessary

NOTE: Approval by the Chief Health Officer is required to access tecovirimat stock via the National Medicines Stockpile, and stock may not necessarily be held onsite by the hospital pharmacies. Please liaise with your local hospital pharmacy as soon as possible to organise access.

For further advice, refer to Monkeypox treatment guidelines | Australian Government Department of Health and Aged Care

Case Management

The interview should include symptom history including onset date; travel history, exposure to a confirmed or probable case, nature of contact with a confirmed or probable case, history of sexual contact and intimate partners within the 21 days prior to symptom onset; smallpox vaccination status; and other relevant clinical findings to exclude other common causes of rash.

- Identify the likely source of infection
    - Offer STI screening
- Alert doctors and laboratories in the area where a mpox case has been infectious
- Implement public health management of confirmed cases and their contacts and report to CDC for notification

Isolation advice

Isolation is an effective measure to reduce the spread of disease. Isolation of monkeypox cases should occur during the presumed and known infectious periods, including the prodromal and rash stages of the illness.

- All suspected cases should be advised to isolate at home while waiting for results (until a negative orthopox virus laboratory test result is returned).
- Confirmed and probable cases (as per CDNA case definition) , cdna-monkeypox-virus-infection-case-and-contact-management-guidelines.docx (live.com)should immediately isolate until all lesions have crusted, scabs have fallen off and a fresh layer of skin has formed underneath. The Public Health Unit (PHU) or managing clinician will advise on release from isolation.
- Advise:
    - Notifiable condition
    - Reassure privacy and confidentiality
    - Where to find information
    - What to do if develops severe or worsening symptoms, who to contact?
- Ask them to stay at home, do not go to work, do not have visitors
- Cases should sleep in a separate room, use a separate bathroom from the rest of household if possible and use designated household items (clothes, bed linen, towels, crockery and cutlery).
- Household members should avoid physical contact with the case.
- Abstain from sexual contact while in isolation and use condoms for 12 weeks after they recover until more is known about levels of the virus and potential infectivity in semen during the period that follows recovery.
- If isolation from the rest of the household is not possible, this should be discussed with the PHU; moving the case from the household should be considered, particularly if there are children or pregnant women in the household.

- Cases should not leave the home except as required for follow-up medical care, or for solo outdoor exercise. If a case leaves the home, they should wear a surgical mask and cover their rash.
- Cases should avoid close contact with pets or wildlife and in particular rodents (mice, rats, hamsters, gerbils, guinea pigs, squirrels etc.), due to the possibility of human-to-animal transmission and the risk of setting up a reservoir in Australia.
- Careful hand and respiratory hygiene are recommended for the case and everyone in the household; a surgical face mask should be used when in the same room as other people if this is unavoidable.
- Cases isolating in the community setting should be provided with their PHU or communicable diseases unit contact number to seek advice or support where required.
- When exiting isolation all clothes, linen, towels and personal items should be cleaned due to risk of fomite mediated transmission.

Contact tracing

Contacts within the past 21 days of symptom onset in people confirmed to have mpox virus infection should monitor for symptoms for 21 days after their last exposure. Contacts are encouraged to practise good hand hygiene and respiratory etiquette.

Transmission of mpox virus occurs when a person comes into close contact with the virus from an animal, human, or materials contaminated with the virus. Human-to-human transmission occurs through mucous membrane or non-intact skin contact with infectious material from skin lesions of an infected person; through respiratory droplets in prolonged face-to-face contact; and through fomites.

Discuss contact tracing with local CDC

Medium and high-risk contacts

All medium and high-risk contacts should be instructed to monitor their temperature and watch for signs and symptoms. Additional measures, including consideration of post-exposure prophylaxis, may be considered (as per Table 1).

If any clinically compatible symptoms develop, medium and high-risk contacts should isolate and:

- If symptoms include rash, orthopox virus testing should be conducted as soon as practicable.
- If symptoms do not include rash, the PHU should consult the responsible authorising pathologist and the clinician regarding the appropriateness of testing.

Low-risk contacts

People involved in brief indirect contact with a case, or indirect contact wearing appropriate personal protective equipment (PPE) are at low risk of transmission and do not routinely require follow up. However, on a case-by-case basis public health units may advise low-risk contacts to self-monitor for signs and symptoms.

See CDNA Monkeypox virus infection case and contact management guidelines | Australian Government Department of Health and Aged Care See Table 1 pp.7-10 for detailed guidance for management of contacts.

Room cleaning and waste management

As per

- Standard Precautions TEHS Guideline.docx (nt.gov.au)
- Standard and Additional Precautions PHC CAHS Guideline

Active case finding

Alert local doctors, sexual health clinics, emergency departments and laboratories in the areas where the monkeypox case may have acquired infection or was infectious and not all contacts were able to be identified.

- Ask them to report suspected cases to the local PHU immediately.
- Provide advice on appropriate management including PPE and other infection control measures and specimen collection.
- Consider the need for communications to assist in case finding.

Vaccination

- Pre and post exposure vaccination is now available in the NT.
- Two vaccines are available in Australia for prevention of mpox: the 3rd generation JYNNEOS® (MVA-BN: modified vaccinia Ankara vaccine-Bavarian Nordic) and the 2nd generation ACAM2000™
- JYNNEOS® is a highly-attenuated vaccine that is replication-deficient.

  The primary course of JYNNEOS® is two doses, with a minimum dose interval of 28 days.

  Standard administration of JYNNEOS® is by subcutaneous injection.

  JYNNEOS® can be administered by intradermal injection as an alternative route for primary preventative vaccination.

  Each subcutaneous dose is 0.5mL (contents of 1 vial).

  Each intradermal dose is 0.1mL (20% of the standard subcutaneous dose).

  Once the vial is punctured and dose withdrawn, if it is not used in its entirety, it should continue to be stored at +2°C to +8°C and discarded within 8 hours of the first puncture. Each dose of JYNNEOS® should be drawn from the vial at the time of administration (for both subcutaneous and intradermal routes).

  The intradermal route is not recommended for people with severe immunocompromise or atopic dermatitis.

  JYNNEOS® is associated with fewer potential adverse events compared to ACAM2000™ and is safe to use in people with immunocompromise or atopic dermatitis. JYNNEOS® may also be used in children or during pregnancy, after a risk-benefit assessment.

  Vaccine eligibility in the NT is as follows:

  - high risk close contact of a confirmed case
  - gay, bisexual, and other men who have sex with men

- trans (binary and non-binary people) who have sex with men
- sex workers
- sistergirls
- any person who perceives themselves to be at increased risk of acquisition (e.g. because they are attending a high risk event as an advocate/ally)

Eligible people can contact their local Clinic34 to book in for vaccination.

NOTE: Local recommendations may vary based on the availability of vaccines. Please discuss with Sexual Health Physician if in doubt.

Definitions

The following definition(s) from Communical Disease Network Australia are relevant to this guideline.

Term	Definition
Mpox confirmed case	A confirmed case requires laboratory definitive evidence only. Laboratory definitive evidence: 1. Detection of mpox virus by nucleic acid amplification testing in clinical specimens; OR 2. Detection of mpox virus-specific sequences using next generation sequencing for clinical specimens; OR 3. Isolation of monkeypox virus by culture from clinical specimens.
Mpox pox probable case	A probable case requires laboratory suggestive evidence AND clinical evidence. Laboratory suggestive evidence: 1. Detection of Orthopoxvirus by nucleic acid amplification testing in clinical specimens; OR 2. Detection of Orthopoxvirus by electron microscopy from clinical specimens in the absence of exposure to another orthopoxvirus. Clinical evidence: A clinically compatible illness with rash[1,2,3] on any part of the body with or without one or more classical symptom(s) of monkeypox virus infection: · lymphadenopathy · fever (>38°C) or history of fever · headache · myalgia · arthralgia · back pain
Suspected case	A suspected case requires clinical evidence[4] AND epidemiological evidence. Epidemiological evidence:

	· An epidemiological link to a confirmed or probable case of monkeypox virus infection in the 21 days before symptom onset, OR · Overseas travel in the 21 days before symptom onset, OR · Sexual contact and/or other physical intimate contact with a gay, bisexual or other man who has sex with men in the 21 days before symptom onset

Notes:
1 Lesions typically begin to develop simultaneously and evolve together on any given part of the body, and may be generalised or localised, discrete or confluent. The evolution of lesions progress through four stages – macular, papular, vesicular, to pustular – before scabbing over.

2 For which the following causes of acute rash do not explain the clinical symptoms: chickenpox, shingles, measles, herpes simplex, or bacterial skin infections.

3 Public health units should seek advice from the responsible authorising pathologist and the clinician regarding testing for monkeypox virus and other alternative causes.

4 A high or medium risk contact of a confirmed or probable case only requires one or more symptoms of a clinically compatible illness (i.e. does not require rash, if another symptom present) to be a suspected case.

Resources

1.1. Suggested medical images of MPOX for clinical use

- Journal of Infection Article
- Eurosurveillance Article 1
- Eurosurveillance Article 2

1.2. Community information and resources

Please refer to the AFAO website for national and state and territory based members providing further information on MPOX to their communities.

Monkey Pox (MPXV) - Australian Federation of AIDS Organisations (afao.org.au)Australian Human monkeypox virus infection treatment guidelines (health.gov.au)

Appendix A

Clinic 34 Reception/triage procedures – these can be adapted as appropriate for other health services.

Assessment/triage guide			
Reception/Triage nurse	" To make sure correct assessment and care, we are asking everyone some additional questions" Do you have/had more than 1 of following symptoms recently 1. Rash on any part of your body 2. Fever 3. New lump/s in neck, groin or in armpits?"	No	Sit in waiting room as usual, seen as usual
		Yes	Ask patient to wait inside a designated clinic room (safe clinical area) and inform clinic manager/senior nurse Avoid close contact / do not follow the patient
Clinician (in designated safe clinic room)	If the patient answered yes to above questions, make sure you inform and discuss with a senior clinician before meeting the client with full PPE during consult (see below) Arrange /Inform Clinical Microbiology you are sending the tests. Ask 1. Are you a gay, bisexual or other man who has sex with men? 2. Have you had contact with someone with confirmed Monkeypox in the 21 days before symptoms start? 3. Have you had contact with anyone who travelled any other country in the 21 days before your symptoms started?" 4. Have you travelled overseas in the 21 days before your symptoms started?	No	Proceed as a normal consult
		Yes	Get closer to the patient (in full PPE) – general examination/check mouth for lesions/check for lymphadenopathy Collect: • Mpox swabs from lesions (for Mpox: at least 2-3 swabs in UTM from 3 different skin lesions (red topped dry PCR swabs), add separate HSV/Syphilis PCR swab. • PCR throat swab for Mpox • PCR anal swab for Mpox if anal symptoms (e.g. proctitis) • 4mL of blood in EDTA tube Do regular STI testing as indicated.

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National Safety and Quality Health Service standards

National Safety and Quality Health Service standards							
Clinical Governance	Partnering with Consumers	Preventing and Controlling Healthcare Associated Infection	Medication Safety	Comprehensive Care	Communicating for Safety	Blood Management	Recognising & Responding to Acute Deterioration
☒	☐	☒	☐	☒	☐	☐	☐