Monkeypox (MPX) – clinical update

5 August 2022
This update is based on current information and the situation may quickly change within New Zealand. Further information and advice will be provided when known.

Current situation

MPX in New Zealand
- Monkeypox (MPX) is a zoonotic virus (transmission occurring animal-to-human) which is endemic in parts of Central and West Africa. Outbreaks outside of the African continent occasionally occur but are often small due to low transmissibility of the virus.
- On 7th May 2022 a confirmed case of MPX was notified by the United Kingdom. This is now a global outbreak with nearly 25,000 cases confirmed and suspected in more than 80 countries outside of where MPX is usually endemic. Most infections are among men who have sex with men (MSM) and most have had recent international travel but not to East or West Africa.
- All sequenced PCR samples are identified with the less severe West African clade MPX virus.
- Most cases so far are reported to have mild to moderate illness and are recovering well.
- On Saturday 9 July 2022, the first confirmed case of MPX was reported in New Zealand with two additional unrelated confirmed cases reported on 12 July and 2 August 2022.
- There is no evidence of community transmission in New Zealand.

Risk assessment
- Overall, there is a low to moderate public health risk to New Zealand from MPX. The risk of further importation of MPX is high.
- The likelihood of transmission of MPX in New Zealand is as follows:
  - the risk of transmission among people with multiple sexual partners is considered high
  - the likelihood of widespread community transmission is very low
  - the risk of sustained transmission is low with adequate contract tracing measures in place.
- The level of risk is being reviewed regularly as new information emerges internationally.

MPX transmission and symptoms
- Since Thursday 9 June 2022 MPX is a notifiable disease in New Zealand on Schedule 1 of the Health Act 1956 which enables a prompt response to a MPX case to minimise the risk of community transmission. Now that MPX is a notifiable disease, health practitioners must notify the medical officers of health of suspected cases or confirmed cases.

Transmission
- MPX virus does not spread easily between people but can be transmitted person-to-person by close contact with skin lesions, body fluids, respiratory droplets and contaminated materials such as bedding.
- While MPX is not likely to be a sexually transmitted infection (through fluids), it can be transmitted during sexual contact/activity due to close physical contact. Research is ongoing around transmission through semen.
• An individual is contagious from the time that they develop their first symptoms (which is usually fever, but occasionally starts with a rash) and until rash lesions crust, dry or fall off. The scabs may also contain infectious virus material.

Symptoms
• From exposure, incubation is usually six to 13 days but can range from five to 21 days.
• First symptoms (prodrome) of MPX include fever, intense fatigue, headache, muscle ache, backache and lymphadenopathy. A person may sometimes be contagious during this period.
• Following the prodrome, which usually has a duration of one to three days, a rash develops. Traditionally lesions first begin in the mouth and spread to the face, arms and legs, however, in the current outbreak lesions often first appear in the anogenital region. Lesions start as a macular rash that develops into papules, vesicles, then pustules, which crust and fall off. A person is no longer considered infectious once all scabs have fallen off.
• There has been some atypical presentations in the current outbreak in non-endemic countries. These include an absence of prodromal symptoms (e.g. fever, malaise and headache), and lesions appearing at the site of inoculation; anogenital lesions.
• Most cases are mild with people recovering within two – four weeks.

MPX case definition
An interim case definition for MPX has been developed by the Ministry of Health and ESR and will be reviewed as information changes.

Clinical criteria
A clinically compatible illness characterised by the presence of acute unexplained skin and/or mucosal lesions or proctitis (for example anorectal pain, bleeding)

AND

Epidemiological criteria
At least one of the following:
• Exposure to a confirmed or probable case in the 21 days before symptom onset
• History of travel to West or Central Africa where MPX is endemic in the 21 days before symptom onset
• Is a priority group for testing
At this time priority groups for testing include the following:
• Persons who had multiple or anonymous sexual partners in the 21 days before symptom onset
• Gay, bisexual or other men who have sex with men (MSM).

Laboratory test for diagnosis
Laboratory definitive evidence for a confirmed case requires MPX virus detection by NAAT.

1 More common causes of acute rashes with similar appearances should be considered and excluded where possible; varicella zoster, herpes simplex, syphilis, molluscum contagiosum.
2 Exposure: direct physical contact with skin or skin lesions, including sexual contact; or contact with contaminated materials such as clothing, bedding or utensils; or face-to-face, including health care workers without appropriate PPE
3 Two or more
Testing should be limited only to patients who meet the clinical and epidemiological criteria. Laboratory confirmation requires the detection of MPX virus nucleic acid by PCR from an appropriate clinical sample. Local laboratories are to test for Varicella (chickenpox, VZV), Herpes simplex (HSV), +/- syphilis if there is capability, prior to referral to a reference laboratory for MPX testing.

In addition to Standard Precautions, Contact and Airborne Precautions should be adhered to for clinical assessment and collecting samples. This includes the use of eye protection, P2/N95 mask, fluid repellent gown and gloves.

Potential cases are most likely to present to sexual health, primary care or emergency departments, where the treating physician will collect samples. Note that patients should not present to a community collection centre for sampling. Clinicians are advised to follow the most up to date testing advice which can be found on the New Zealand Microbiology Network website.

Cases under investigation are to isolate and avoid close contact (including kissing or sexual contact) with others while waiting for test results.

Probable and confirmed cases are required to isolate.

**Case classification**

- **Under investigation**: A person that has been reported to a Medical Officer of Health but information is not yet available to classify it as confirmed, probable or not a case.
- **Confirmed**: A person with laboratory definitive evidence.
- **Probable**: A person who meets the clinical and epidemiological criteria and laboratory confirmation is not possible
- **Not a case**: A person that has been investigated and subsequently found not to meet the case definition.

**Managing MPX**

**Prepare** by looking out for signs and symptoms consistent with MPX particularly in returned travellers or people who have had close contact (including sexual) with recent traveller. Ensure infection prevention controls are on hand including droplet precaution.

**Inform** your local medical officer of health and clinical microbiologist at your local laboratory on suspicion of a MPX case, prior to the collection of any samples.

**Test** cases who meet the clinical AND epidemiological criteria.

Standard, contact and droplet precautions are considered as the minimum level of PPE required for all healthcare settings and providers of care when interacting or providing care to a person with suspected, probable and confirmed MPX. Personal protective equipment includes;

- Fluid resistant level II R medical mask
- Gloves
- Disposable fluid resistant long sleeve gown

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• Eye protection (Face shield or goggles)

Healthcare workers can consider the use of a fit tested P2/N95 particulate respirator\(^5\) when providing specific care for a person with probable or confirmed MPX including but not limited to;

• Undertaking procedures involving the oropharynx eg collecting of samples
• Prolonged close physical contact
• Handling of used contaminated linen, clothing and towels

Collect 3x viral swabs from vesicle/pustule fluid in UTM – ideally at least 3 separate vesicles/pustules. Lesions may need to be de-roofed in order to collect the vesicle/pustule fluid and the base of the lesion swabbed vigorously. Depending on your location, there may be designated services or clinicians who are able to collect samples (e.g. Infectious Disease) that you are able to refer to.

Where possible, it is recommended to also include nasopharyngeal swab in UTM to exclude other respiratory viruses and for MPX PCR as patients may have detectable MPX virus in the nasopharynx for a prolonged period.

A dedicated 4ml EDTA blood is also recommended if the patient presents early with signs of systemic illness such as fever. Scab lesions or crust material should be sent to the laboratory in a sterile pottle.

Note that patients should not present to a community collection centre for sampling.

Samples must be clearly labelled and indicated on the request form as possible MPX, including that the Medical Officer of Health and clinical microbiologist have been consulted. Normal clinical channels and usual local escalation pathways should be used for this to regional ID physicians or microbiologists. Local laboratories will test for VZV, HSV, enterovirus, +/- syphilis if there is capability, prior to referral to a reference laboratory for MPX testing.

**Updated testing advice can be found on the New Zealand Microbiology Network website**

https://www.nzmn.org.nz/

**Advise** probable cases to isolate, avoid close contact (including kissing or sexual contact) with others while waiting test results. It is important they are do not share bedding or clothing with others while symptomatic.

**Manage** the case with daily check-ins to monitor symptoms. Probable and confirmed cases will need to be isolated until they are no longer infectious (when the scabs have crusted and fallen off).

Probable or confirmed cases should avoid close direct contact with animals, including domestic animals (such as cats and dogs), livestock, and other captive animals, as well as wildlife\(^6\). People should be particularly vigilant around animals known to be susceptible, such as rodents and non-human primates.

Ensure that all waste, including medical waste, is disposed of in a safe manner and that it is not accessible to rodents and other scavenger animals.

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\(^5\) User to perform a fit check (user seal check) each and every time they don a particulate respirator

\(^6\) This is precautionary. Thus far, there is no documented evidence of domestic animals, such as cats and dogs, or of livestock, being affected by monkeypox virus.
**Contact tracing** of cases and close contacts will be undertaken by the local Medical Officer of Health/Public Health Unit in consultation with the treating physician or sexual health clinic when appropriate.

Contact definition and guidance is being developed. Currently guidance on close contacts is available.

A close contact is defined as a person with one or more of the following exposures to a probable or confirmed MPX case during their infectious period which is taken from onset of prodromal symptoms:

- face to face exposure (including healthcare workers without appropriate PPE)
- direct physical contact, including sexual contact
- contact with contaminated materials such as clothing or bedding

A close contact will undergo symptom monitoring for 21 days since last contact with a confirmed or probable case. If prodromal or rash symptoms develop, they will need to isolate. While asymptomatic (no prodromal symptoms and no rash), a close contact will **not** be required to strictly quarantine however will be provided guidance to avoid:

- High risk settings such as healthcare settings, childcare settings and aged care facilities, as well as places of indoor gatherings where infection may spread via droplets such as bars, restaurants or places of worship.
- High risk activities such as sexual activities and other activities that involve close physical contact such as kissing.
- close contact with people potentially at higher risk of infection including infants, older people and immunocompromised people.

Options for post exposure vaccine prophylaxis for close contacts are being explored.

**Treatment** advice can be provided by your local Infectious Disease Physicians. The Ministry of Health Therapeutic Technical Advisory Group has developed advice around use of vaccines or antivirals for cases and close contacts.

The Ministry of Health is currently working with PHARMAC to explore options for access to Smallpox vaccines that can be used as part of the targeted prevention of spread of Monkeypox in certain situations. In the interim control activities should focus on isolation of probable or confirmed cases, contact tracing and contact management.

**More information**

For more information, including updates on overseas case numbers and investigations, please refer to:

- Monkeypox photos and dermatologist advice: https://dermnetnz.org/topics/monkeypox
- WHO: https://www.who.int/emergencies/emergency-events/item/2022-e000121
- CDC: https://www.cdc.gov/poxvirus/monkeypox/outbreak/us-outbreaks.html
- WOAH: https://www.woah.org/en/disease/monkeypox/

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7 unless seeking medical attention, in which case the contact should call the facility in advance and explain their status.