Management of Cases and Contacts of mpox in Newfoundland and Labrador

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Purpose

The purpose of this document is to provide provincial guidance on the management of cases and contacts of mpox in our province. As mpox is an evolving communicable disease, information in this document may require updates. The information contained in this document has been adapted from recommendations provided by the Public Health Agency of Canada (PHAC), in consultation with provincial/territorial public health authorities and other relevant federal government departments.

Background

Mpox is caused by an Orthopoxvirus and is related to smallpox. It is considered a zoonotic disease with spread occurring in humans in three different ways: animal to human, human to human, and likely through the sharing of clothing, bedding, or other items that have been contaminated by body fluids or lesions.

Case Definition

Suspect case definition:

A person of any age who presents with one or more of the following:

1. An unexplained* acute rash** AND has at least one of the following signs or symptoms
    - Headache
    - Acute onset of fever (>38.5°C),
    - Lymphadenopathy (swollen lymph nodes)
    - Myalgia (muscle and body aches)
    - Back pain
    - Asthenia (profound weakness)
2. An unexplained* acute genital, perianal or oral lesion(s)

P**robable case** definition:

A person of any age who presents with an unexplained* acute rash or lesion(s)**

AND

Has one or more of the following:

1. Has an epidemiological link to a probable or confirmed MPX case in the 21 days before symptom onset, such as
    - direct physical contact, including sexual contact;
    - face-to-face exposure, including health workers without appropriate personal protective equipment (PPE);
    - contact with contaminated materials such as clothing or bedding

2. Reported travel history to or residence in a location where MPX is reported*** in the 21 days before symptom onset.

C**onfirmed case** definition:

A person who is laboratory confirmed for mpox virus by detection of unique sequences of viral DNA either by real-time polymerase chain reaction (PCR) and/or sequencing.

*Common causes of acute rash can include Varicella zoster, herpes zoster, measles, herpes simplex, syphilis, chancroid, lymphogranuloma venereum, hand-foot-and-mouth disease.

**Acute rash. Mpox illness includes a progressively developing rash that usually starts on the face and then spreads elsewhere on the body. The rash can affect the mucous membranes in the mouth, tongue, and genitalia. The rash can also affect the palms of hands and soles of the feet. The rash can last for 2 to 4 weeks and progresses through the following stages before falling off:

- Macules
- Papules
- Vesicles
- Pustules
- Scabs

N.B. It is not necessary to obtain negative laboratory results for listed common causes of rash illness in order to classify a case as suspected.

***Reported travel history includes regional, national, or international travel in the 21 days before symptom onset to any area where mpox may be reported.

Additional information on the case definition can be found on the PHAC website.

Public Health Reporting of Cases

As this is an emerging communicable disease, and there is a potential risk to the health of the population, MPOX is reportable pursuant to subsection 7(1) of the Public Health Protection and Promotion Regulations made under the Public Health Protection and Promotion Act. Suspect, probable, and confirmed cases of MPOX should be immediately reported to the Department of Health and Community Services (DHCS) using the National Case Reporting Form.

Public Health Management of Cases of mpox

Clinical management of the case, whether in the home or an acute care setting, is based on the case's condition and at the discretion of the health care provider. Cases of mpox should have initial contact with public health to discuss symptom and isolation recommendations, including:

- The need to isolate until the case is no longer considered contagious;

- Identifying and mitigating any barriers to effective isolation at the home, as well as providing appropriate supports as needed, including engagement with resources available through Mental Health and Addictions programs;
- Providing information on public health measures that the case, their caregiver and household members should follow;
- Providing general advice on steps to take if symptoms worsen, including instruction on self-care, when to contact their health care provider and how/when to access medical care;
- Identifying all contacts during the case's period of communicability, including persons identified specifically as contacts by the case, or group(s) of individuals potentially exposed during an event or while at a location.

If a case can be managed in their home environment, the recommendations outlined below should be followed by the case:

- Remain in isolation until deemed no longer contagious (i.e., once scabs have fallen off, and the wound is epithelialized and has a light pink/shiny pearl appearance). This may take 2-4 weeks. An individual should only leave isolation to access urgent medical care or for other such emergencies. When accessing medical care, a case should alert the health care providers of their infection prior to interacting.
- Avoid contact with vulnerable populations (e.g., children under 12 years of age, immunocompromised individuals, and pregnant women).
- Avoid direct touching of other people, including through sexual contact
- Cover all lesions with clothing or bandages as much as possible
- Do not share clothes, bedding, towels, utensils, toothbrush, razors, sex toys, needles, or any other items that may be contaminated with infectious particles from lesions or body fluids
- Isolate in a separate space (e.g., private room for sleeping and washroom) whenever possible, especially if the case has respiratory symptoms, and/or lesions that are hard to cover (e.g., on the face), or are weeping.
    - If a private room for sleeping is not possible, the case should maintain as much distance as possible from others (e.g., by sleeping in separate beds).
    - If a separate washroom is not possible, the case should clean and disinfect all surfaces and objects they have had contact with and immediately remove and launder used towels.
- Wear a well-fitting medical mask when around others, at all times. If not possible, other household members should wear a medical mask when in the presence of the case.
- Maintain proper hand hygiene and respiratory etiquette.
- If breastfeeding, consultation with a health care provider should be competed to discuss the risks/benefits of breastfeeding while diagnosed with MPOX.
- Avoid contact with animals, including pets and livestock, when possible. The risk of people passing the virus to animals is unknown at this time, further investigation is ongoing. If this is not possible, cases should cover all lesions with clothing or bandages, wear a well-fitting medical mask and gloves when near the animals, and clean and disinfect high-touch surfaces frequently.
- As a precaution and until more is known, cases should avoid handling, feeding or working closely with wildlife to prevent any possible spread of the virus—this is to limit risk of creating a wildlife reservoir for this virus in Canada.

Following the initial assessment with the case, active monitoring by public health is recommended to ensure adherence to isolation recommendations and to address emerging issues or concerns. Frequency of follow-up with public health should be considered on a case-by-case basis, in consultation with the Regional Medical Officer of Health (MOH). Ending of the isolation period should also be assessed on an individual basis.

Recommendations for Caregivers of a Case

If the case is in need of a caregiver while recovering from mpox, ideally only one individual in the home should be the designated care provider. The caregiver should not be an individual who is at higher risk of severe disease. If the caregiver develops symptoms within 21 days of their last interaction with the case, they should immediately isolate and contact public health or their primary care provider for further direction. Health care providers entering the home to provide medical care should follow appropriate IPAC protocols. Caregivers should reduce their risk of mpox infection by:

- Avoiding close physical contact with the case as much as possible. When interacting with the case, the caregiver should wear a well-fitting medical mask and cover any skin that could potentially come in contact with the case (e.g., consider wearing long pants, long sleeves, an apron, etc.). If the caregiver is providing care that involves direct contact with lesions, the caregiver should also wear disposable gloves.
- Avoiding contact with clothing, towels, or bedding used by the case. If this is unavoidable, the caregiver handling these items should wear a well-fitted mask, gloves, and ensure the contaminated clothing does not come into contact with their skin.
- Avoiding sharing personal items with the case (e.g., toothbrushes, razors, sex toys, needles, contaminated utensils, etc.)
- Avoiding handling utensils and dinnerware that has been used by the case. If unavoidable, utensils and dinnerware should be promptly cleaned with warm soapy water following use.
- Frequently cleaning and disinfecting high-touch surfaces and objects in the home, especially those that the case may have had contact with.
- Practicing frequent hand hygiene.

Public Health Management of Contacts of a Case of mpox

Contact tracing is necessary to prevent the spread of an infectious disease in a community through active case finding during a case investigation. This process facilitates the rapid identification of additional cases of mpox and facilitates the early implementation of public health measures. Contact tracing is detailed and time-intensive work but is crucial in controlling the spread of disease. When completing contact tracing for mpox, the following factors should be considered:

- Cases are considered contagious from onset of symptoms until after the scabs have fallen off, and there is evidence of epithelialization. This may take 2-4 weeks.
- The timing, type and duration of exposure to the case.

Contacts are classified into three categories based on their level of exposure to the case; high, intermediate and low risk. The table below outlines examples of the three categories when determining level of exposure.

Exposure Risk	Description	Examples
High	Prolonged or intimate contact, including: ▪ Skin/mucosa to skin contact with a case (regardless of the case's lesion location) ▪ Skin/mucosa contact with a case's biological fluids, secretions, skin lesions or scabs ▪ Skin/mucosa contact with surfaces or objects contaminated by a case's secretions, biological fluids, skin lesions or scabs ▪ Face-to-face interaction with a case, without the use of a medical mask by the case or contact	▪ Sexual partner ▪ Household members ▪ Roommate in a group home or student residence ▪ HCP without appropriate PPE as per IPAC guidance ▪ Skin/mucosa contact with a case's unwashed bedding, towels, clothing, lesion dressings, utensils, razors, needles, sex toys, etc.
Intermediate	Not meeting high-risk exposure criteria above **AND**: ▪ Limited or intermittent, close proximity exposure to a case without wearing adequate PPE for the type of exposure risk (i.e., medical mask and gloves) ▪ Shared living space where there are limited interactions with a case or their belongings	▪ Sitting next to case on plane ▪ Person sharing close proximity workspace for long periods of time
Low	Not meeting the high- or intermediate-risk exposure criteria above **AND:** ▪ Very limited exposures to a case	▪ Brief social interactions ▪ Colleagues not sharing a confined or close-proximity office space

	▪ Wearing adequate PPE for the type of exposure risk (i.e., medical mask and gloves)	

Priority for public health management should be given to contacts considered to have a high-risk and intermediate risk of exposure to mpox. High-risk and intermediate-risk contacts should receive initial contact from public health for counseling on the signs and symptoms of mpox and the need for self-monitoring for 21 days from the contacts last exposure to the case. If concerns arise in determining level of risk, consultation should occur with the regional MOH. The table below outlines other recommendations based on exposure risk.

Exposure Risk	Recommendations
All Exposures (High, Intermediate and Low)	▪ Can be permitted to continue routine daily activities ▪ Self-monitor for signs and symptoms of mpox infection ▪ Practice proper hand hygiene and respiratory etiquette ▪ Practice safe sex behaviors. While condom use and reduction of the number of partners is not completely protective in the case of mpox, it could reduce the risk of exposure. ▪ Notify the RHA and isolate immediately if signs or symptoms develop ▪ Alert any health care providers that provide medical care of the potential exposure
High and Intermediate	▪ Avoid high-risk settings (e.g., congregative living settings, such as jails or shelters) and vulnerable populations (e.g., children under 12 years of age, pregnant women, immunocompromised individuals), where possible. If this is unavoidable, consider wearing a well-fitting medical mask in these settings or around vulnerable populations. For contacts who work in high-risk settings, refer to occupational health and safety advice or defer to the advice of their local RHA, based on a risk assessment ▪ As a precaution to prevent possible spread to animals, including pets and livestock, and until more is known, it is recommended that contacts have another member of their household care for their animal. If this is not possible, contacts should cover all lesions with clothing or bandages, wear a well-fitting medical mask and gloves when near the animals, and clean and disinfect high-touch surfaces frequently
High	▪ Wear a well-fitting medical mask whenever in the presence of others (including household members)

	▪ Refrain from sexual contact with others ▪ Vigilant self-monitoring, particularly if working with vulnerable populations ▪ Administration of Imvamune as PEP (see section below on recommendations for use).

Treatment Recommendations for High-Risk Contacts of mpox

The National Immunization Committee on Immunization (NACI) has provided recommendations on the use of Imvamune vaccine for prophylaxis against mpox. Imvamune is an orthopoxvirus vaccine made by Bavarian Nordic that is authorized by Health Canada for immunization against smallpox, mpox and other pox viruses in adults 18 years of age and older who are at high risk of exposure. NACI has provided guidance on the use of Imvamune vaccine for Pre-Exposure Prophylaxis (PrEP) and Post Exposure Prophylaxis (PEP).

For PEP, NACI recommends the following:

1. A single dose of the Imvamune vaccine may be offered to individuals with high-risk exposures to a probable or confirmed case of mpox, or within a setting where transmission is happening. PEP should be offered as soon as possible and within 4 days of last exposure and can be considered up to 14 days since last exposure. PEP should not be offered to individuals who are symptomatic and who meet the definition of a suspect, probable or confirmed case.

   After 28 days, if an individual is assessed as having a predictable ongoing risk of exposure, a second dose may be offered. A second dose should not be offered to individuals who are symptomatic and therefore after medical evaluation meet suspect, probable or confirmed mpox case definitions. For individuals who had received a live replicating 1st or 2nd generation smallpox vaccine in the past and sustain a high risk exposure to a probable or confirmed case of mpox, a single dose of Imvamune vaccine may be offered (i.e. as a booster dose).

   The benefit of protection against infection should be discussed with a healthcare provider and weighed against the potential risk of recurrent myocarditis for individuals with a history of myocarditis/pericarditis linked to a previous dose of live replicating 1st and 2nd generation smallpox vaccine and/or Imvamune; a precautionary approach is warranted at this time until more information is available

NACI further recommends that:

2. Imvamune vaccine may be offered to the following populations, if recommended to receive vaccine based on exposure risk:
   - Individuals who are Immunocompromised due to disease or treatment
   - Individuals who are pregnant
   - Individuals who are lactating
   - Children and youth <18 years of age

NACI recommend the following eligibility criteria for the use of Imvamune as PrEP:

- two-spirit people, transgender people, and cisgender males who self-identify as belonging to the gay, bisexual, queer, or men who have sex with men community, and meet at least one of the following criteria, are eligible for preventative vaccination with Imvamune:
    - Have had sex with two or more partners in the last 90 days, or are planning to do so;
    - Have received a diagnosis of a sexually transmitted infection in the last six months;
    - Have attended, worked, or volunteered in venues or other locations for sexual contact within the past 90 days or may be planning to do so, whether in or outside of the province.
- sexual contacts of individuals in the above eligibility groups as well as to people who engage in, or plan to engage in, sex work.

In terms of concurrent administration, NACI recommends that Imvamune vaccine given as PEP or PrEP should not be delayed due to recent receipt of an mRNA COVID-19 vaccine. If vaccine timing can be planned, NACI recommends that Imvamune vaccine be given at least 4 weeks after or before an mRNA vaccine for COVID-19.

NACIs rapid response on the use of Imvamune can be found here.

For more information on mpox, please visit the PHAC website.