

Agenda

- Mpox Re-emergence WHO Global Emergency Alerts
- Current situation Global and Canada
- Canada preparedness
- Mpox Overview and Management :
- **Pathogenic Clade**
- ➤ Clade I DRC (Central African) Congo Basin origin
- Clade II African (West African)
- origin 1 % Human to Human Transmission
- IPAC recommendations in Health care setting



10 % Human to Human Transmission

WHO – Global Alerts and Canada Update

• 14 August 2024

WHO Director-General declares mpox outbreak

A public health emergency of international concern many Countries are affected

Affected Countries STATS: 17,000 Cases/457 Deaths

- Democratic Republic of Congo (DRC) 450 death age, < 15 y 60 %
- Many African countries, Burundi, Uganda, Rwanda, Kenya
- Europe :UK ,Berlin, Sweden 1/ 0
- East :Philippines 2/ 0 and Thailand 1/0
- South East :Pakistan 1/0

Non affected – PAN ALERT

- Canada
- America North, South, Australia, Oceania, Antarctica and Middle East



WHO declares mpox outbreak in Africa a global public health emergency as new variant of virus spreads



GLOBAL Aug 22 STATS

Africa Clade 1

- Burundi (eight cases, zero deaths)
- Cameroon (35, two)
- Central African Republic (213, zero)
- Ivory Coast (28, one)
- Republic of Congo (146, one)
- DRC (13,791, 450)
- Ghana (four, zero)
- Liberia (five, zero)
- Nigeria (24, zero)
- Rwanda (two, zero)
- South Africa (22, three)
- <u>Uganda</u> (four, zero)
- Kenya (one, zero)
- Mozambique (one, zero)

Asia Clade 1, Clade1b and Clade 2

- Pakistan (one, zero) Clade 2
- Philippines (Two case, zero deaths)
- Thailand (one, zero) Clade 1b

- Americas, Middle East, Oceania and Antarctica: No cases
- North or South America countries have reported new Clade 1 cases: None so far



Risk Assessment Global - Canada

- Current Global Risk Assessment (17,000 cases in African subcontinent)
- WHO has set the global risk assessment for mpox clade 1 to "moderate."
- Surveillance: human-to-human transmission is occurring among people in close physical contact with cases who are symptomatic.
- The Government of Canada is closely monitoring the global mpox situation and working with domestic and international partners to determine opportunities for support.
- For Canadian travelers, PHAC's <u>travel health notice</u> outlines potential health risks and recommends ways to help reduce them.

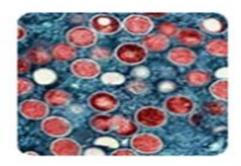


How Canada is monitoring Mpox

- 1. PHAC is working with provinces, territories and international partners, including the World Health Organization, to:
- 2. Conduct public health surveillance of mpox in Canada
- 3. Contribute to global surveillance and monitoring initiatives
- 4. Maintain vigilance for the emergence of clade I mpox virus in Canada
- Data reporting Provincial and territorial health authorities report data on cases of mpox to PHAC on a regular basis.

THE GLOBE AND MAIL* 5d

Toronto health officials urge at-risk groups to get vaccinated as mpox cases...





Current situation in Canada Aug 16-2024

- The risk to people in Canada from mpox remains low.
- The Public Health Agency of Canada (PHAC) is working with provincial and territorial public health partners to monitor mpox (previously called monkeypox) in Canada.
- There are 2 known subtypes of mpox virus, which are called clades: clade I and clade II.
- Clade II is divided into two subclades: clade IIa and clade IIb.
- All mpox cases reported in Canada have been caused by <u>clade IIb mpox virus</u>.
- Current reports suggest that <u>clade II mpox is less severe</u> than clade I.
- Clade IIb mpox cases continue to be detected and reported across Canada.
- January 1-August 12, 2024: <u>Total164 cases</u> have been reported to PHAC, <u>162 confirmed and 2</u> probable.
- To date, no cases of clade I have been identified in Canada.

Resource: Mpox (monkeypox): Update - Canada.ca



Mpox History

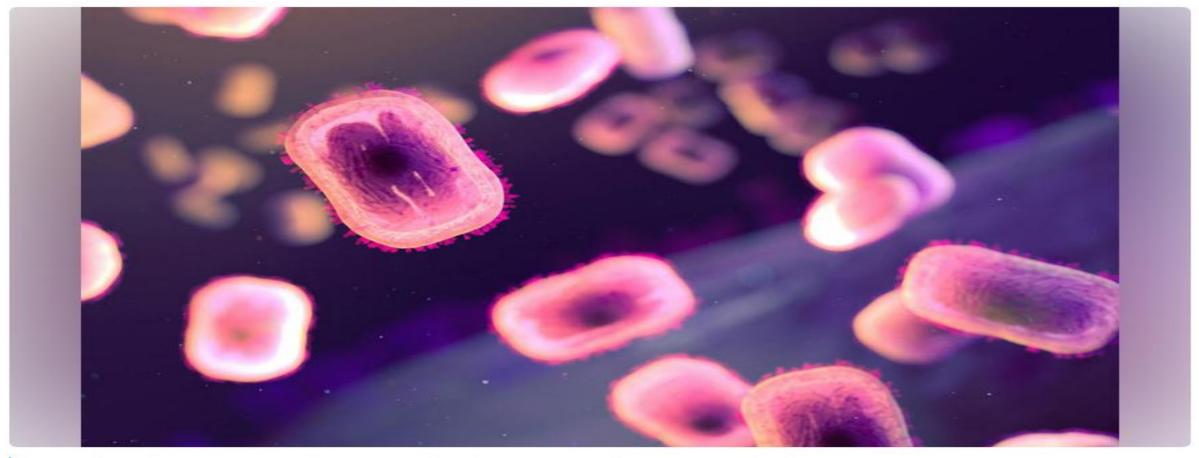
1956 1958 1970 **Identified in Monkey** kept in captivity **Isolated 9 month old Reported First Human** boy DRC imported from case Singapore **2022 - 2023 Outbreaks** 2024 reported **Global Alert**



Mpox aka Monkey Pox

Family Poxvirus, Genus Orthopox, Cousin of Small pox

DSDNA virus, Zoonotic Disease, Human-Human



Mpox virus particles seen through a microscope. Mpox is a virus that causes flu-like symptoms and skin blisters across the body.









Mpox Stastics

Gender specific

Worldwide and Canada



90% of Mpox Cases are Men, Transmitted through Sex - WHO



BY SEWUESE ANYO | AUGUST 15, 2024 Q 0 3 MINS READ



















Mpox in Ontario: January 1 to August 10, 2024

Published: August 20, 2024

Introduction

This biweekly report provides an epidemiologic summary of confirmed mpox cases in Ontario and includes information available from Ontario's integrated Public Health Information System (iPHIS) as of **August 14, 2024**.

The current provincial case definition for mpox can be found in Appendix 1 of the Infectious Disease Protocol for mpox. For further information regarding mpox, visit Public Health Ontario's (PHO) Mpox webpage.

Key Messages

- An increase in mpox activity has been observed in Ontario since mid-January 2024 with a total of 142 confirmed cases occurring from January 1 to August 10, 2024. In comparison, only 33 confirmed cases were reported in 2023. Trends pertaining to age, gender and risk factors were similar between cases reported in 2023 and 2024. For more information on cases reported in 2023, see the mpox epidemiological summary published on June 25, 2024.
- Public health units (PHUs) that have reported cases, particularly those in the Greater Toronto Area and Ottawa, should encourage health care providers to test individuals with compatible clinical evidence for mpox.
- Only 35.7% of individuals who received one dose of the Imvamune® vaccine in Ontario have received their second dose. PHUs in Ontario should continue to promote a two-dose Imvamune® vaccination series to those <u>eligible</u>. Individuals with a previous history of laboratory-confirmed mpox infection or history of completing a two dose Imvamune® vaccine series do not require a booster vaccine.
- On August 14, 2024, the World Health Organization declared mpox to be a Public Health Emergency of International Concern due to the spread of the more severe clade I strain of the virus in countries in West and Central Africa. To date, no cases of mpox clade I have been reported in Ontario.



Table 1. Case characteristics of confirmed mpox cases: Ontario, January 1 to August 10, 2024

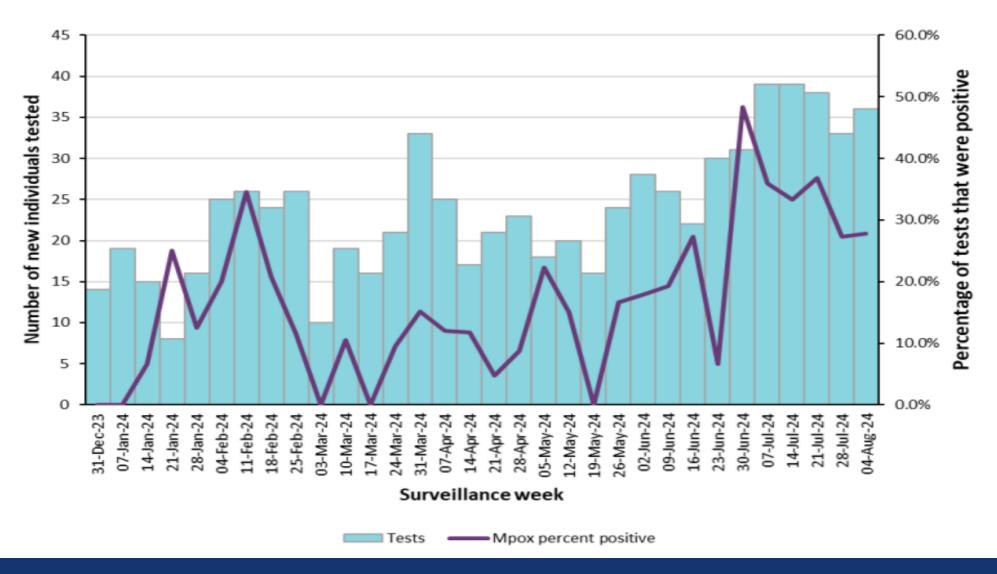
Case Characteristics	January 1 to August 10, 2024 n (%)
Male	136 (95.8%)
Female	3 (2.1%)
Unknown	3 (2.1%)
< 20 years	1 (0.7%)
20 – 29 years	42 (29.6%)
30 – 39 years	53 (37.3%)
40 – 49 years	29 (20.4%)
≥ 50 years	17 (12.0%)
Unvaccinated	87 (61.3%)
1 dose of Imvamune®	33 (23.2%)
2 doses of Imvamune®	22 (15.5%)
Hospitalized	2 (1.4%)
Death	0 (0%)
Total reported cases	142 (100%)



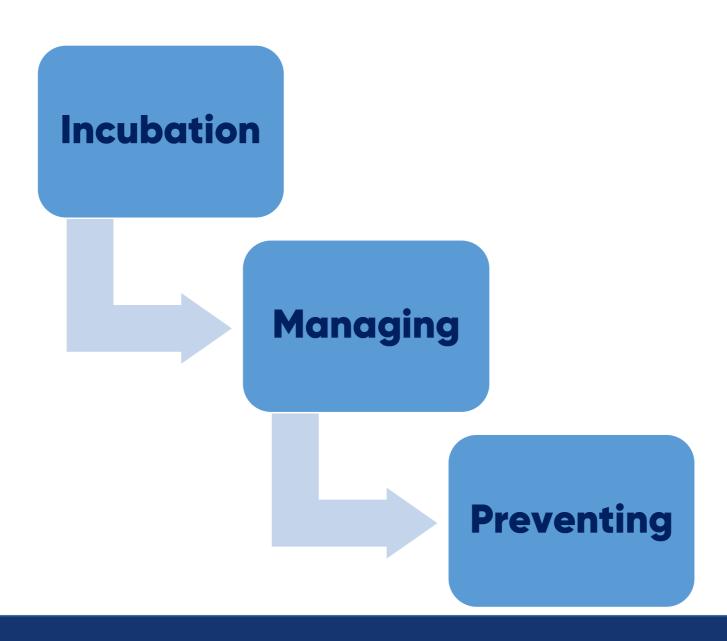
Table 2. Diagnosing public health unit of confirmed mpox cases: Ontario, January 1 to August 10, 2024

Public health unit*	January 1 to August 10, 2024 n (%)
Toronto Public Health	119 (83.8%)
Ottawa Public Health	5 (3.5%)
Peel Public Health	4 (2.8%)
City of Hamilton Public Health Services	2 (1.4%)
Durham Region Health Department	2 (1.4%)
Halton Region Public Health	2 (1.4%)
Region of Waterloo Public Health and Emergency Services	2 (1.4%)
Wellington-Dufferin-Guelph Public Health	2 (1.4%)
York Region Public Health	2 (1.4%)
Middlesex-London Health Unit	1 (0.7%)
Simcoe Muskoka District Health Unit	1 (0.7%)
Total	142 (100%)

Figure 2. Number of new individuals tested for mpox and percent positivity by week: Public Health Ontario, January 1 to August 10, 2024

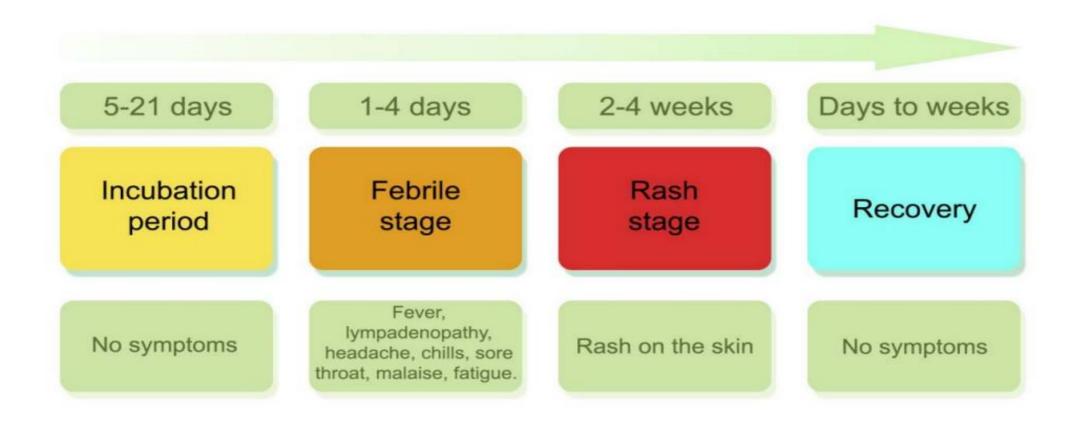






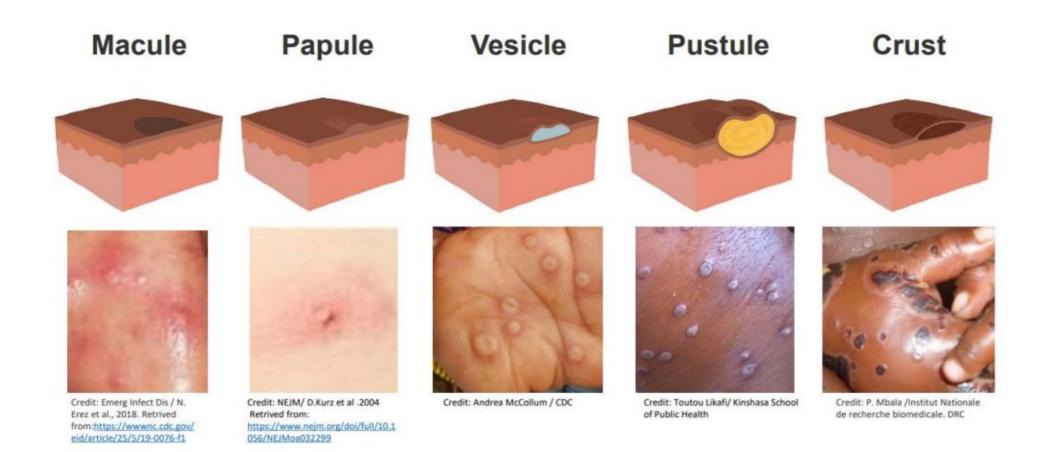


Disease Progression





The Rash





Modes of Transmission

Unprotected contact with:

- respiratory droplets
- lesion material
- body fluids
- contaminated materials and surfaces

The virus can enter through:

- respiratory tract
- mucous membranes (eyes and mouth)
- broken skin (e.g. animal bites)











Other Mode of transmission

Human – Human

- Close contact with infected individual
- Sexual contact multiple sexual partners and homosexual (Male) are at higher risk.

Infected Animal to human transmission:

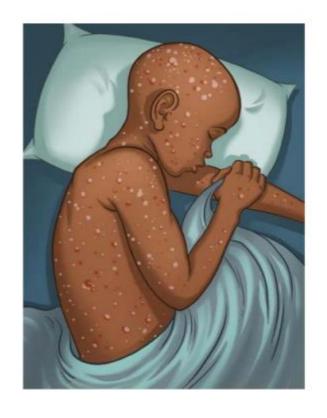
- Bites
- Scratching: During hunting, skinning, trapping, cooking, playing with carcasses, or eating animals.
- Sharps injuries
- Tattoo parlours.



Case Management

Airborne/Droplet/Contact Precautions

- Fever and pain management
- Skin, eye and mouth care
- Respiratory care
- Hydration and nutritional support
- Mental health support
- Prevention & treatment of complications
- Infection prevention and control





<u>Interim guidance on infection prevention and control for suspect, probable or confirmed monkeypox within Healthcare settings - Canada.ca</u>





AT A GLANCE

Infection Prevention and Control (IPAC)
Recommendations for Monkeypox in Health
Care Settings

2nd Revision: June 2022



Case Management Suspected/ Probable/ Confirmed

Case Management:

Initiate Additional Precaution AIR Borne/ Droplet/ Contact

Room Placement:

- A single-patient room, with the door closed.
- with a dedicated toileting facility or commode.

If a single-room is not available (LTCHs - RH - CLS)

- Case must :Don a medical mask over their nose and mouth (as tolerated).
- Safe Distance maximizing distancing from others.
- Cover :covering exposed skin lesions with clothing, sheet or gown as best as possible.



Contact Management

- Health Care setting: Acute/Vaccination Clinics:
 Screening for symptoms of communicable diseases (e.g., fever, rash, cough)
- Apply Routine practices: Individuals who are Contacts and Asymptomatic are not considered infectious during their incubation period (5-21 days)
 (prior to symptom onset).
- Self isolation Contacts of a confirmed, probable or suspect monkeypox case should self-monitor for signs and symptoms of monkeypox and self-isolate if these develop, pending further direction from public health.



IPAC practices and Waste Disposal

I. Hand hygiene:

Four Moments of Hand Hygiene.

II. Personal Protective Equipment (PPE) for health care workers

- 1. Gloves
- 2. Gown
- 3. Eye protection (e.g., face shields, safety glasses or goggles)
- 4. N-95 face fit tested
- 5. Well fitted Face mask for visitors and residents/patients

Waste disposal:

• Containment and disposal of contaminated waste (e.g., dressings) in accordance with facility-specific/public health guidelines for infectious waste.



Additional Precaution and Infected Individual Transport

Until all scabs have fallen off and new skin is present.

Community: Individuals in self-isolation in the community, self-isolation is maintained.

- > until all scabs have fallen off and new skin is present
- > have been cleared by their PHU (no longer considered infectious).

CLS: Infected Individual Transport;

• Have the individual wear clean clothes/gown, wash their hands, wear a medical mask and cover their lesions to the best extent possible for transport.



CLS Specimen Collection, handling Soiled linen and Laundry

Specimen collection:

- PCR swab of affected areas
- An AllR is not required for specimen collection for monkey pox testing.

Laundry:

- Avoid Shaking: soiled laundry
- Soiled linen collection / begging: Additional Precautions, HH PPE (gloves, gown, fittested and seal-checked N95 respirator and eye protection)

Donot sort or pre-rinse soiled laundry in care areas.

- HH before and after and PPE Don- Doff
- Wash: machine washing using hot water (70 degrees Celsius)
- Usual laundry detergent is sufficient.



CLS Food Services

- Food service items are to be managed in accordance with Routine Practices.
- Dishware and eating utensils are effectively decontaminated in commercial dishwashers with hot water and detergent.
- Reusable dishware and utensils may be used.
- Disposable dishes are not required.



CLS Environmental Cleaning and Disinfection

Routine environmental cleaning and disinfection is adequate for monkey pox.

Disinfection: Health care grade, DIN

- High touch areas
- Once a day daily Clean of residents Rooms
- Shared equipment before and after each used discharge and discontinuation of Additional Precautions. Additional cleaning as required.
- Shared showering facilities, including shower chairs, are to be cleaned after each use.
- Activities that could re-suspend dried material from lesions (e.g., use of portable fans, shaking of linens, dry dusting, sweeping, or vacuuming) should be avoided.
- Wet cleaning methods are preferred.



Diagnosis

- PCR preferred laboratory test for mpox.
- The best diagnostic specimens are taken directly from the rash – skin, fluid or crusts – collected by vigorous swabbing.
- In the absence of skin lesions, testing can be done on oropharyngeal, anal or rectal swabs.
- Testing blood is not recommended.
- Antibody detection methods may <u>not be useful</u> as they do not distinguish between different orthopoxviruses

Treatment and Vaccination

- Care of the rash,
- Pain management
- Prevent complications.
- Early and supportive care is important to help manage symptoms and avoid further problems.

Vaccination

- within 4 days of contact
- within up to 14 days if are no symptoms
- During an outbreak. High risk group people
- health workers at risk of exposure
- > men who have sex with men
- > people with multiple sex partners
- > sex workers.
- Persons who have mpox should be cared for away from other people



Post Mortem Care

Care of the deceased:

- Prepare the body for transfer to the morgue or funeral as per routine organizational polices (e.g., cleaning, containing body fluids, placing in a body bag).
- Follow the same Additional Precautions used while the person was alive.
- Care is to be taken to avoid contaminating the exterior of the body bag.



Learning Outcome Key facts

- Virus: Mpox (monkeypox) is a viral illness caused by the monkeypox virus,
- Symptom : Common symptoms

skin rash or mucosal lesions which can last 2-4 weeks accompanied by fever, headache, muscle aches, back pain, low energy, and swollen lymph nodes.

- Mpox can be transmitted to humans through physical contact with someone who is infectious, with contaminated materials, or with infected animals.
- Laboratory confirmation of mpox is done by testing skin lesion material by PCR.
- Mpox is treated with supportive care. Vaccines and therapeutics developed for smallpox and approved for use in some countries can be used for mpox in some circumstances.
- In 2022–2023 a global outbreak of mpox was caused by a strain known as clade IIb.
- Mpox can be prevented by avoiding physical contact with someone who has mpox.
- Vaccination can help prevent infection for people at risk.



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Questions

Thank you



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