

ENHANCED EPIDEMIOLOGICAL SUMMARY

Mpox in Ontario: January 1 to May 31, 2025

Updated: June 10, 2025

Introduction

In 2022, the global spread of clade IIb mpox resulted in outbreaks of mpox in countries where the disease was previously never reported, including Canada. The resultant outbreak in Ontario in 2022 predominantly affected adult men who identified as gay or bisexual, as well as men who reported having sex with men (gbMSM) and had a new, anonymous, and/or more than one sexual partner. Since 2022, there has been ongoing clade IIb mpox transmission in Ontario with low levels of activity in 2023 followed by a resurgence in 2024 in late spring and summer.

In 2023, a new and more severe strain of mpox (clade Ib) emerged in Africa and since 2024, travel-associated cases have been detected in several countries outside of Africa, including Canada. To date, no clade Ib mpox cases have ever been reported in Ontario and the risk of clade Ib infection to Ontarians remains low.

Provincial case definitions for mpox can be found in Appendix 1 of the Ministry of Health (MOH)'s Infectious Disease Protocol for [Smallpox and other Orthopoxviruses, including mpox](#)². For further information regarding mpox and cases reported between 2022 and 2024, visit PHO's [mpox webpage](#)¹ and the MOH's [mpox webpage](#)³.

The following provides an epidemiologic summary of confirmed mpox cases in Ontario using data from Ontario's integrated Public Health Information System (iPHIS) as of **June 4, 2025**.

Key Messages

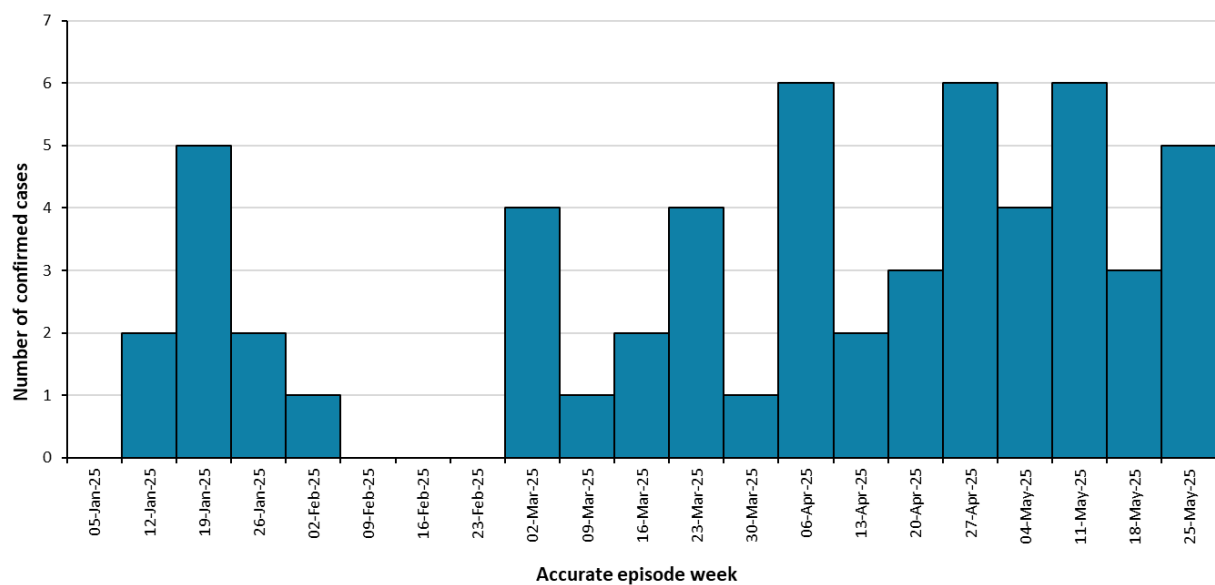
- Between January 1 and May 31, 2025, Ontario has reported 59 confirmed clade IIb mpox cases, which is comparable to the 57 cases reported during the same period in 2024. Over the past nine weeks, mpox activity in Ontario has been increasing, particularly in the Greater Toronto Area (GTA). The GTA may be experiencing increasing local transmission of mpox virus as indicated by most cases not reporting travel before their infection.
- Mpox continues to predominantly affect adult men who identify as gay or bisexual, as well as men who report having sex with men (gbMSM). The most commonly reported risk factors continue to be having a new, anonymous, and/or more than one sexual partner.
- Of the mpox cases reported since 2023, the majority (313/379; 82.6%) are either unvaccinated or have received only one dose of Imvamune® vaccine. As of June 2025, only 41.0% of Ontarians who received one dose of Imvamune® vaccine have received their second dose.
- Health care providers and Public Health Units (PHUs) should continue to recommend that [eligible](#)³ individuals complete a two-dose Imvamune® vaccination series. An additional/booster dose is not recommended.
- Between January 1 and May 31, 2025, mpox test positivity increased, which suggests under-testing and/or increasing community transmission of mpox virus. Health care providers should consider testing individuals for mpox who present with compatible risk factors and clinical evidence. Individuals who have received at least one dose of Imvamune® vaccine can still be infected with the virus but may have a milder clinical presentation. See Public Health Ontario's [Test Information Sheet](#)⁴ for more information.

Case Characteristics

Trends over time

Between January 1 to May 31, 2025, a total of 59 laboratory-confirmed mpox cases were reported in Ontario. The first two cases were identified during the week of January 12-18, 2025, and counts have fluctuated since then, ranging from 0-6 cases per week. Beginning the week of March 2-8, 2025, at least one case has been reported weekly, with the highest number of cases (6, 10.2%) reported during the week of May 11-17, 2025.

Figure 1: Confirmed mpox Cases by Week of Accurate Episode Date: Ontario, January 1 to May 31, 2025



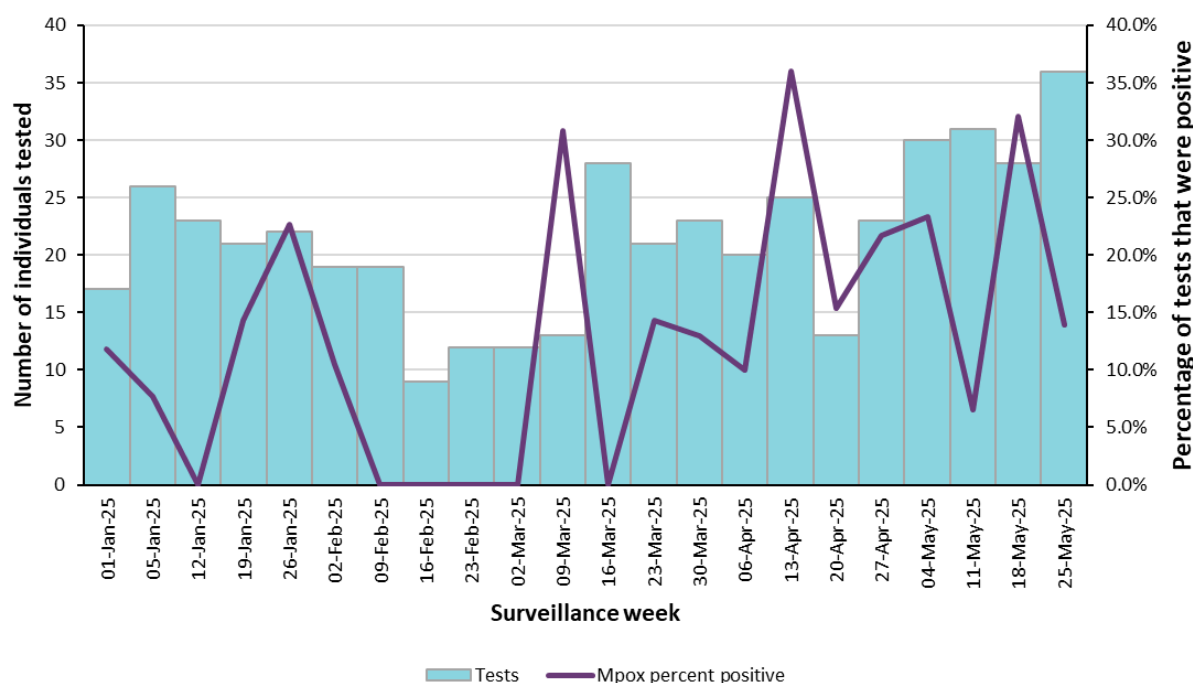
Data source: Ontario’s integrated Public Health Information System (iPHIS)

Note: Accurate Episode Date is defined in the [Data Caveats](#). Due to potential delays between symptom onset, reporting of laboratory test results, and data entry into iPHIS, case counts for the last few weeks may be incomplete and should be interpreted with caution.

Percent Positivity

Between January 1 to May 31, 2025, a total of 471 individuals were tested for mpox of which 65 (13.8%) tested positive. Mpox percent positivity is the percentage of all mpox virus tests completed at Public Health Ontario's laboratory that come back positive. The percent positivity peaked at 36.0% during the week of April 13-19, 2025. Percent positivity has fluctuated since then, with the most recent week (May 25-31, 2025) having a rate of less than 14.0%.

Figure 2: Number of Samples Tested for mpox and the Number (%) that Tested Positive by Week: Public Health Ontario, January 1 to May 31, 2025



Data Source: Public Health Ontario Laboratory Information Management System.

Note: The week of January 1, 2025 is a partial week. Week was assigned using sample collection date, if provided, and login date otherwise. Includes repeat positive tests from two individuals; a repeat test (positive or negative) was counted for an individual if separated by greater than six weeks from their initial test. As Public Health Ontario is not the sole provider of mpox testing in Ontario, data may not be a complete representation of individuals tested in the province. For further details, see [Technical Notes](#).

Sex, Age, Vaccination Status, and Severity

The vast majority (98.3%) of mpox cases reported from January 1 to May 31, 2025 were male and 74.6% were between the ages of 20-39 years. Just over half (54.2%) of mpox cases reported during this period have not received any doses of mpox vaccine. No hospitalizations or deaths have been reported.

51/59 (86.4%) of cases reported at least one risk factor. Of these, 9/51 (17.6%) cases reported travel outside of Ontario during the 21 days prior to symptom onset, suggesting that the majority of cases acquired their infection within Ontario (i.e., ongoing local transmission).

Table 1: Characteristics of Confirmed mpox Cases: Ontario, January 1 to May 31, 2025

Case Characteristics	January 1 to May 31, 2025 n (%)
Sex: Male	58 (98.3%)
Sex: Female	0 (0.0%)
Sex: Unknown	1 (1.7%)
Age group: < 20 years	1 (1.7%)
Age group: 20 – 29 years	15 (25.4%)
Age group: 30 – 39 years	29 (49.2%)
Age group: 40 – 49 years	10 (16.9%)
Age group: ≥ 50 years	4 (6.8%)
Vaccination status: Unvaccinated*	32 (54.2%)
Vaccination status: 1 dose of Imvamune®	15 (25.4%)
Vaccination status: 2 doses of Imvamune®	12 (20.3%)
Severity: Hospitalized	0 (0.0%)
Severity: Death	0 (0.0%)
Total Cases	59 (100.0%)

Data sources: iPHIS and Digital Health Immunization Repository (DHIR).

Note: The categories 'Male' and 'Female' reflect an individual's internal and individual experience of gender and not necessarily their sex assignment at birth. Case counts and details may change based on updates made by public health units.

Geography

Of the 59 confirmed mpox cases reported between January 1 to May 31, 2025, the majority 46/59 (78.0%) were reported by Toronto Public Health; the remaining 13/59 (22.0%) cases were reported by eight other public health units (PHUs). 20/29 (69.0%) PHUs have not reported any confirmed mpox cases since January 1, 2025 and are not included in Table 2.

Table 2: Diagnosing Public Health Unit of Confirmed mpox Cases: Ontario, January 1 to May 31, 2025

Public Health Unit*	January 1 to May 31, 2025 n (%)
Toronto Public Health	46 (78.0%)
Peel Public Health	4 (6.8%)
City of Hamilton Public Health Services	2 (3.4%)
Durham Region Health Department	2 (3.4%)
Grand Erie Public Health	1 (1.7%)
Halton Region Public Health	1 (1.7%)
Niagara Region Public Health	1 (1.7%)
Region of Waterloo Public Health and Emergency Services	1 (1.7%)
South East Health Unit	1 (1.7%)
Total	59 (100.0%)

Data source: iPHIS

Technical Notes

Data Sources

- The data for this report were based on information entered in:
 - the Ontario Ministry of Health's (MOH) integrated Public Health Information System (iPHIS) database as of **June 4, 2025**
 - the Public Health Ontario Laboratory Information Management System as of **June 4, 2025**
 - the Digital Health Immunization Repository (DHIR) as of **June 4, 2025**
- iPHIS is a dynamic disease reporting system that allows ongoing updates to previously entered data. As a result, data extracted from iPHIS represent a snapshot at the time of extraction and may differ from previous or subsequent reports.

Data Caveats

- These data only represent confirmed cases of mpox reported to public health and recorded in iPHIS. As a result, all case counts are subject to varying degrees of underreporting due to a variety of factors, such as disease awareness and medical care seeking behaviours that may depend on severity of illness, clinical practices, and changes in laboratory testing and reporting behaviours.
- Only mpox cases meeting the confirmed case classification as listed in the [Ontario MOH surveillance case definitions](#)² are included in the reported case counts.
- Cases of mpox are reported based on the Episode Date, which is an estimate of the onset date of disease for a case. In order to determine this date, the following hierarchy exists in iPHIS: Onset Date > Specimen Collection Date > Lab Test Date > Reported Date.
 - For example: If an Onset Date exists, it will be used as the Episode Date. If Onset Date is not available, then the next available date in the hierarchy (i.e., Specimen Collection Date) will be used, and so on.
- Case counts by geography are based on the diagnosing health unit (DHU). DHU refers to the case's public health unit of residence at the time of illness onset or report to public health and not necessarily the location of exposure.
- As of January 1, 2025, a number of public health units have merged:
 - Brant County Health Unit and Haldimand-Norfolk Health Unit have merged into Grand Erie Public Health;
 - Hastings and Prince Edward Counties Health Unit, Kingston, Frontenac and Lennox and Addington Health Unit and Leeds, Grenville and Lanark District Health Unit have merged into South East Health Unit;
 - Porcupine Health Unit and Timiskaming Health Unit have merged into Northeastern Public Health.
- The vaccination status of mpox cases was determined as follows:
 - Unvaccinated: Did not receive any doses of Imvamune[®] vaccine or their Episode Date occurred within 14 days of receiving their first dose.

- 1 Dose of Imvamune®: Their Episode Date occurred more than 14 days after receiving their first dose or their Episode Date occurred within 14 days of receiving their second dose.
- 2 Doses of Imvamune®: Their Episode Date occurred more than 14 days after receiving their second dose.
- Hospitalized cases include those with an Intervention Type Description of 'Hospitalization' or 'ICU' and an Intervention Start Date that occurs on or after the case's Episode Date.
- Fatal cases include those with an Outcome of 'Fatal' and Type of Death is not captured as 'Reportable Disease was Unrelated to Cause of Death'.
- Cases for which the Disposition Status was reported as ENTERED IN ERROR, DOES NOT MEET DEFINITION, DUPLICATE-DO NOT USE, or any variation on these values, were excluded from this analysis.
- The potential for duplicates exists because duplicate sets were not identified and excluded unless they were already resolved at either the local or provincial level prior to data extraction from iPHIS.
- Number of new individuals tested for mpox excludes individuals with invalid, indeterminate or pending test results. For individuals with multiple test results, the following hierarchy was used to assign a single result: Detected > Indeterminate > Not detected > Invalid > Pending. For multiple results at the same level in the hierarchy, the earliest result was used.
- Data on hospitalizations and fatalities may be incomplete for cases reported in the most recent week(s) and should be interpreted with caution. This information may be updated in subsequent reports pending further data collection and entry by public health units.

References

1. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Mpox. Toronto, ON: King's Printer for Ontario; 2024 [cited 2024 Dec 05]. Available from: <https://www.publichealthontario.ca/en/Diseases-and-Conditions/Infectious-Diseases/Vector-Borne-Zoonotic-Diseases/Mpox>
2. Ontario. Ministry of Health. Ontario public health standards: requirements for programs, services and accountability. Infectious disease protocol. Appendix 1: case definitions and disease-specific information. Disease: Smallpox and other Orthopoxviruses including mpox (monkeypox). Effective: April 2024 [Internet]. Toronto, ON: King's Printer for Ontario; 2024 [cited 2025 June 4]. Available from: <https://www.ontario.ca/files/2024-04/moh-ophs-smallpox-en-2024-04-01.pdf>
3. Ontario. Ministry of Health. Mpox (monkeypox). Effective: Feb 2024 [Internet]. Toronto, ON: King's Printer for Ontario; 2024 [cited 2024 Dec 05]. Available from: <https://www.ontario.ca/page/mpox-monkeypox>
4. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Monkeypox Virus. Toronto, ON: King's Printer for Ontario; 2024 [cited 2025 June 4]. Available from: <https://www.publichealthontario.ca/en/Laboratory-Services/Test-Information-Index/Monkeypox-Virus>

Citation

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