

## ENHANCED EPIDEMIOLOGICAL SUMMARY

# Mpox in Ontario: January 1, 2023 to May 31, 2024

Updated: June 25, 2024

## Key Messages

- An increase in mpox activity has been observed in Ontario since mid-January 2024 with a total of 55 confirmed cases in 2024 to the end of May (compared to only 33 confirmed cases in all of 2023).
- Public health units (PHUs), particularly those in the Greater Toronto Area and Ottawa, should encourage health care providers to test individuals with compatible clinical evidence for mpox.
- Only 35.2% of individuals who received one dose of an Imvamune<sup>®</sup> vaccine in Ontario have received their second dose. PHUs in Ontario should continue to promote a two-dose Imvamune<sup>®</sup> vaccination series to those [eligible](#). Individuals with a previous history of laboratory-confirmed mpox infection or history of completing a two dose Imvamune<sup>®</sup> vaccine series do not require a booster vaccine.

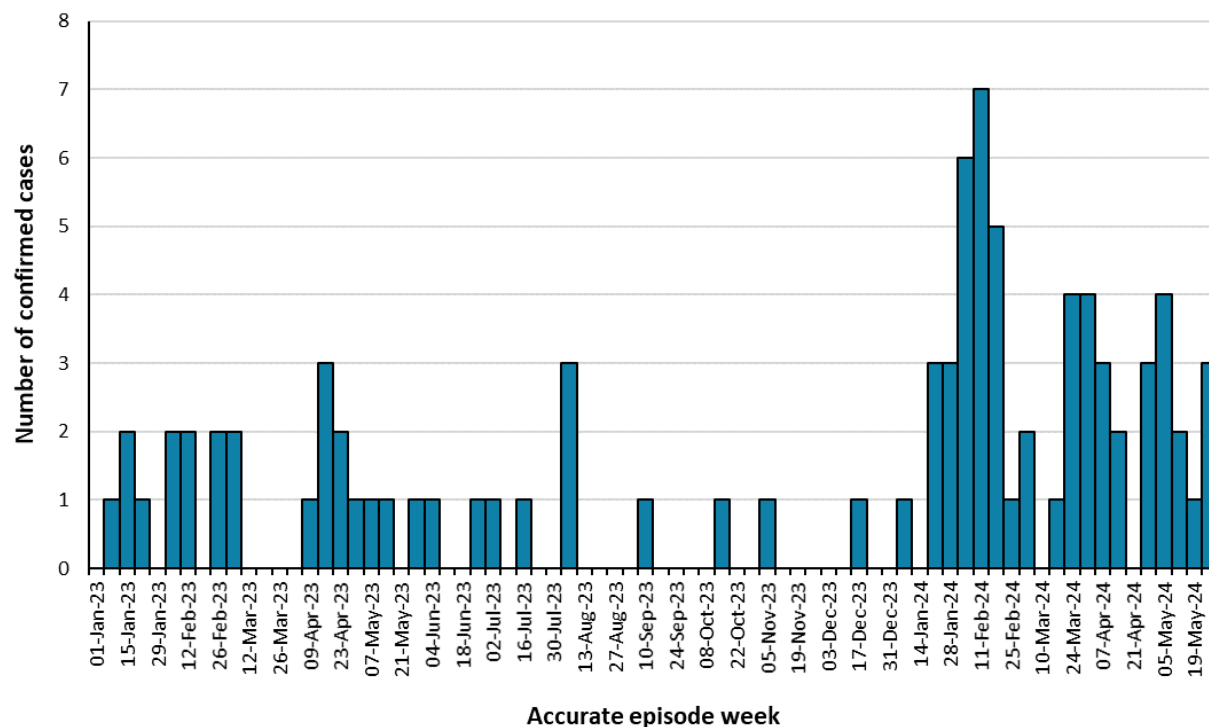
## Highlights

Since January 1, 2023, a total of 88 laboratory-confirmed mpox cases have been reported in Ontario (33 cases in 2023 and 55 cases in 2024 to-date). ([Figure 1](#))

- 86/88 (97.7%) cases are male and 1/88 (1.1%) case is female (with an epidemiological-link to a male case); gender is unknown for 1/88 (1.1%) case. ([Table 1](#))
- 72/88 (81.8%) cases are between the ages of 20 – 49 years. The overall median age is 37.8 years (range: 30.8 – 47.3 years). ([Table 1](#))
- 1/88 (1.1%) case required hospitalization; no deaths have been reported. ([Table 1](#))
- 70/88 (79.5%) cases were reported by Toronto Public Health; the remaining 18/88 (20.5%) cases were reported by eight other public health units. ([Table 2](#))
- 76/88 (86.4%) cases reported at least one risk factor. Engaging in sexual or intimate contact with a partner of the same sex (67/76; 88.2%), with new and/or more than one partner (57/76; 75.0%), or anonymous partners (48/76; 63.2%) were the most frequently reported among these cases.
- Less than 20% (14/76; 18.4%) of cases with at least one risk factor 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).
- Between May 4, 2022 and June 20, 2024, a total of 54,347 doses of Imvamune<sup>®</sup> vaccine have been administered in Ontario among 40,183 people. Only 26.1% of total doses have been administered as second doses (n=14,164 doses).

## Case Characteristics

**Figure 1. Confirmed mpox cases by week of accurate episode date: Ontario, January 1, 2023 to May 31, 2024**



**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 week may be incomplete and should be interpreted with caution.

**Table 1. Case characteristics of confirmed mpox cases by year: Ontario, January 1, 2023 to May 31, 2024**

Case characteristics	January 1 to December 31, 2023 n (%)	January 1 to May 31, 2024 n (%)	Total n (%)
<b>Gender*</b>			
Male	33 (100.0)	53 (96.4)	86 (97.7)
Female	0 (0.0)	1 (1.8)	1 (1.1)
Other	0 (0.0)	1 (1.8)	1 (1.1)
<b>Age Group</b>			
< 20 years	0 (0.0)	1 (1.8)	1 (1.1)
20 – 29 years	6 (18.2)	14 (25.5)	20 (22.7)
30 – 39 years	12 (36.4)	19 (34.5)	31 (35.2)
40 – 49 years	9 (27.3)	12 (21.8)	21 (23.9)
≥ 50 years	6 (18.2)	9 (16.4)	15 (17.0)
<b>Vaccination Status</b>			
Unvaccinated	16 (48.5)	42 (76.4)	58 (65.9)
1 dose of Imvamune®	12 (36.4)	11 (20.0)	23 (26.1)
2 doses of Imvamune®	5 (15.2)	2 (3.6)	7 (8.0)
<b>Severity and Outcome</b>			
Hospitalized	1 (3.0)	0 (0.0)	1 (1.1)
Death	0 (0.0)	0 (0.0)	0 (0.0)
<b>Total reported cases</b>	<b>33 (37.5)</b>	<b>55 (62.5)</b>	<b>88 (100.0)</b>

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

\*The gender category captures an individual’s internal and individual experience of gender and not necessarily their sex assignment at birth. Case counts may fluctuate based on data cleaning at the local public health unit level.

**Table 2. Diagnosing public health unit of confirmed mpox cases by year: Ontario, January 1, 2023 to May 31, 2024**

Public health unit*	January 1 to December 31, 2023 n (%)	January 1 to May 31, 2024 n (%)	Total n (%)
Toronto Public Health	27 (81.8)	43 (78.2)	70 (79.5)
Ottawa Public Health	2 (6.1)	5 (9.1)	7 (8.0)
Durham Region Health Department	1 (3.0)	1 (1.8)	2 (2.3)
Halton Region Public Health	0 (0.0)	2 (3.6)	2 (2.3)
Kingston, Frontenac and Lennox & Addington Public Health	2 (6.1)	0 (0.0)	2 (2.3)
Peel Public Health	1 (3.0)	1 (1.8)	2 (2.3)
Middlesex-London Health Unit	0 (0.0)	1 (1.8)	1 (1.1)
Region of Waterloo Public Health and Emergency Services	0 (0.0)	1 (1.8)	1 (1.1)
Wellington-Dufferin-Guelph Public Health	0 (0.0)	1 (1.8)	1 (1.1)
<b>Total</b>	<b>33 (100/-)</b>	<b>55 (100.0)</b>	<b>88 (100.0)</b>

**Data source:** iPHIS

\*25/34 public health units have not reported any confirmed mpox cases since January 1, 2023 and have not been included in Table 2.

# 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 19, 2024** and the Digital Health Immunization Repository (DHIR) as of **June 20, 2024**.
- 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](#) 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.
- 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.

## Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Enhanced epidemiological summary: Mpox in Ontario: January 1, 2023 to May 31, 2024. Toronto, ON: King's Printer for Ontario; 2024.

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