

## ENHANCED EPIDEMIOLOGICAL SUMMARY

## Measles in Ontario

Updated: October 16, 2025

## Introduction

Measles is a highly contagious respiratory virus. Symptoms of measles include fever, a red blotchy rash, red watery eyes and cough. Immunization is the best protection against measles. For children and most adults born in or after 1970, this means receiving two doses of measles containing-vaccine (e.g., MMR vaccine).

In Ontario, measles has historically been a rare disease, owing to the successful elimination of measles in Canada and high immunization coverage. Cases in the province have typically been predominantly associated with travel (often referred to as “measles importations”). However, due to an increase in measles activity globally in 2024, Ontario began to see more cases.

On October 18, 2024, exposure to a travel-related case in New Brunswick led to measles cases in Ontario, with Ontario’s first outbreak cases occurring the week of October 28, 2024. Additional provinces have also reported measles cases related to this outbreak.<sup>1</sup> Effective October 6, 2025, Ontario’s measles outbreak has been declared over using national guidance to define the conclusion of the outbreak (i.e., 46 days since the rash onset date of the last outbreak case).<sup>2</sup> Although the outbreak is declared over, measles continues to circulate in Canada and globally, so ongoing vigilance for measles case finding and public health follow-up will continue to occur.

This report describes the epidemiology of measles in Ontario between January 1, 2013 and October 14, 2025, with a focus on the multi-jurisdictional measles outbreak. This report will be updated every two weeks as of October 16, 2025 until otherwise noted.

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This report includes the most current information available from Ontario’s integrated Public Health Information System (iPHIS) as of October 14, 2025 at 7:00 am.

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## Highlights

### Multi-Jurisdictional Measles Outbreak October 28, 2024 to October 14, 2025

#### Overview

- As of October 14, Ontario has reported a total of 2,375 measles cases (2,060 confirmed, 315 probable) associated with the multi-jurisdictional outbreak ([Figure 1](#)) occurring in 26 public health units ([Table 1](#)).

- No additional outbreak cases have been reported since the previous data extraction on October 7 ([Figure 1](#)).
- The last rash onset date among outbreak cases was August 21, 2025 ([Table 1](#)).
- Ontario declared the outbreak over on October 6, 2025 using national guidance to define the conclusion of the outbreak (i.e., 46 days since the rash onset date of the last outbreak case).<sup>2</sup>

## Geography

- The geographic distribution of measles outbreak cases per 100,000 population by forward sortation area (FSA) since the start of the outbreak is shown in [Figure 2](#).
- Outbreak cases have occurred predominantly in southwestern Ontario.

## Demographics and Risk Factors

- Among all outbreak cases, the majority (73.0%, n=1,734) were infants, children and adolescents (19 years old or younger), while 26.4% (n=628) were adults, and 0.5% (n=13) had unknown age ([Table 2](#)).
- 98.1% (n=2,331) of outbreak cases were born in or after 1970 ([Table 2](#)).
- Almost all infant, child and adolescent outbreak cases (96.4%, n=1,671) were unimmunized, while 69.9% (n=439) of adults were unimmunized ([Figure 3](#)).
- A total of 2.1% (n=51) of outbreak cases were pregnant at the time of their measles infection ([Table 2](#)).
- Of these, 86.3% (n=44) were unimmunized, 2.0% (n=1) received one dose of measles-containing vaccine, 9.8% (n=5) received two or more doses, and 2.0% (n=1) had unknown immunization status.
- There have been nine cases of congenital measles (i.e., measles diagnosed in the first 10 days of life) ([Table 2](#)).

## Severity

- Overall, 6.9% (n=165) of outbreak cases were hospitalized and 0.5% (n=12) were admitted to the intensive care unit (ICU) ([Table 2](#)).
- 95.2% (n=157) of hospitalized cases were unimmunized, of whom 122 were infants, children and adolescents.
- The median length of stay among discharged hospitalized cases was three days (range: 1–54 days) and the median length of stay among ICU admissions was three and a half days (range: 1–54 days).
- There was one death that occurred in a congenital case of measles who was born pre-term and had other underlying medical conditions ([Table 2](#)).

## Non-Outbreak Measles Cases January 1 to October 14, 2025

### Overview

- As of October 14, there have been 47 cases reported in 2025 that were not linked to the multi-jurisdictional outbreak described above.
- Of these, 22 cases had a history of travel (i.e., measles acquired outside of Canada); one case was epidemiologically linked to a case who was a visitor to Ontario; 12 cases were epidemiologically-linked to confirmed non-outbreak cases; and 12 cases had an unknown source of exposure ([Figure 1](#)).
- Non-outbreak cases may be subsequently linked to the outbreak based on genomic sequencing results.

### Geography

- Non-outbreak cases were reported across 14 public health units ([Table 1](#)).

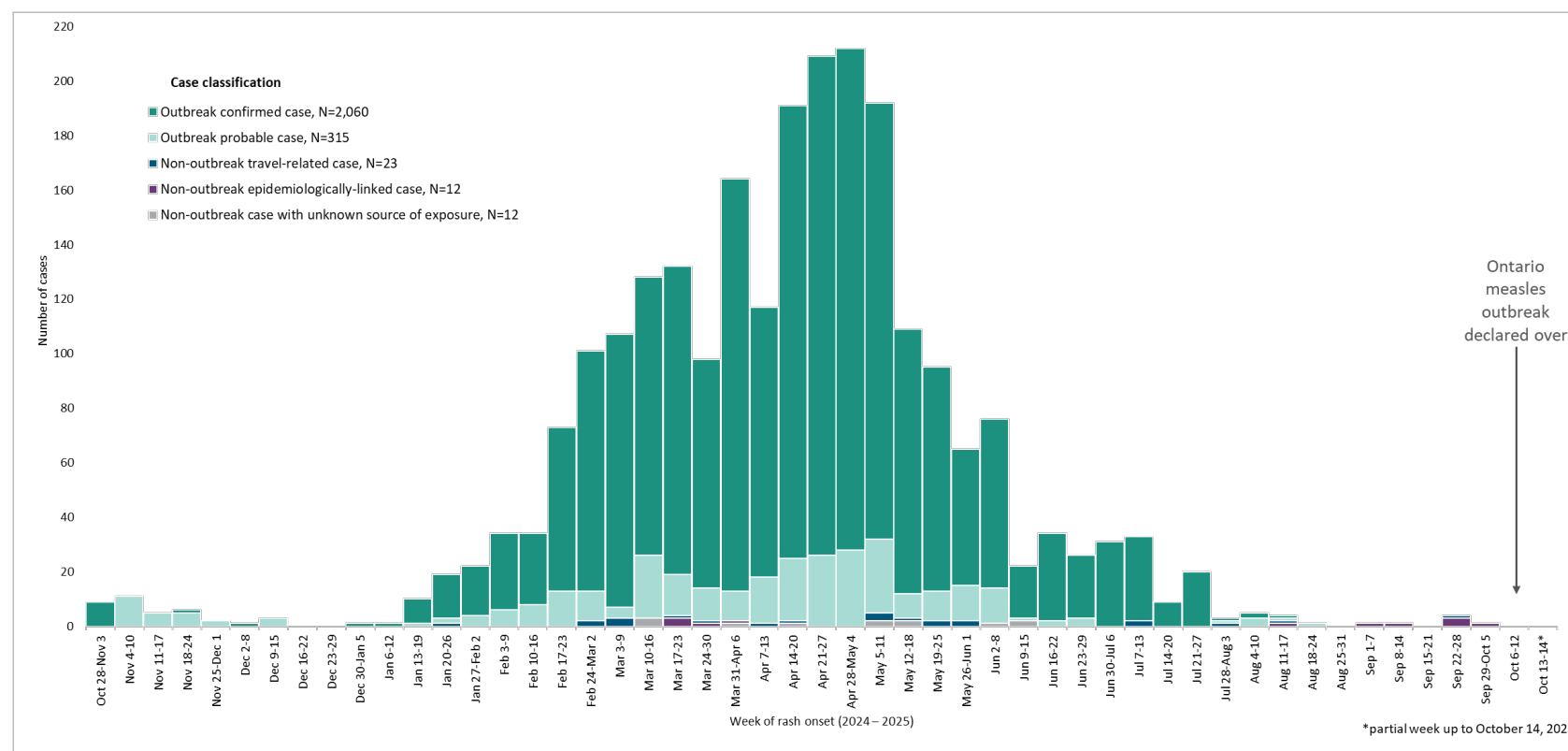
### Demographics and Risk Factors

- Infants, children and adolescents made up 59.6% (n=28) of non-outbreak cases, while adults accounted for 40.4% (n=19) ([Table 2](#)).
- 95.7% (n=45) of non-outbreak cases were born in or after 1970 ([Table 2](#)).
- Overall, 53.2% (n=25) of non-outbreak cases were unimmunized ([Table 2](#)).

### Severity

- Hospitalization was required for 19.1% (n=9) of non-outbreak cases, with no ICU admissions reported ([Table 2](#)).
- 88.9% (n=8) of hospitalized cases were unimmunized, all of whom were infants, children and adolescents.

**Figure 1: Measles Cases by Week of Rash Onset and Case Classification**



**Notes:**

- Outbreak cases are reported for the period October 28, 2024–October 14, 2025 and non-outbreak cases are reported for the period January 1–October 14, 2025.
- Cases are infectious from four days before rash onset to four days after rash onset.<sup>3</sup> The incubation period for measles (i.e., period from exposure to prodromal symptoms) averages 10 to 12 days and the time from exposure to rash onset ranges from 7 to 21 days (average 14 days).<sup>3,4</sup> Based on the incubation and the infectious period, epidemiologically-linked cases may appear up to 25 days after the rash onset date of the most recently reported case of measles.
- Provincial surveillance definitions for confirmed and probable cases of measles are available in Appendix 1<sup>5</sup> and have been adapted to reflect the specific circumstances of the outbreak under investigation.
- Rash onset date was not available for 32 cases at the time of analysis, either because the rash was not observed or the rash onset date was unknown. For these cases, the earliest available date from the following was used: symptom onset (other than rash), laboratory specimen collection, laboratory test, or date reported to public health.
- One non-outbreak travel-related case was epidemiologically linked to a case who was a visitor to Ontario.
- Non-outbreak epidemiologically-linked cases may include laboratory-confirmed cases that are epidemiologically-linked to non-outbreak cases; non-outbreak cases may be subsequently linked to the outbreak based on genomic sequencing results.
- A data table corresponding to this figure can be found in Appendix [Table A1](#).

**Table 1: Measles Cases by Public Health Unit**

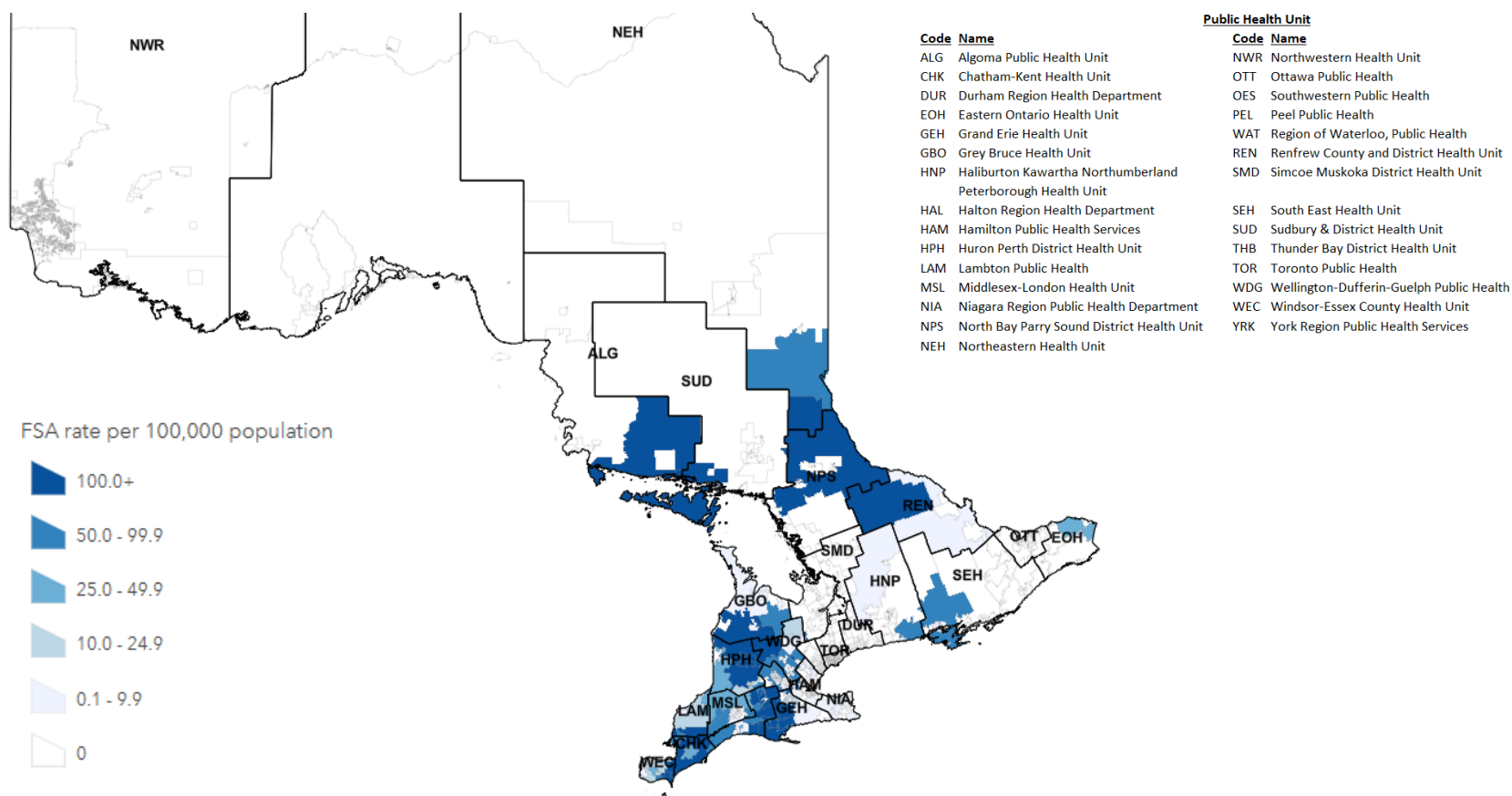
| Public Health Unit                                          | Outbreak Case Count | Outbreak Case Rate per 100,000 Population | Change in Outbreak Case Count Since Previous Data Extraction | Last Rash Onset Date Among Outbreak Cases | Non-Outbreak Case Count |
|-------------------------------------------------------------|---------------------|-------------------------------------------|--------------------------------------------------------------|-------------------------------------------|-------------------------|
| Algoma Public Health                                        | 151 (6.4%)          | 127.8                                     | 0                                                            | July 15, 2025                             | 0 (0.0%)                |
| Chatham-Kent Public Health                                  | 179 (7.5%)          | 164.3                                     | 0                                                            | July 24, 2025                             | 0 (0.0%)                |
| City of Hamilton Public Health Services                     | 1 (0.04%)           | 0.2                                       | 0                                                            | March 22, 2025                            | 3 (6.4%)                |
| Durham Region Health Department                             | 0 (0.0%)            | 0.0                                       | 0                                                            | N/A                                       | 0 (0.0%)                |
| Eastern Ontario Health Unit                                 | 6 (0.3%)            | 2.7                                       | 0                                                            | May 16, 2025                              | 0 (0.0%)                |
| Grand Erie Public Health                                    | 299 (12.6%)         | 101.4                                     | 0                                                            | July 3, 2025                              | 0 (0.0%)                |
| Grey Bruce Health Unit                                      | 54 (2.3%)           | 28.7                                      | 0                                                            | July 8, 2025                              | 0 (0.0%)                |
| Haliburton Kawartha Northumberland Peterborough Health Unit | 2 (0.1%)            | 0.6                                       | 0                                                            | June 5, 2025                              | 2 (4.3%)                |
| Halton Region Public Health                                 | 2 (0.1%)            | 0.3                                       | 0                                                            | May 7, 2025                               | 4 (8.5%)                |
| Huron Perth Public Health                                   | 297 (12.5%)         | 190.2                                     | 0                                                            | July 25, 2025                             | 0 (0.0%)                |
| Lambton Public Health                                       | 20 (0.8%)           | 14.8                                      | 0                                                            | May 19, 2025                              | 0 (0.0%)                |
| Middlesex-London Health Unit                                | 55 (2.3%)           | 9.9                                       | 0                                                            | July 17, 2025                             | 2 (4.3%)                |
| Niagara Region Public Health                                | 13 (0.5%)           | 2.5                                       | 0                                                            | May 24, 2025                              | 0 (0.0%)                |
| North Bay Parry Sound District Health Unit                  | 38 (1.6%)           | 28.5                                      | 0                                                            | June 8, 2025                              | 0 (0.0%)                |
| Northeastern Public Health                                  | 20 (0.8%)           | 17.0                                      | 0                                                            | May 13, 2025                              | 0 (0.0%)                |
| Northwestern Health Unit                                    | 0 (0.0%)            | 0.0                                       | 0                                                            | N/A                                       | 0 (0.0%)                |
| Ottawa Public Health                                        | 3 (0.1%)            | 0.3                                       | 0                                                            | August 9, 2025                            | 2 (4.3%)                |
| Peel Public Health                                          | 1 (0.04%)           | 0.1                                       | 0                                                            | May 4, 2025                               | 7 (14.9%)               |

| Public Health Unit                                      | Outbreak Case Count   | Outbreak Case Rate per 100,000 Population | Change in Outbreak Case Count Since Previous Data Extraction | Last Rash Onset Date Among Outbreak Cases | Non-Outbreak Case Count |
|---------------------------------------------------------|-----------------------|-------------------------------------------|--------------------------------------------------------------|-------------------------------------------|-------------------------|
| Public Health Sudbury & Districts                       | 44 (1.9%)             | 20.9                                      | 0                                                            | August 21, 2025                           | 0 (0.0%)                |
| Region of Waterloo Public Health and Emergency Services | 111 (4.7%)            | 16.4                                      | 0                                                            | June 2, 2025                              | 2 (4.3%)                |
| Renfrew County and District Health Unit                 | 3 (0.1%)              | 2.7                                       | 0                                                            | July 6, 2025                              | 0 (0.0%)                |
| Simcoe Muskoka District Health Unit                     | 1 (0.04%)             | 0.2                                       | 0                                                            | March 30, 2025                            | 3 (6.4%)                |
| South East Health Unit                                  | 80 (3.4%)             | 13.6                                      | 0                                                            | April 14, 2025                            | 1 (2.1%)                |
| Southwestern Public Health                              | 771 (32.5%)           | 325.3                                     | 0                                                            | August 12, 2025                           | 0 (0.0%)                |
| Thunder Bay District Health Unit                        | 0 (0.0%)              | 0.0                                       | 0                                                            | N/A                                       | 1 (2.1%)                |
| Toronto Public Health                                   | 2 (0.1%)              | 0.1                                       | 0                                                            | May 17, 2025                              | 7 (14.9%)               |
| Wellington-Dufferin-Guelph Public Health                | 71 (3.0%)             | 20.8                                      | 0                                                            | June 8, 2025                              | 1 (2.1%)                |
| Windsor-Essex County Health Unit                        | 149 (6.3%)            | 33.3                                      | 0                                                            | July 27, 2025                             | 1 (2.1%)                |
| York Region Public Health                               | 2 (0.1%)              | 0.2                                       | 0                                                            | July 29, 2025                             | 11 (23.4%)              |
| <b>Ontario</b>                                          | <b>2,375 (100.0%)</b> | <b>15.0</b>                               | <b>0</b>                                                     | <b>August 21, 2025</b>                    | <b>47 (100.0%)</b>      |

Notes:

- Outbreak cases are reported for the period October 28, 2024–October 14, 2025 and non-outbreak cases are reported for the period January 1–October 14, 2025.
- This table is based on the public health unit corresponding to where a case was residing most of the time at the time of illness onset or report to public health, and not necessarily the location of exposure or diagnosis.
- As of January 1, 2025, 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; and Haliburton, Kawartha, Pine Ridge District Health Unit and Peterborough County-City Health Unit have merged into Haliburton Kawartha Northumberland Peterborough Health Unit.
- Non-outbreak case counts include two Ontario residents who were known to be out of province during their infectious period.
- Changes in case counts at the PHU level (either increases or decreases) may result from ongoing data cleaning efforts and/or case updates, including re-classification of previously reported cases.

**Figure 2: Geographic Distribution of the Cumulative Rate of Measles Outbreak Cases Per 100,000 Population by Forward Sortation Area (FSA) Among Regions in Ontario with Cases**



**Notes:**

- Outbreak cases are reported for the period October 28, 2024–October 14, 2025.
- FSA boundaries do not align with public health unit boundaries, and some FSAs span multiple public health units. Therefore, the number and rate of cases by public health unit in [Table 1](#) do not correspond to the FSA-level rates shown in these maps.
- As of January 1, 2025, 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; and Porcupine Health Unit and Timiskaming Health Unit have merged into Northeastern Public Health.

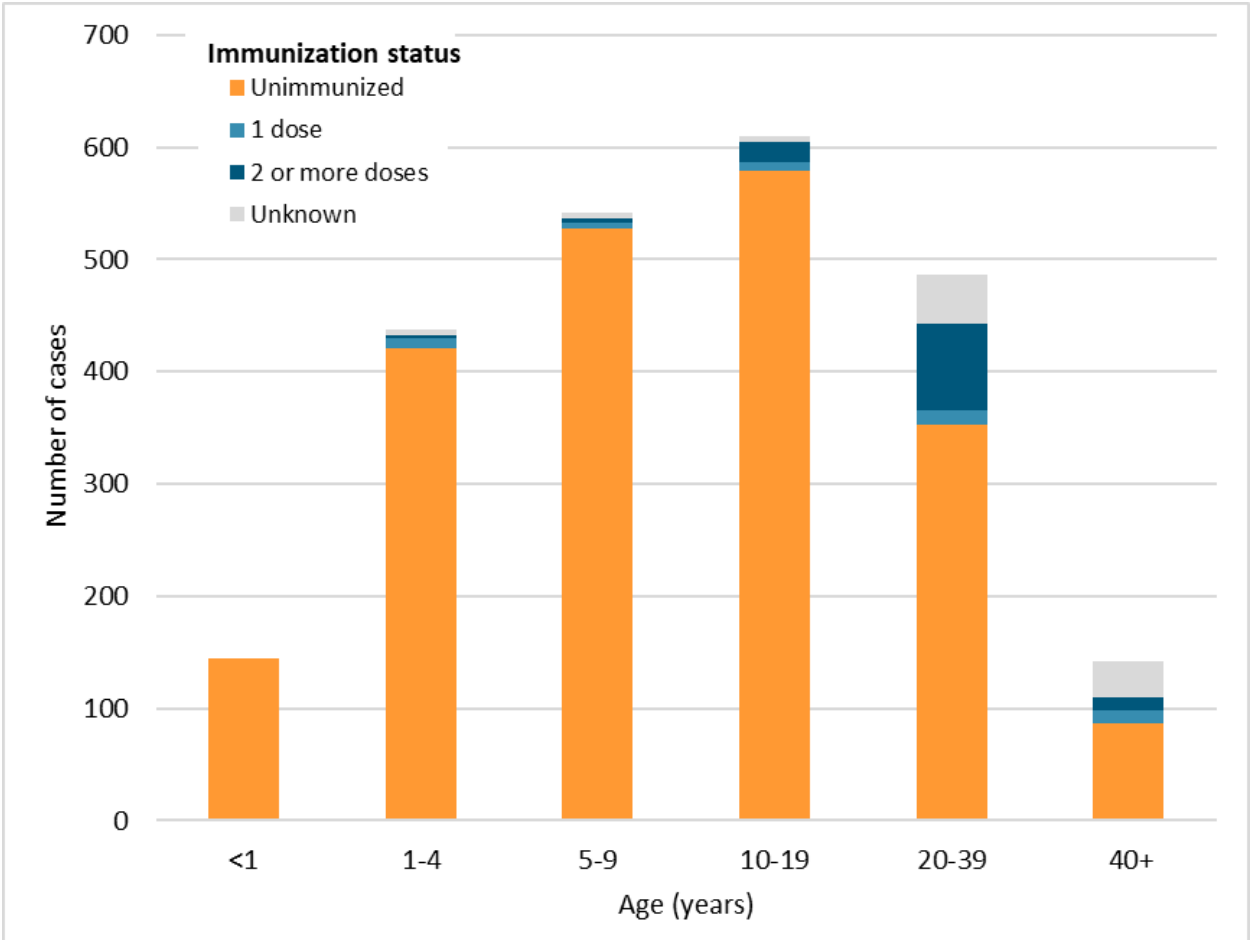
**Table 2: Characteristics of Measles Cases**

| Case Characteristics               | Outbreak Case Count | Non-Outbreak Case Count |
|------------------------------------|---------------------|-------------------------|
| <b>Total cases</b>                 | 2,375 (100.0%)      | 47 (100.0%)             |
| <b>Case classification</b>         |                     |                         |
| Confirmed                          | 2,060 (86.7%)       | 47 (100.0%)             |
| Probable                           | 315 (13.3%)         | 0 (0.0%)                |
| <b>Gender</b>                      |                     |                         |
| Female                             | 1,138 (47.9%)       | 18 (38.3%)              |
| Male                               | 1,236 (52.0%)       | 29 (61.7%)              |
| Unknown                            | 1 (0.04%)           | 0 (0.0%)                |
| <b>Age (years)</b>                 |                     |                         |
| <1                                 | 144 (6.1%)          | 10 (21.3%)              |
| 1–4                                | 438 (18.4%)         | 8 (17.0%)               |
| 5–9                                | 542 (22.8%)         | 3 (6.4%)                |
| 10–19                              | 610 (25.7%)         | 7 (14.9%)               |
| 20–39                              | 486 (20.5%)         | 14 (29.8%)              |
| 40+                                | 142 (6.0%)          | 5 (10.6%)               |
| Unknown                            | 13 (0.5%)           | 0 (0.0%)                |
| <b>Cases born in or after 1970</b> | 2,331 (98.1%)       | 45 (95.7%)              |
| <b>Pregnant cases</b>              | 51 (2.1%)           | 0 (0.0%)                |
| <b>Congenital cases</b>            | 9 (0.4%)            | 0 (0.0%)                |
| <b>Hospitalized cases</b>          | 165 (6.9%)          | 9 (19.1%)               |
| ICU admissions                     | 12 (0.5%)           | 0 (0.0%)                |
| <b>Deaths</b>                      | 1 (0.04%)           | 0 (0.0%)                |
| <b>Immunization status</b>         |                     |                         |
| Unimmunized                        | 2,119 (89.2%)       | 25 (53.2%)              |
| 1 dose                             | 47 (2.0%)           | 6 (12.8%)               |
| 2 or more doses                    | 112 (4.7%)          | 10 (21.3%)              |
| Unknown/no proof of immunization   | 97 (4.1%)           | 6 (12.8%)               |

Notes:

- Outbreak cases are reported for the period October 28, 2024–October 14, 2025 and non-outbreak cases are reported for the period January 1–October 14, 2025.

Figure 3: Measles Outbreak Cases by Age Group and Immunization Status



Notes:

- Outbreak cases are reported for the period October 28, 2024–October 14, 2025.
- A data table corresponding to this figure can be found in Appendix [Table A2](#).

# Trends Over Time

## 2013–2023

- Between 2013 and 2023, Ontario reported a total of 101 measles cases, where 93.1% (n=94) occurred in individuals born in or after 1970. Most cases were unimmunized (62.4%) or had unknown immunization status (24.8%). Twenty-eight cases (27.7%) were hospitalized, and there were no deaths ([Table 3](#)).
- Prior to the COVID-19 pandemic (2013–2019), the annual number of measles cases in Ontario ranged between seven and 22. In comparison, one case was reported during the pandemic (2020–2022) while seven cases were reported in 2023 ([Figure 4](#)).
- Similar trends were seen in [Canada](#) overall, where the number of measles cases decreased dramatically during the COVID 19 pandemic.

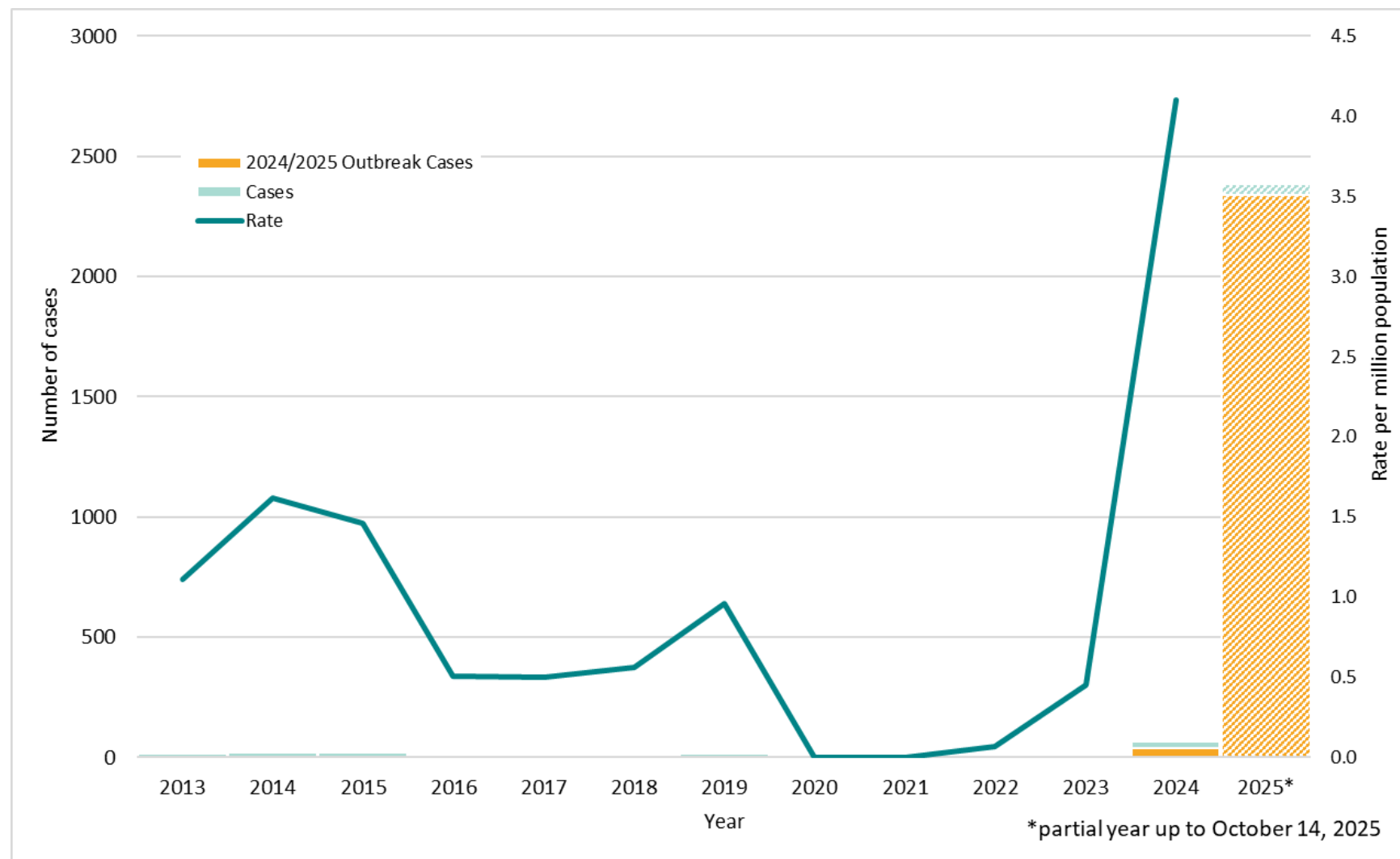
## 2024

- In 2024, consistent with the global increase in measles activity, Ontario reported a total of 64 measles cases ([Figure 4](#)). Of these cases:
  - Thirty-seven were associated with the multi-jurisdictional measles outbreak described above.
  - Eighteen cases were associated with travel, two of whom resulted in six epidemiologically-linked cases in April and May.
  - Three cases occurred in individuals with unknown sources of exposure (i.e., no history of travel and not epidemiologically linked to another case).
- All 64 cases (100.0%) occurred in individuals born in or after 1970 and most cases were unimmunized (79.7%). Eight (12.5%) cases were hospitalized and there was one death in a child less than 5 years old ([Table 3](#)).

## 2025

- In 2025, Ontario has reported a total of 2,385 measles cases as of October 14, including 2,338 cases associated with the multi-jurisdictional measles outbreak described above ([Figure 4](#)).
- As of October 14, laboratory data shows that 3.7% of individuals (n=1) tested in October and 20.3% of individuals (n=1,082) tested in all of 2025 for acute measles infection using molecular PCR at Public Health Ontario's Laboratory have received positive test results (Appendix [Table A3](#)).
- Note: As of June 15, 2025, Hamilton Health Science Laboratory began performing measles PCR testing. As a result, these numbers do not capture all measles PCR testing in Ontario.

**Figure 4: Number of Measles Cases and Incidence Rate per Million Population by Year**



Notes:

- A data table corresponding to this figure can be found in Appendix [Table A4](#).

**Table 3: Characteristics of Historical Measles Cases by Year**

| Case Characteristics               | 2013–2023  | 2024        |
|------------------------------------|------------|-------------|
| <b>Total cases</b>                 | 101        | 64          |
| <b>Gender</b>                      |            |             |
| Female                             | 49 (48.5%) | 30 (46.9%)  |
| Male                               | 52 (51.5%) | 34 (53.1%)  |
| <b>Age (years)</b>                 |            |             |
| <1                                 | 13 (12.9%) | 3 (4.7%)    |
| 1–4                                | 22 (21.8%) | 14 (21.9%)  |
| 5–9                                | 6 (5.9%)   | 12 (18.8%)  |
| 10–19                              | 8 (7.9%)   | 15 (23.4%)  |
| 20–39                              | 36 (35.6%) | 18 (28.1%)  |
| 40+                                | 16 (15.8%) | 2 (3.1%)    |
| <b>Cases born in or after 1970</b> | 94 (93.1%) | 64 (100.0%) |
| <b>Hospitalizations</b>            | 28 (27.7%) | 8 (12.5%)   |
| <b>Deaths</b>                      | 0 (0.0%)   | 1 (1.6%)    |
| <b>Immunization Status</b>         |            |             |
| Unimmunized                        | 63 (62.4%) | 51 (79.7%)  |
| 1 dose                             | 6 (5.9%)   | 2 (3.1%)    |
| 2 or more doses                    | 7 (6.9%)   | 5 (7.8%)    |
| Unknown/no proof of immunization   | 25 (24.8%) | 6 (9.4%)    |

# Technical Notes

## Data Sources

### Case Data

- The case data for this report were based on information entered in the Ontario Ministry of Health (MOH) integrated Public Health Information System (iPHIS) database as of October 14, 2025 at 7:00 am.
- Cases associated with the multi-jurisdictional measles outbreak were identified as cases linked to the provincial outbreak number (0000-2024-00016) in iPHIS.
- 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.

### Laboratory Data

- The most recent monthly summary of laboratory data was extracted from the Public Health Ontario Laboratory Information Management System on October 14, 2025 and reflect finalized molecular PCR results indicating acute measles infection for samples received between January 1 and October 14, 2025. Specimen collection date was used where available, otherwise login date was used. Counts represent unique individuals and may change in future reports as results are finalized.
- Due to differences in the dates of extraction for case and laboratory data, and Public Health Ontario's Laboratory no longer performing all measles PCR testing in Ontario (as of June 15, 2025, Hamilton Health Science Laboratory began performing measles PCR testing), the number of cases and individuals testing positive by PCR will differ.

### Ontario Population Data

Ontario population data were sourced from Statistics Canada and the Ministry of Finance:

- Statistics Canada. Table 17-10-0134-01: Population estimates (2016 census and administrative data), by age group and sex for July 1st, Canada, provinces, territories, health regions (2018 boundaries) and peer groups [Internet]. Ottawa, ON: Government of Canada; 2023 Mar 2 [extracted 2023 Mar 13]. Available from: <https://doi.org/10.25318/1710013401-eng>
- Statistics Canada. Table 98-10-0027-01: Population estimates (2021 census and administrative data), by age (in single years), average age and median age, gender, Canada and forward sortation areas [Internet]. Ottawa, ON: Government of Canada; 2022 Sept 9 [extracted 2024 June 7]. Available from: <https://doi.org/10.25318/9810002701-eng>
- Population projections 2023-2025: Population reporting. Population Projections Public Health Unit, 2022–2046 [data file]. Toronto ON: Ministry of Finance [producer]; Toronto, ON: Ontario. Ministry of Health, IntelliHealth Ontario [distributor]; [data extracted 2023 May 10].

## Data Caveats

- Data reported for 2020–2022 should be interpreted with caution. Both testing and iPHIS data entry practices were likely impacted by the COVID-19 pandemic response.
- Only measles cases meeting the confirmed and probable case classification as listed in the Ontario MOH surveillance<sup>5</sup> or outbreak case definitions are included in the reported case counts.
  - Changes to provincial surveillance case definitions and disease classifications have occurred over the years and thus may impact the analysis of trends over time. Cases are classified in iPHIS based on the Ontario MOH surveillance case definitions in use at the time the case was identified.
  - PHO's technical report "Factors Affecting Reporting Diseases in Ontario: Case Definition Changes and Associated Trends 1991-2016" and its associated appendix provide more detailed information on this topic.<sup>6</sup>
- In [Figure 1](#), episode date was used as a proxy when rash onset date was unavailable. Episode date is an estimate of the onset date of disease for a case that is determined using the following hierarchy 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 and rates by geography in [Table 1](#) are based on the diagnosing health unit (DHU). DHU refers to the public health unit corresponding to where a case was residing most of the time at the time of illness onset or report to public health, and does not necessarily indicate the location of exposure or diagnosis. Cases that were not residents of Ontario at the time of illness onset were excluded from the analysis.
  - In [Figure 2](#), the map shows the rates of measles cases by residential forward sortation area (FSA). FSA boundaries do not align with public health unit boundaries, and some FSAs span multiple health units.
- 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.
- To determine immunization status of cases, only documented doses of a measles-containing vaccine administered on or after the 1<sup>st</sup> birthday and at least 14 days prior to disease onset were included; a minimum interval of 28 days between doses was also applied to count valid doses.
- A case of measles is considered imported if the person travelled outside Canada 7 to 21 days prior to rash onset.
- The median length of stay for hospitalized cases and ICU admissions was only derived for those cases where both the admission and discharge dates were entered in iPHIS. Cases who were still hospitalized or admitted to ICU, or whose dates of admission/discharge were unknown at the time of data extraction, were excluded from the calculation. For cases with multiple records of hospitalization, the cumulative length of stay (i.e., sum of length of stay associated with each hospitalization) was used to calculate the median length of stay.
- To be considered as a fatal case outcome, a case must not have REPORTABLE DISEASE WAS UNRELATED TO CAUSE OF DEATH selected as the Death Type Description at the time of data extraction.

## References

1. Health Infobase. Measles and rubella weekly monitoring report: week 13 (March 23 to 29, 2025) [Internet]. Ottawa, ON: Government of Canada; 2025 [updated 2025 Apr 11; cited 2025 Apr 16]. Available from: <https://health-infobase.canada.ca/measles-rubella/>
2. Public Health Agency of Canada. Guidance for the public health management of measles cases, contacts and outbreaks in Canada: definitions [Internet]. Ottawa, ON: Government of Canada; 2025 [updated 2025 May 14; cited 2025 Oct 08]. Available from: <https://www.canada.ca/en/public-health/services/diseases/measles/health-professionals-measles/guidance-management-measles-cases-contacts-outbreaks-canada.html#a3>
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4. American Academy of Pediatrics, Committee on Infectious Diseases; Kimberlin DW, Barnett ED, Lynfield R, Sawyer MH, editors. Red Book: 2021-2024 report of the committee of infectious diseases [Internet]. 32nd ed. Itasca, IL: American Academy of Pediatrics; 2021. Available from: <https://online.statref.com/Home/Resolve?id=23017&grpalias=HSICOTR>
5. Ontario. Ministry of Health. Ontario public health standards: requirements for programs, services and accountability. Infectious diseases protocol. Appendix 1: case definitions and disease-specific information. Disease: measles. Effective: March 2024. Toronto, ON: Queen's Printer for Ontario; 2022. Available from: <https://www.ontario.ca/files/2024-03/moh-measles-appendix-en-2024-03-19.pdf>
6. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Factors affecting reportable diseases in Ontario: case definition changes and associated trends in Ontario: 1991-2016 [Internet]. Toronto, ON: Queen's Printer for Ontario; 2018 [cited 2024 Mar 05]. Appendix, Measles. Available from: <https://www.publichealthontario.ca/-/media/documents/F/2018/factors-reportable-diseases-ontario-1991-2016.pdf?la=en>

## Appendix A

**Table A1: Measles Cases by Week of Rash Onset and Case Classification**

| Week of Rash Onset<br>(2024-2025) | Outbreak<br>Confirmed<br>Cases | Outbreak<br>Probable<br>Cases | Outbreak<br>Week Total | Non-Outbreak<br>Travel-related<br>Cases | Non-Outbreak<br>Epidemiologically-<br>linked Cases | Non-Outbreak<br>Cases With<br>Unknown Source<br>of Exposure | Non-Outbreak<br>Week Total |
|-----------------------------------|--------------------------------|-------------------------------|------------------------|-----------------------------------------|----------------------------------------------------|-------------------------------------------------------------|----------------------------|
| October 28–November 3             | 9                              | 0                             | 9                      | N/A                                     | N/A                                                | N/A                                                         | N/A                        |
| November 4–10                     | 0                              | 11                            | 11                     | N/A                                     | N/A                                                | N/A                                                         | N/A                        |
| November 11–17                    | 0                              | 5                             | 5                      | N/A                                     | N/A                                                | N/A                                                         | N/A                        |
| November 18–24                    | 1                              | 5                             | 6                      | N/A                                     | N/A                                                | N/A                                                         | N/A                        |
| November 25–December 1            | 0                              | 2                             | 2                      | N/A                                     | N/A                                                | N/A                                                         | N/A                        |
| December 2–8                      | 1                              | 0                             | 1                      | N/A                                     | N/A                                                | N/A                                                         | N/A                        |
| December 9–15                     | 0                              | 3                             | 3                      | N/A                                     | N/A                                                | N/A                                                         | N/A                        |
| December 16–22                    | 0                              | 0                             | 0                      | N/A                                     | N/A                                                | N/A                                                         | N/A                        |
| December 23–29                    | 0                              | 0                             | 0                      | N/A                                     | N/A                                                | N/A                                                         | N/A                        |
| December 30–January 5             | 1                              | 0                             | 1                      | 0                                       | 0                                                  | 0                                                           | 0                          |
| January 6–12                      | 1                              | 0                             | 1                      | 0                                       | 0                                                  | 0                                                           | 0                          |
| January 13–19                     | 9                              | 1                             | 10                     | 0                                       | 0                                                  | 0                                                           | 0                          |
| January 20–26                     | 16                             | 2                             | 18                     | 1                                       | 0                                                  | 0                                                           | 1                          |
| January 27–February 2             | 18                             | 4                             | 22                     | 0                                       | 0                                                  | 0                                                           | 0                          |
| February 3–9                      | 28                             | 6                             | 34                     | 0                                       | 0                                                  | 0                                                           | 0                          |
| February 10–16                    | 26                             | 8                             | 34                     | 0                                       | 0                                                  | 0                                                           | 0                          |
| February 17–23                    | 60                             | 13                            | 73                     | 0                                       | 0                                                  | 0                                                           | 0                          |
| February 24–March 2               | 88                             | 11                            | 99                     | 2                                       | 0                                                  | 0                                                           | 2                          |
| March 3–9                         | 100                            | 4                             | 104                    | 3                                       | 0                                                  | 0                                                           | 3                          |

| Week of Rash Onset<br>(2024-2025) | Outbreak<br>Confirmed<br>Cases | Outbreak<br>Probable<br>Cases | Outbreak<br>Week Total | Non-Outbreak<br>Travel-related<br>Cases | Non-Outbreak<br>Epidemiologically-<br>linked Cases | Non-Outbreak<br>Cases With<br>Unknown Source<br>of Exposure | Non-Outbreak<br>Week Total |
|-----------------------------------|--------------------------------|-------------------------------|------------------------|-----------------------------------------|----------------------------------------------------|-------------------------------------------------------------|----------------------------|
| March 10–16                       | 102                            | 23                            | 125                    | 0                                       | 0                                                  | 3                                                           | 3                          |
| March 17–23                       | 113                            | 15                            | 128                    | 1                                       | 3                                                  | 0                                                           | 4                          |
| March 24–30                       | 84                             | 12                            | 96                     | 1                                       | 1                                                  | 0                                                           | 2                          |
| March 31–April 6                  | 151                            | 11                            | 162                    | 0                                       | 1                                                  | 1                                                           | 2                          |
| April 7–13                        | 99                             | 17                            | 116                    | 1                                       | 0                                                  | 0                                                           | 1                          |
| April 14–20                       | 166                            | 23                            | 189                    | 1                                       | 0                                                  | 1                                                           | 2                          |
| April 21–27                       | 183                            | 26                            | 209                    | 0                                       | 0                                                  | 0                                                           | 0                          |
| April 28–May 4                    | 184                            | 28                            | 212                    | 0                                       | 0                                                  | 0                                                           | 0                          |
| May 5–11                          | 160                            | 27                            | 187                    | 3                                       | 0                                                  | 2                                                           | 5                          |
| May 12–18                         | 97                             | 9                             | 106                    | 1                                       | 0                                                  | 2                                                           | 3                          |
| May 19–25                         | 82                             | 11                            | 93                     | 2                                       | 0                                                  | 0                                                           | 2                          |
| May 26–June 1                     | 50                             | 13                            | 63                     | 2                                       | 0                                                  | 0                                                           | 2                          |
| June 2–8                          | 62                             | 13                            | 75                     | 0                                       | 0                                                  | 1                                                           | 1                          |
| June 9–15                         | 19                             | 1                             | 20                     | 0                                       | 0                                                  | 2                                                           | 2                          |
| June 16–22                        | 32                             | 2                             | 34                     | 0                                       | 0                                                  | 0                                                           | 0                          |
| June 23–29                        | 23                             | 3                             | 26                     | 0                                       | 0                                                  | 0                                                           | 0                          |
| June 30–July 6                    | 31                             | 0                             | 31                     | 0                                       | 0                                                  | 0                                                           | 0                          |
| July 7–13                         | 31                             | 0                             | 31                     | 2                                       | 0                                                  | 0                                                           | 2                          |
| July 14–20                        | 9                              | 0                             | 9                      | 0                                       | 0                                                  | 0                                                           | 0                          |
| July 21–27                        | 20                             | 0                             | 20                     | 0                                       | 0                                                  | 0                                                           | 0                          |
| July 28–August 3                  | 1                              | 1                             | 2                      | 1                                       | 0                                                  | 0                                                           | 1                          |

| Week of Rash Onset<br>(2024-2025) | Outbreak<br>Confirmed<br>Cases | Outbreak<br>Probable<br>Cases | Outbreak<br>Week Total | Non-Outbreak<br>Travel-related<br>Cases | Non-Outbreak<br>Epidemiologically-<br>linked Cases | Non-Outbreak<br>Cases With<br>Unknown Source<br>of Exposure | Non-Outbreak<br>Week Total |
|-----------------------------------|--------------------------------|-------------------------------|------------------------|-----------------------------------------|----------------------------------------------------|-------------------------------------------------------------|----------------------------|
| August 4–10                       | 2                              | 3                             | 5                      | 0                                       | 0                                                  | 0                                                           | 0                          |
| August 11–17                      | 1                              | 1                             | 2                      | 1                                       | 1                                                  | 0                                                           | 2                          |
| August 18–24                      | 0                              | 1                             | 1                      | 0                                       | 0                                                  | 0                                                           | 0                          |
| August 25–31                      | 0                              | 0                             | 0                      | 0                                       | 0                                                  | 0                                                           | 0                          |
| September 1–7                     | 0                              | 0                             | 0                      | 0                                       | 1                                                  | 0                                                           | 1                          |
| September 8–14                    | 0                              | 0                             | 0                      | 0                                       | 1                                                  | 0                                                           | 1                          |
| September 15–21                   | 0                              | 0                             | 0                      | 0                                       | 0                                                  | 0                                                           | 0                          |
| September 22–28                   | 0                              | 0                             | 0                      | 1                                       | 3                                                  | 0                                                           | 4                          |
| September 29–October 5            | 0                              | 0                             | 0                      | 0                                       | 1                                                  | 0                                                           | 1                          |
| October 6–12                      | 0                              | 0                             | 0                      | 0                                       | 0                                                  | 0                                                           | 0                          |
| October 13–14 (partial<br>week)   | 0                              | 0                             | 0                      | 0                                       | 0                                                  | 0                                                           | 0                          |
| <b>Total cases</b>                | <b>2,060</b>                   | <b>315</b>                    | <b>2,375</b>           | <b>23</b>                               | <b>12</b>                                          | <b>12</b>                                                   | <b>47</b>                  |

Notes:

- Data table corresponds to [Figure 1](#).
- Outbreak cases are reported for the period October 28, 2024–October 14, 2025 and non-outbreak cases are reported for the period January 1–October 14, 2025.
- Rash onset date was not available for 32 cases at the time of analysis, either because the rash was not observed or the rash onset date was unknown. For these cases, the earliest available date from the following was used: symptom onset (other than rash), laboratory specimen collection, laboratory test, or date reported to public health.
- One non-outbreak travel-related case was epidemiologically linked to a case who was a visitor to Ontario.
- Non-outbreak epidemiologically-linked cases may include laboratory-confirmed cases that are epidemiologically-linked to non-outbreak cases; non-outbreak cases may be subsequently linked to the outbreak based on genomic sequencing results.
- Changes in case counts (either increases or decreases) may result from ongoing data cleaning efforts and/or case updates, including re-classification of previously reported cases.

**Table A2: Measles Outbreak Cases by Age Group and Immunization Status**

| Age (years) | Unimmunized | 1 Dose | 2 or More Doses | Unknown |
|-------------|-------------|--------|-----------------|---------|
| <1          | 100.0%      | 0.0%   | 0.0%            | 0.0%    |
| 1-4         | 96.1%       | 2.1%   | 0.5%            | 1.4%    |
| 5-9         | 97.2%       | 0.9%   | 0.9%            | 0.9%    |
| 10-19       | 94.9%       | 1.3%   | 2.8%            | 1.0%    |
| 20-39       | 72.6%       | 2.7%   | 15.6%           | 9.1%    |
| 40+         | 60.6%       | 8.5%   | 8.5%            | 22.5%   |

Notes:

- Data table corresponds to [Figure 3](#).
- Outbreak cases are reported for the period October 28, 2024–October 14, 2025.

**Table A3: Number of Individuals Positive, Tested, and Percent Positivity for Measles PCR by Month**

| Month        | Positive     | Tested       | Percent Positivity |
|--------------|--------------|--------------|--------------------|
| January      | 24           | 96           | 25.0               |
| February     | 91           | 335          | 27.2               |
| March        | 280          | 1,121        | 25.0               |
| April        | 314          | 1,317        | 23.8               |
| May          | 280          | 1,096        | 25.5               |
| June         | 53           | 624          | 8.5                |
| July         | 29           | 348          | 8.3                |
| August       | 6            | 204          | 2.9                |
| September    | 4            | 150          | 2.7                |
| October      | 1            | 27           | 3.7                |
| <b>Total</b> | <b>1,082</b> | <b>5,318</b> | <b>20.3</b>        |

Notes:

- Public Health Ontario Laboratory data is reported for the period January 1–October 14, 2025.
- As of June 15, 2025, Hamilton Health Science Laboratory began performing measles PCR testing. As a result, these numbers do not capture all measles PCR testing in Ontario.

**Table A4: Number of Measles Cases and Incidence Rate per Million Population by Year**

| Year | Cases | 2024/2025<br>Outbreak Cases | Total Cases | Case Rate per<br>100,000 Population |
|------|-------|-----------------------------|-------------|-------------------------------------|
| 2013 | 15    | N/A                         | 15          | 1.11                                |
| 2014 | 22    | N/A                         | 22          | 1.62                                |
| 2015 | 20    | N/A                         | 20          | 1.46                                |
| 2016 | 7     | N/A                         | 7           | 0.50                                |
| 2017 | 7     | N/A                         | 7           | 0.50                                |
| 2018 | 8     | N/A                         | 8           | 0.56                                |
| 2019 | 14    | N/A                         | 14          | 0.96                                |
| 2020 | 0     | N/A                         | 0           | 0.00                                |
| 2021 | 0     | N/A                         | 0           | 0.00                                |
| 2022 | 1     | N/A                         | 1           | 0.07                                |
| 2023 | 7     | N/A                         | 7           | 0.46                                |
| 2024 | 27    | 37                          | 64          | 4.10                                |
| 2025 | 47    | 2,338                       | 2,385       | TBD                                 |

Notes:

- Data table corresponds to [Figure 4](#).
- 2025 cases are reported for the period January 1–October 14, 2025.

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