

SURVEILLANCE REPORT

Mumps in Ontario: January 1 to December 31, 2025

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Introduction

This annual report describes the epidemiology of mumps in Ontario in 2025. Trends over time for years 2014 to 2024 are also included. The most current information available from Ontario's integrated Public Health Information System (iPHIS) as of January 14, 2026 is included.

Highlights

- In 2025, 36 cases of mumps were reported in Ontario, representing an annual rate of 0.22 per 100,000 population. This is lower than the rate reported in 2024 (0.61 per 100,000 population) and slightly lower than the pre-pandemic five-year average (0.36 per 100,000 population). The pre-pandemic five-year average includes years 2014-2016 and 2018-2019, excluding the outbreak year 2017.
- Between 2014 and 2025, case counts in years with highest incidence (2017 and 2024) were predominantly driven by outbreaks.
- In 2025, the age groups with the highest incidence were children 1-4- and 5-9-years of age (0.87 and 0.75 per 100,000 population, respectively).
- In 2025, 25.0% and 36.1% of the reported cases had unknown immunization status or were unimmunized against mumps, respectively.

Background

Mumps is a contagious viral illness that spreads primarily by respiratory droplets or saliva. Common symptoms include swelling of one or both parotid or other salivary glands, fever, and headache.¹ Mumps is an endemic disease in Canada and outbreaks continue to occur in Ontario and across Canada.

Mumps can be prevented by a vaccine. Mumps vaccine was first authorized in Canada in 1969.² Adults born before 1970 are generally considered to be immune to the disease through natural infection.² Ontario implemented a one-dose MMR (measles-mumps-rubella) vaccine program in 1975, followed by a routine two-dose program for children in 1996. Currently, children in Ontario receive two doses of mumps-containing vaccine before the age of 7 years.³ Due to historical changes in Ontario's vaccine program, individuals born between approximately 1970 and 1992 are considered more vulnerable to mumps infection as they may not have acquired natural immunity through infection and are less likely to have received two doses of mumps-containing vaccine. More information on Ontario's mumps vaccine coverage among children and vaccine safety data are presented in Public Health Ontario's [Immunization Data Tool](#).⁴

Results

Temporal Trends

- There were 36 cases of mumps reported in Ontario in 2025, representing an annual provincial incidence of 0.22 per 100,000 population ([Figure 1](#)). Between 2014 and 2025, years with peaks in incidence (2017 and 2024) were predominantly driven by outbreaks (see [Mumps in Ontario: 2024 report](#) for more details on the 2024 outbreak).
- All monthly case counts in 2025 were below the pre-pandemic five-year-average plus 2-standard deviations ([Figure 2](#)). The increase in cases observed in January 2025 was due to a localized outbreak originating in Southwestern Public Health that began in October 2024 until January 2025.

Age and Sex

- In 2025, 52.8% of the cases were males and the age of the cases ranged from <1 to 69 years (median 16 years).
- The highest proportion of cases were reported in the 10-17 and 5-9 age groups (19.4% and 16.7%, respectively). However, the highest rates were reported for the 1-4 and 5-9-year age groups (0.87 and 0.75 per 100,000 population, respectively). ([Figure 3a](#)).
- In 2025, all age groups under 18 years of age had higher rates than rates in age groups 18 years and older ([Figure 3b](#)).

Geography

- Cases were reported from 14 different PHUs, with Southwestern Public Health (n=9) and Grand Erie Public Health (n=3) reporting the highest rate (3.65 and 0.96 per 100,000 population, respectively). These two public health units were affected by the outbreak that began in October 2024.

Severity

- There were two cases with hospitalization reported in 2025: one in an unimmunized child under five years and one in an adult with unknown immunization status.
- No deaths were reported.

Immunization Status and Travel History

- Of the 36 cases reported in 2025, 75.0% had a known immunization status. Of these, 48.1% were unimmunized (n=13), 22.2% reported receiving one dose (n=6) and 29.6% reported receiving two doses of vaccine prior to disease onset (n=8).
 - Among the six cases with one dose, two were in children under five years of age and four were in adults who have received the dose more than 30 years prior to disease onset.
 - Among the eight cases with two doses, two were in children aged between five and 17 years while the remaining six were in adults over 17 years of age who have received the second dose more than 10 years prior to disease onset.
- Six cases (16.7%) reported travel outside Ontario within one month prior to disease onset; five travelled outside Canada involving four different countries and one travelled outside Ontario but within Canada.

Figure 1: Number of Mumps Cases and Incidence Rates by Year: Ontario, 2014-2025

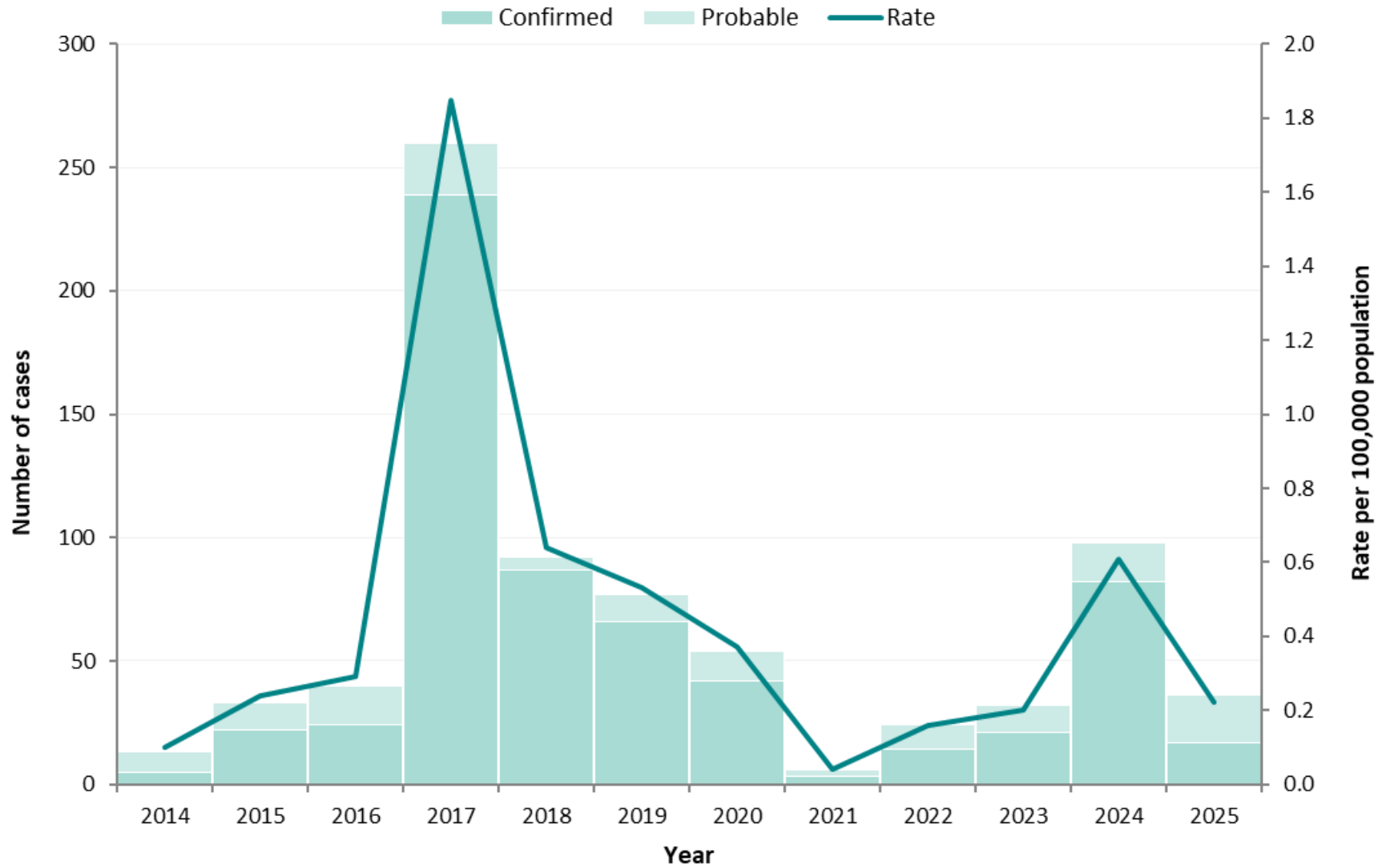
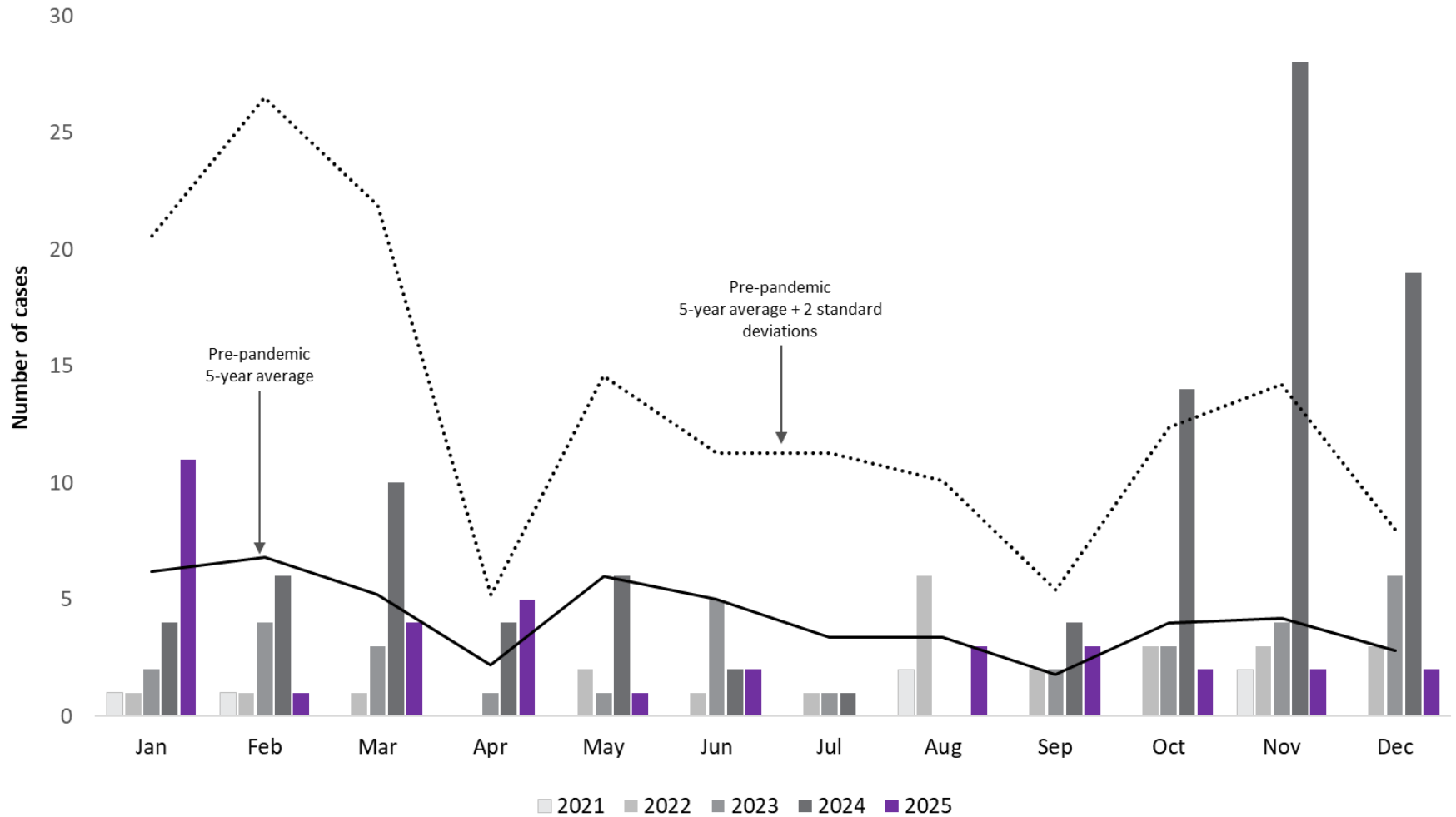


Figure 2: Number of Mumps Cases by Month: Ontario, 2021-2025



Note: Pre-pandemic 5-year average includes years 2014, 2015, 2016, 2018 and 2019. Outbreak year (2017) was excluded from calculating the 5-year average.

Figure 3a: Incidence Rates of Mumps in Children by Age Group and Year with a Focus on Children Under 18 Years of Age: Ontario, 2014-2025

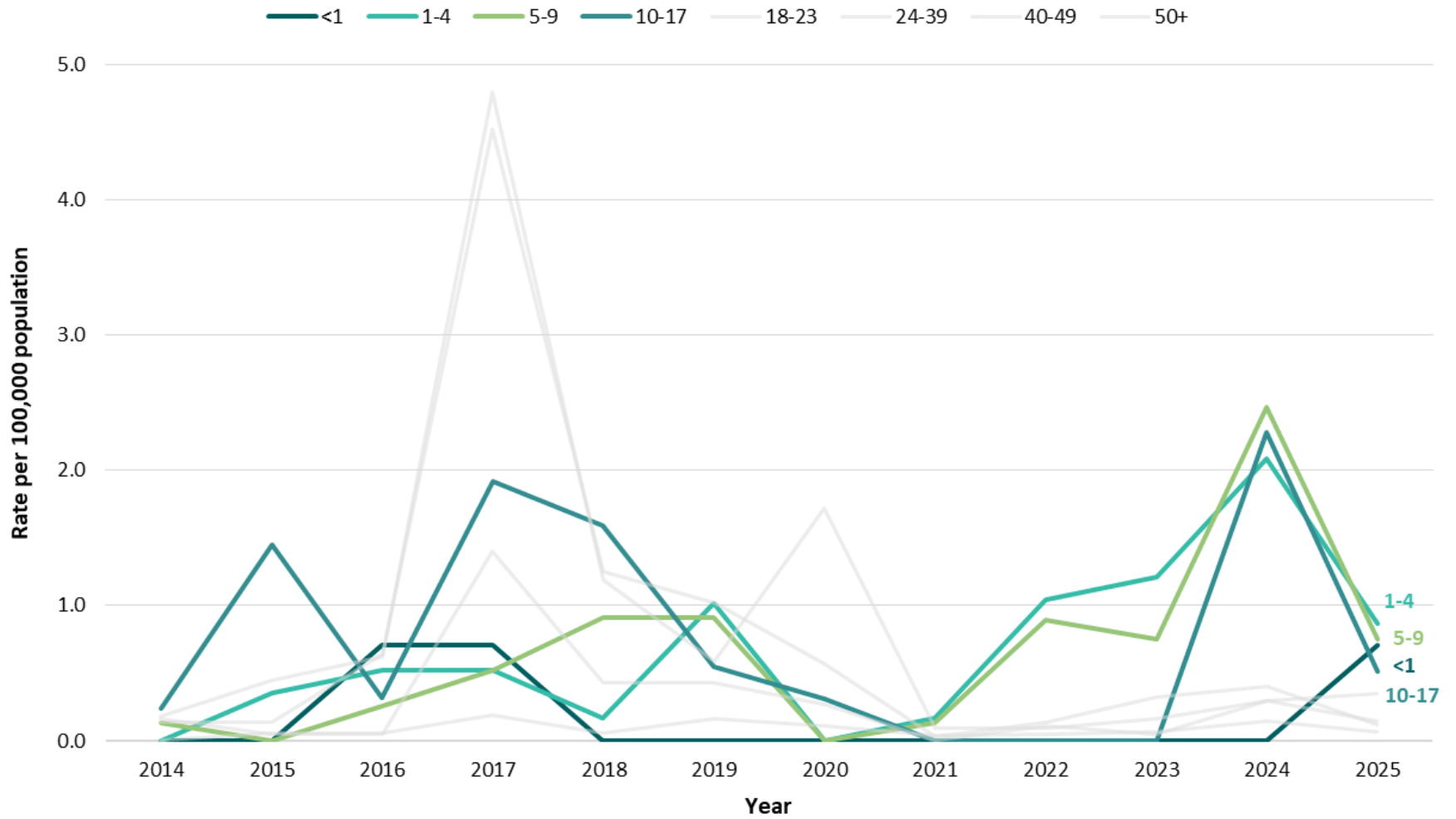


Figure 3b: Incidence Rates of Mumps by Age Group and Year with a Focus on Adults 18 Years of Age and Older: Ontario, 2014-2025

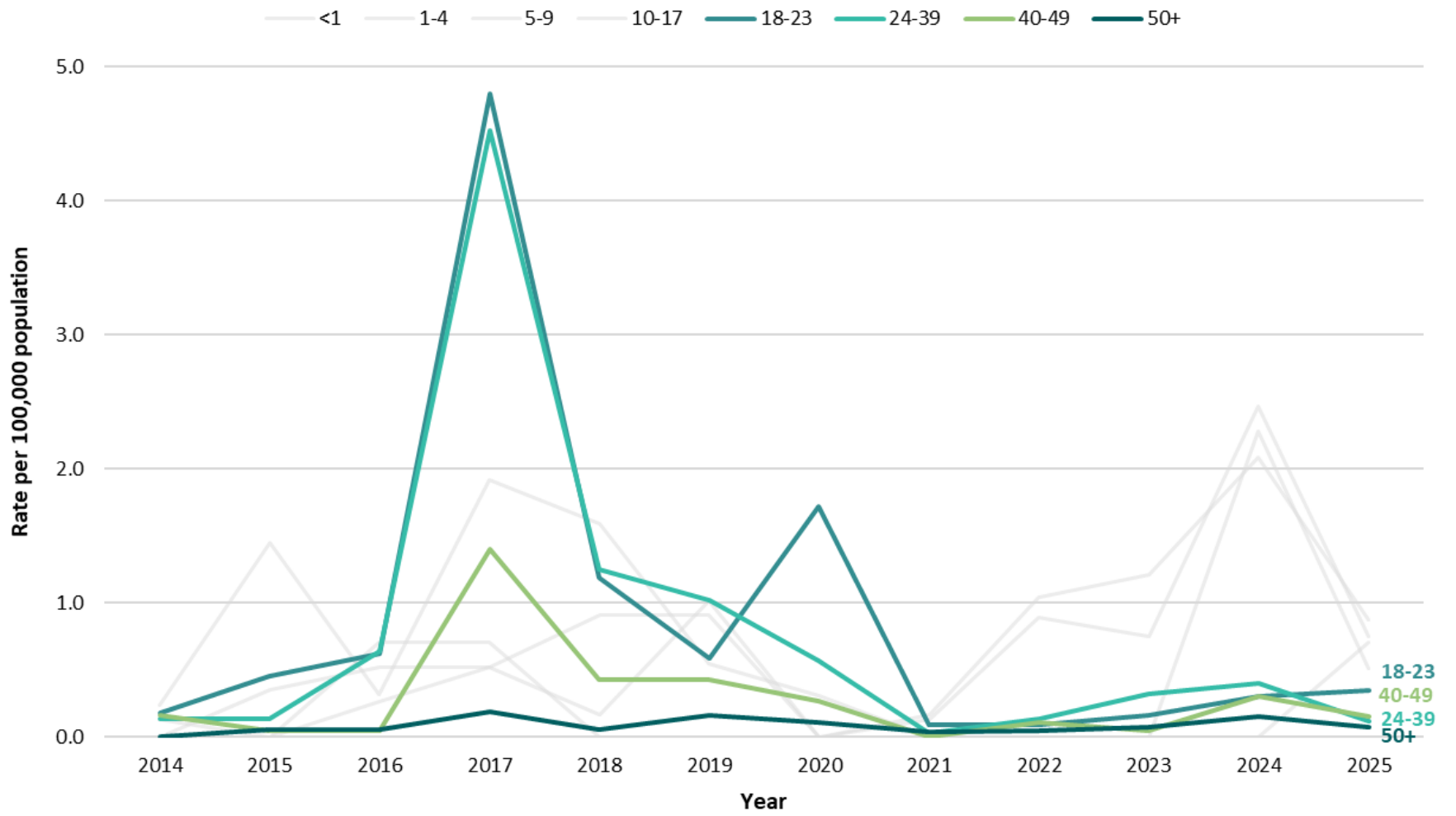


Table 1: Case Classification of Mumps Cases: Ontario, 2025

Case Classification	n	%
Confirmed	17	47.2
Probable	19	52.8
Total	36	100.0

Table 2: Gender of Mumps Cases: Ontario, 2025

Gender	n	%
Female	17	47.2
Male	19	52.8
Total	36	100.0

Table 3: Age Groups of Mumps Cases: Ontario, 2025

Age Group (Years)	n	%	Rate per 100,000 Population
<1	1	2.8	0.71
1 – 4	5	13.9	0.87
5 – 9	6	16.7	0.75
10 – 17	7	19.4	0.51
18 – 23	5	13.9	0.35
24 – 39	5	13.9	0.12
40 – 49	3	8.3	0.15
50 +	4	11.1	0.07
Total	36	100.0	0.22

Table 4: Hospitalization and Deaths of Mumps Cases: Ontario, 2025

Severity	n	%
Hospitalization	2	5.6
Deaths	0	0.0

Table 5: Immunization Status of Mumps Cases: Ontario, 2025

Immunization Status	n	%
Unknown	9	25.0
Unimmunized	13	36.1
One dose	6	16.7
Two or more doses	8	22.2
Total	36	100.0

Table 6: Number of Mumps Cases and Incidence Rates per 100,000 Population by Public Health Unit (PHU): Ontario, 2025

Public Health Unit	n	%	Rate per 100,000 population
Algoma Public Health	0	0.0	0.0
Chatham-Kent Public Health	0	0.0	0.0
City of Hamilton Public Health Services	0	0.0	0.0
Durham Region Health Department	1	2.8	0.12
Eastern Ontario Health Unit	1	2.8	0.42
Grand Erie Public Health	3	8.3	0.96
Grey Bruce Public Health	0	0.0	0.0
Halton Region Public Health	1	2.8	0.15
Huron Perth Public Health	0	0.0	0.0
Lakelands Public Health	0	0.0	0.0
Lambton Public Health	0	0.0	0.0
Middlesex-London Health Unit	1	2.8	0.16
Niagara Region Public Health	1	2.8	0.18
North Bay Parry Sound District Health Unit	0	0.0	0.0
Northeastern Public Health	0	0.0	0.0

Public Health Unit	n	%	Rate per 100,000 population
Northwestern Health Unit	0	0.0	0.0
Ottawa Public Health	5	13.9	0.43
Peel Public Health	3	8.3	0.18
Public Health Sudbury & Districts	1	2.8	0.44
Region of Waterloo Public Health and Emergency Services	0	0.0	0.0
Renfrew County and District Health Unit	0	0.0	0.0
Simcoe Muskoka District Health Unit	0	0.0	0.0
Southeast Public Health	2	5.6	0.32
Southwestern Public Health	9	25.0	3.65
Thunder Bay District Health Unit	0	0.0	0.0
Toronto Public Health	6	16.7	0.18
Wellington-Dufferin-Guelph Public Health	1	2.8	0.29
Windsor-Essex County Health Unit	0	0.0	0.0
York Region Public Health	1	2.8	0.08
Total	36	100.0	0.22

Technical Notes

Data Sources

- The case data for this report were based on information entered in the Ontario Ministry of Health's (MOH) integrated Public Health Information System (iPHIS) as of **January 14, 2026**.
 - 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.
- In addition to the immunization data from iPHIS, immunization records were also extracted from Ontario's Digital Health Immunization Repository using the Panorama Enhanced Analytical Reporting tool (PEAR) on January 29, 2026. The PEAR data extract was used to supplement immunization data reported in iPHIS and increase the completeness of immunization status assessment for mumps cases in this report.
- Rates were calculated using population estimates (1991-2024) sourced from Statistics Canada, and 2025 population projections sourced from Ontario Ministry of Finance.^{5,6}

Data Caveats

- Data reported between 2020 and 2022 should be interpreted with caution. Both testing and iPHIS data entry practices were likely impacted by the COVID-19 pandemic response.
- These data only represent confirmed and probable cases of mumps 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 cases meeting the confirmed and probable case classifications as listed in the [Ontario Ministry of Health surveillance case definitions](#) in use at the time the case was identified are included.⁷
 - PHO's technical report "[Factors Affecting Case Definition Changes in Ontario 1991-2016](#)" provides more detailed information on changes to provincial surveillance case definitions and disease classifications, which may impact the analysis of trends over time.⁸
- 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 the analysis.
- Cases are reported based on the Episode Date, which is an estimate of the symptom onset date for a case. 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.
- The pre-pandemic five-year average is based on cases reported between in years 2014, 2015, 2016, 2018 and 2019. The outbreak year (2017) was excluded from calculating the 5-year average.
- Case counts by geography are based on the diagnosing health unit (DHU), which refers to the case's public health unit of residence at the time of illness onset or report to public health. It does not necessarily reflect the location of exposure or diagnosis. Cases for which the DHU was reported as MOHLTC (to signify a case that is not a resident of Ontario) were excluded from the analysis.

- Age groups are constructed with consideration of the epidemiology of the diseases and the age of recommended vaccination. Cases with an unknown date of birth or a calculated age of greater than 120 are classified as having an unknown age. Cases of unknown age are included in total counts and rate but excluded from age-specific counts/rates.
- To determine the immunization status of cases, only documented doses of a mumps-containing vaccine administered at least 14 days prior to disease onset and on or after the case's first birthday were considered as valid doses.
 - Unimmunized: Case classified as 'Unimmunized' in the risk factor section of iPHIS with no immunization records reported or the case did not receive any valid doses.
 - Immunized: Case has at least one documented valid dose in iPHIS or Panorama.
 - Unknown: Case has no response reported for the risk factor 'Unimmunized' and no immunization records reported in iPHIS or Panorama.
- Hospitalized cases include those with an Intervention Type Description of 'Hospitalization' and an Intervention Start Date that is no more than 60 days prior to disease onset or 90 days post disease onset.
- Fatal cases include those cases reporting an Outcome of 'Fatal' and Type of Death not reported as "Reportable disease was unrelated to cause of death".

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