

ENHANCED EPIDEMIOLOGICAL SUMMARY

Invasive Group A Streptococcal (iGAS) Disease in Ontario: October 1, 2024 to March 31, 2025

Published: April 10, 2025

Note: Effective January 1, 2025, the Ontario Ministry of Health approved the voluntary merger of nine local public health units into four entities. We have begun incorporating the new names of these health entities in our reports and resources. However, there will be a transitional period where the previous health unit name and/or the new health entity name may be referenced. Please note that updates will not be made retroactively.

Introduction

An iGAS season is defined as the period spanning October 1 to September 30. This report summarizes the epidemiology of [Group A Streptococcal](#)¹ (iGAS) disease in Ontario from October 1, 2024 to March 31, 2025. It provides comparisons to iGAS activity in the last season from October 1, 2023 to March 31, 2024, as well as to past seasons, including the 2022-23 season and the five pre-pandemic seasons (October 1, 2014 to September 30, 2019). The report is based on information entered in the Ontario Ministry of Health (MOH) integrated Public Health Information System (iPHIS) database.

A description of the 2023-24 season that focuses on the age distribution of cases, severity, geographic distribution and *emm* typing can be found in the [Invasive Group A Streptococcal \(iGAS\) Disease in Ontario: October 1, 2023 to September 30, 2024](#) report.²

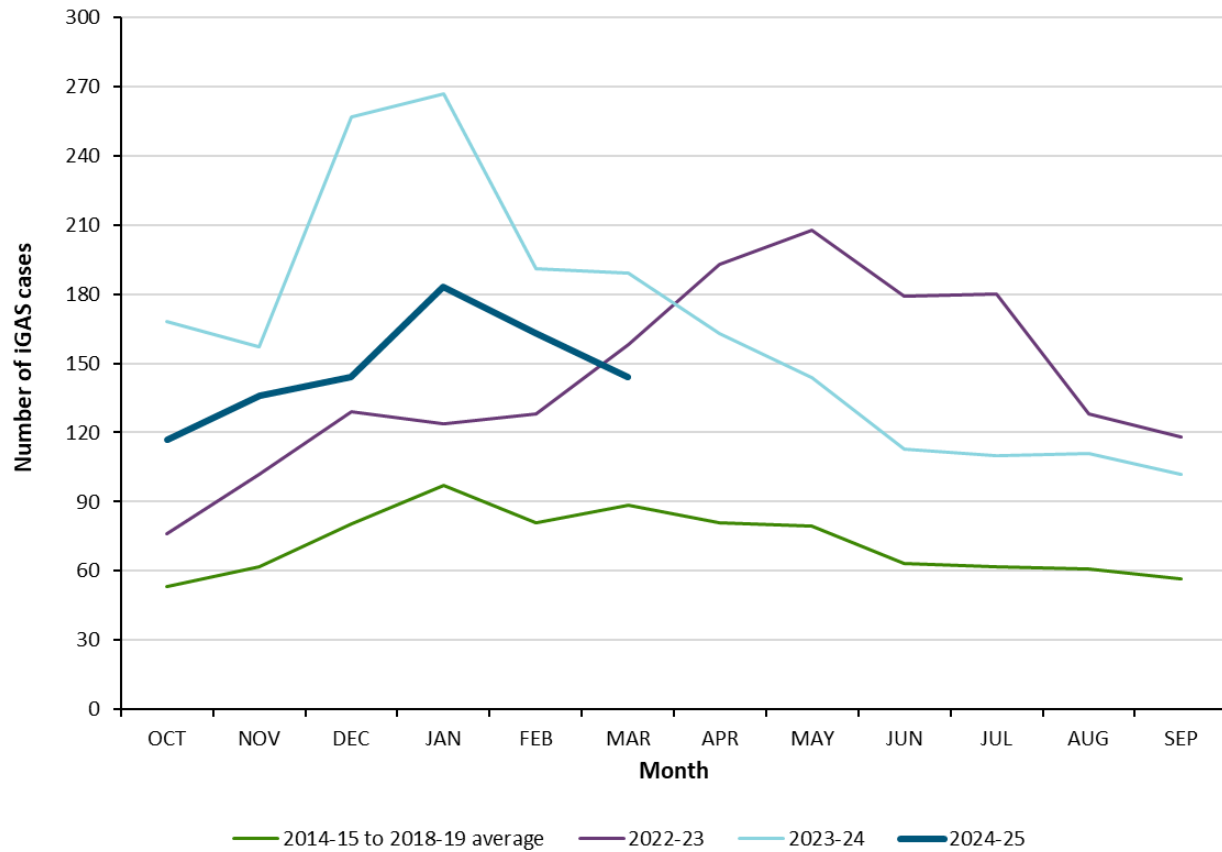
Highlights

- A total of 887 confirmed iGAS cases were reported in Ontario between October 1, 2024 and March 31, 2025, corresponding to an overall incidence rate of 5.4 cases per 100,000 population ([Table 1](#)).
- The number of cases reported in March 2025 was lower than the number of cases reported in March of the 2022-23 and 2023-24 seasons, and lower than the number of cases reported in both January and February 2025 ([Figure 1](#)). Case counts for the most recent month should be interpreted with caution owing to an increase in data lags in the current season.
- There were nine cases among those under 18 years of age (pediatric cases) in March which is a decline from February's 19 cases and the lowest of any month to date this season ([Figure 2](#)).
- The overall number of iGAS cases and the incidence rate reported in the 2024-25 season to date is lower than the corresponding values for the same period in the 2023-2024 season. This decline represents a 29.9% reduction in the incidence rate.

- However, the overall case count in the 2024-25 season thus far continues to exceed counts for the same time period in the 2022-2023 season as well as the average for the five pre-pandemic seasons ([Table 1](#), [Figure 1](#)).
- A similar trend was observed among pediatric iGAS cases reported in the 2024-25 season thus far ([Figure 2](#)).
- In March 2025, rates of confirmed iGAS cases were highest in Northwestern Health Unit and Haliburton, Kawartha, Pine Ridge District Health Unit (now part of Haliburton Kawartha Northumberland Peterborough Health Unit) ([Figure 3](#)).
- Those 65 years of age and older reported the highest incidence rate (9.9 cases per 100,000 population). Based on data reported between October to March for the 2023-24 season, all age groups, with the exception of those under one and those 14 to 17 years, have had lower incidence rates this season to date ([Table 1](#)).
- The overall proportion of iGAS cases requiring hospitalization this season to date is lower than the corresponding proportion for the previous season (77.0% vs. 81.6%), however interpretation of the data should consider the possible impact of lags in reporting ([Table 2](#)).
- For the 2024-25 season up to March 31, 2025, fatal pediatric iGAS cases have been older compared to the previous season, with all but one of the pediatric fatalities this season occurring in children five years of age and older ([Table 2](#)).
 - 6.1% (5/82) of pediatric iGAS cases have had a fatal outcome reported compared to 8.4% (13/155) in the corresponding period in the previous season.
 - The proportion of fatal cases among adults (cases ≥ 18 years of age) in the 2024-25 season was 11.8% (95/805) compared to 14.3% (153/1,072) for the previous season.
 - Interpretation of the data should consider the possible impact of lags in reporting.
- Among iGAS cases in the 2024-25 season to date, the most commonly reported *emm* types are *emm1*, *emm49*, *emm92*, *emm41*, and *emm74* in adults and *emm3*, *emm1* and *emm4* in children ([Table 3](#)).
 - *Emm* types were available for 64.8% of adult cases, and for 73.2% of pediatric cases.
 - These data are expected to change because *emm* types are often confirmed after initial public health notification and follow up with the case.

Trends

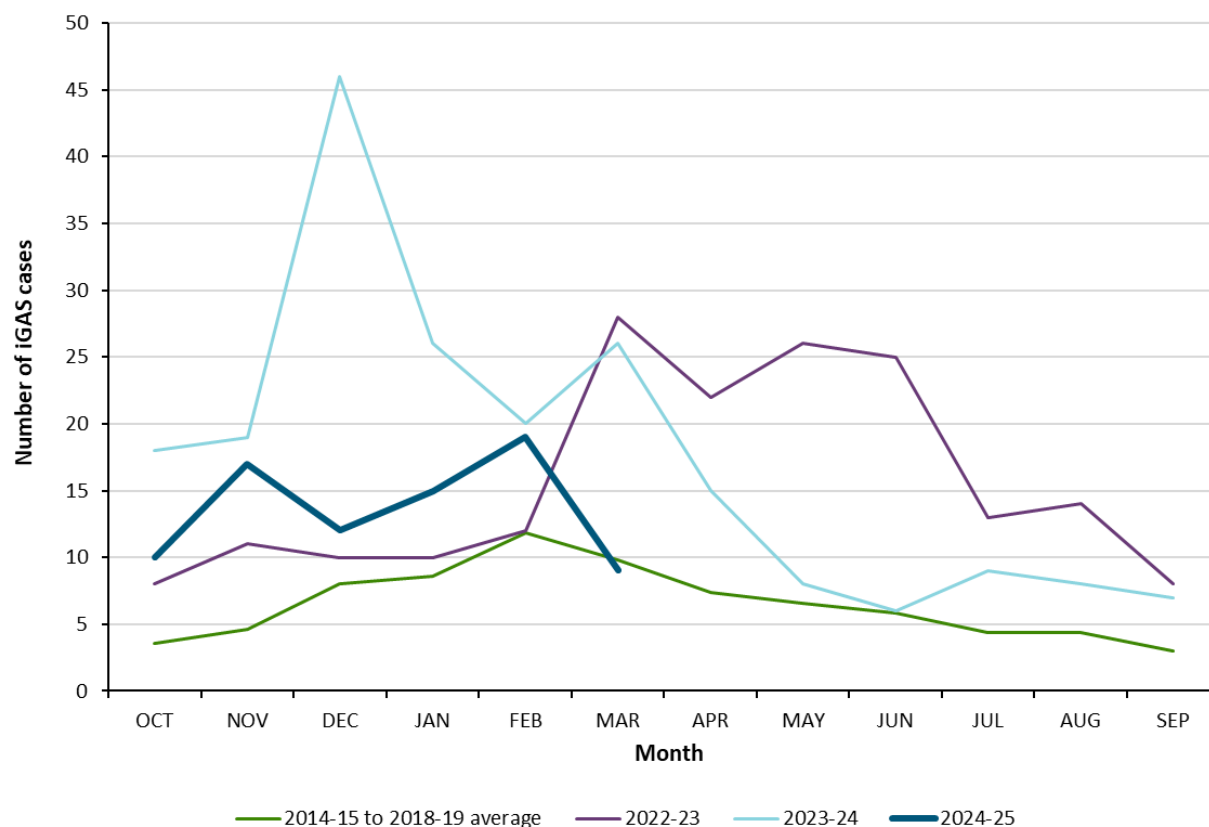
Figure 1: Confirmed iGAS Case Counts by Month for All Ages: Current Season (October 1, 2024 – March 31, 2025)* Compared to 2022-23 and 2023-24 and the Five Pre-Pandemic Season Average



Data source: iPHIS

*Data for the current season (2024-2025) includes cases reported up to March 31, 2025. Data for the most recent reporting month should be interpreted with caution due to reporting lags.

Figure 2: Confirmed iGAS Case Counts by Month in Children 0-17 Years of Age: Current Season (October 1, 2024 – March 31, 2025)* Compared to 2022-23 and 2023-24 and the Five Pre-Pandemic Season Average



Data source: iPHIS

*Data for the 2024-2025 season includes cases reported up to March 31, 2025. Data for the most recent reporting month should be interpreted with caution due to reporting lags.

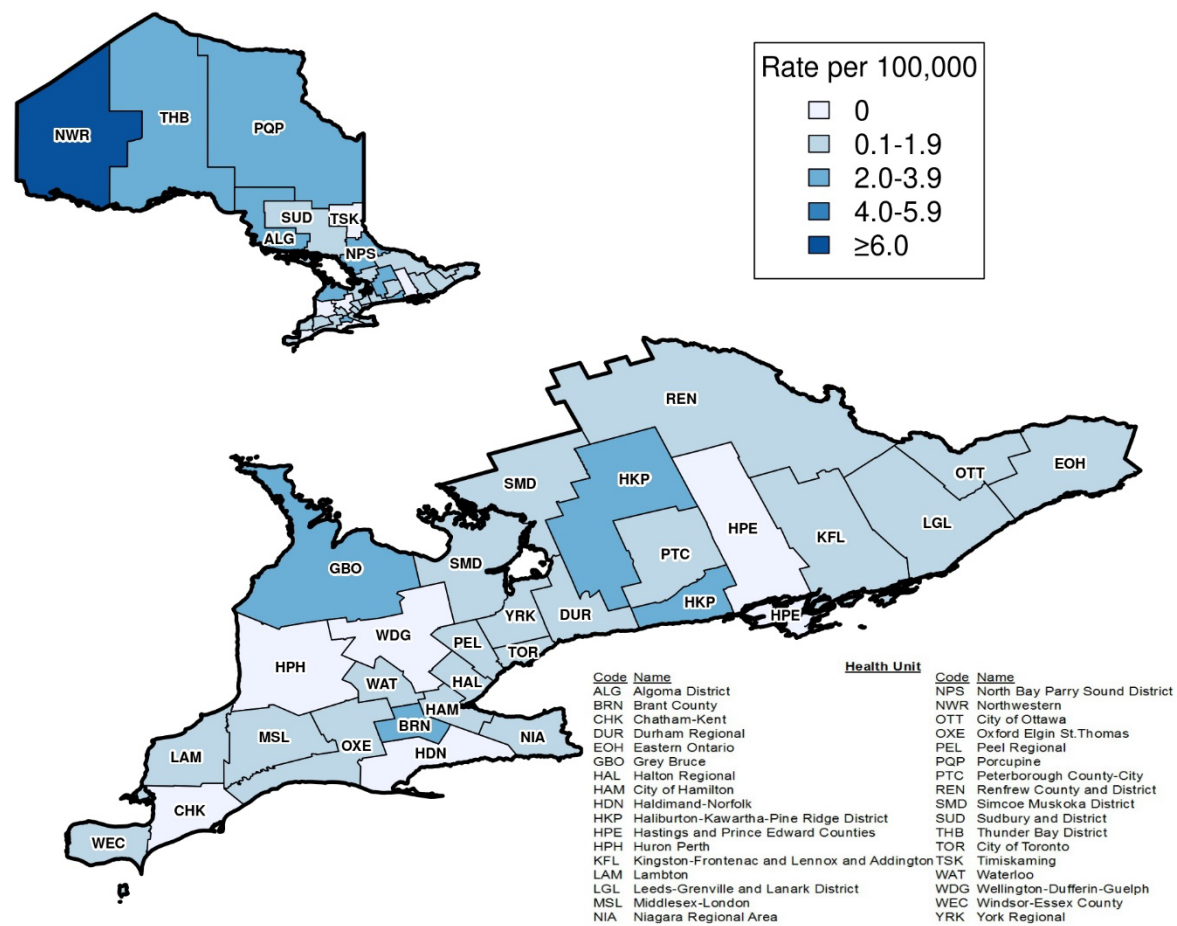
Table 1: Confirmed iGAS Cases and Rate (per 100,000 Population) by Age Group in Ontario: Current Season (October 1, 2024 – March 31, 2025) Compared to the 2023-24 Season (October 1, 2023– March 31, 2024)*

Age Group (years)	Current season: Total number of cases reported (October 1, 2024 – March 31, 2025)	Current season: Rate per 100,000 population (October 1, 2024 – March 31, 2025)	Previous season: Total number of cases reported (October 1, 2023– March 31, 2024)	Previous season: Rate per 100,000 population (October 1, 2023– March 31, 2024)	Percentage change in current season rate compared to 2023-24 season
< 1	9	5.6	6	3.9	+43.6%
1 – 4	28	4.7	49	8.4	-44.0%
5 – 9	25	3.2	72	9.2	-65.2%
10 – 13	12	1.8	21	3.2	-43.8%
14 – 17	8	1.2	7	1.0	+20.0%
18 – 64	502	4.8	669	6.6	-27.3%
≥ 65	303	9.9	403	13.6	-27.2%
Unknown	0	N/A	2	N/A	N/A
Total	887	5.4	1,229	7.7	-29.9%

Data source: iPHIS

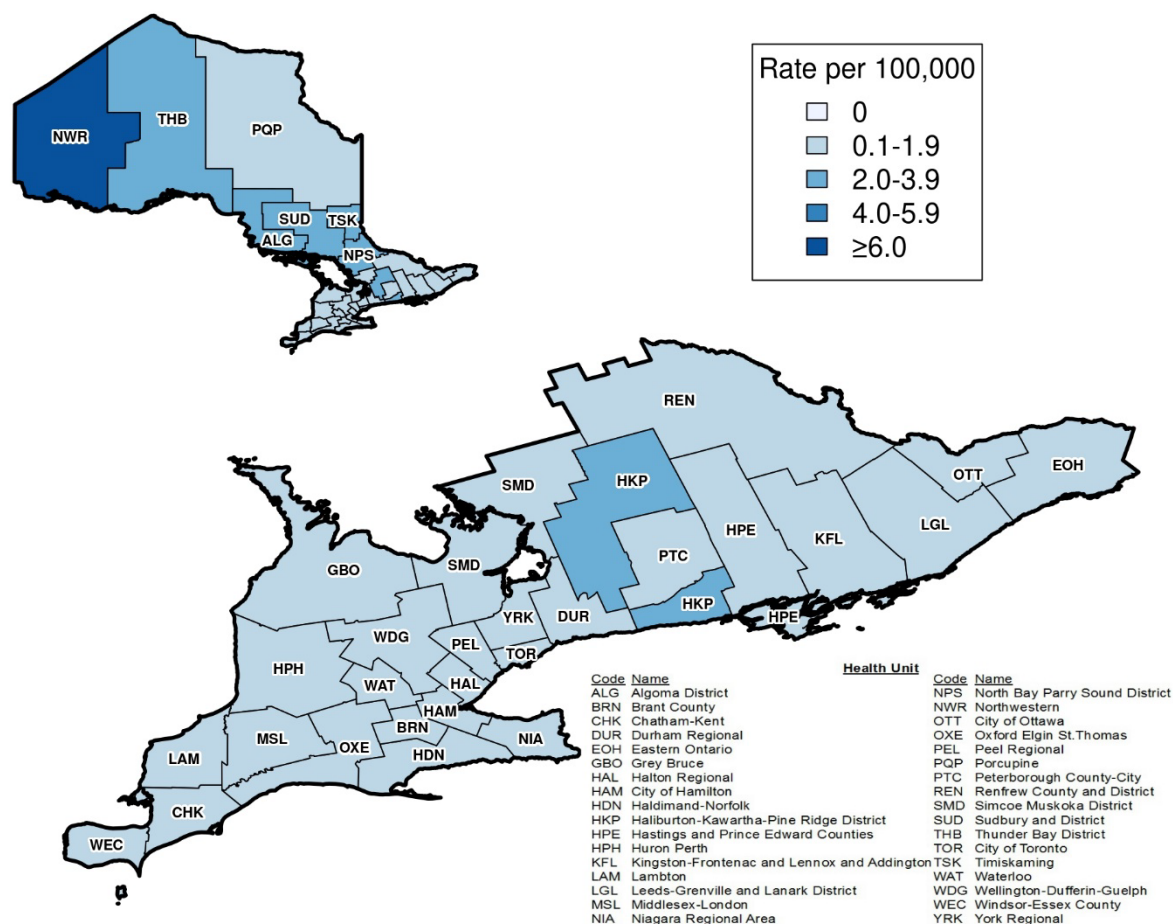
* For comparability to the current iGAS season, only data for confirmed iGAS cases reported for the previous season from October 1, 2023 – March 31, 2024 are presented.

Figure 3: Rate of Confirmed Cases of iGAS Reported in March 2025 by Public Health Unit in Ontario



Data source: iPHIS

Figure 4: Average Monthly Rate of Confirmed Cases of iGAS Reported in the Current Season (October 1, 2024 - March 31, 2025) by Public Health Unit in Ontario



Data source: iPHIS

*The average monthly rate was determined by dividing the cumulative rate of confirmed iGAS cases for each PHU by the number of months included in the reporting period (i.e., for data captured until March 31, 2025, the cumulative rate was divided by six months to determine the monthly rate for each PHU).

Severity

Table 2: Severe Outcomes for Confirmed iGAS Cases by Age Group and Season in Ontario: Current Season (October 1, 2024 – March 31, 2025) Compared to the 2023-24 Season (October 1, 2023– March 31, 2024)*

Age Group (years)	Current season: Number (%) of cases hospitalized (October 1, 2024 – March 31, 2025)	Previous season: Number (%) of cases hospitalized (October 1, 2023– March 31, 2024)	Current season: Number (%) of cases with a fatal outcome (October 1, 2024 – March 31, 2025)	Previous season: Number (%) of cases with a fatal outcome (October 1, 2023– March 31, 2024)
< 1	7/9 (77.8%)	5/6 (83.3%)	0/9 (0.0%)	1/6 (16.7%)
1 – 4	21/28 (75.0%)	42/49 (85.7%)	1/28 (3.6%)	5/49 (10.2%)
5 - 9	20/25 (80.0%)	64/72 (88.9%)	1/25 (4.0%)	5/72 (6.9%)
10 - 13	12/12 (100.0%)	17/21 (81.0%)	1/12 (8.3%)	2/21 (9.5%)
14 - 17	6/8 (75.0%)	5/7 (71.4%)	2/8 (25.0%)	0/7 (0.0%)
18 - 64	370/502 (73.7%)	535/669 (80.0%)	50/502 (10.0%)	85/669 (12.7%)
≥65	247/303 (81.5%)	335/403 (83.1%)	45/303 (14.9%)	68/403 (16.9%)
Unknown	0/0 (0.0%)	0/2 (0.0%)	0/0 (0.0%)	0/2 (0.0%)
Total	683/887 (77.0%)	1,003/1,229 (81.6%)	100/887 (11.3%)	166/1,229 (13.5%)

Data source: iPHIS

*For the previous season, only data for confirmed iGAS cases reported October 1, 2023 – March 31, 2024 is presented, for comparability to the current iGAS season.

Table 3: Number (%) of Most Commonly Reported *Emm* Types Among Confirmed iGAS Cases in Ontario by Age Group*: Current Season (October 1, 2024 – March 31, 2025) Compared to the 2023-24 Season (October 1, 2023– March 31, 2024)**

Most commonly reported <i>emm</i> type by rank	Current season: ≥ 18 years of age (October 1, 2024 – March 31, 2025)	Previous season: ≥ 18 years of age (October 1, 2023– March 31, 2024)	Current season: < 18 years of age (October 1, 2024 – March 31, 2025)	Previous season: < 18 years of age (October 1, 2023– March 31, 2024)
<i>emm1</i>	60 (11.5%)	329 (37.5%)	17 (28.3%)	93 (73.2%)
<i>emm49</i>	59 (11.3%)	39 (4.4%)	0 (0.0%)	1 (0.8%)
<i>emm92</i>	49 (9.4%)	34 (3.9%)	1 (1.7%)	0 (0.0%)
<i>emm41</i>	42 (8.0%)	33 (3.8%)	1 (1.7%)	0 (0.0%)
<i>emm74</i>	39 (7.5%)	51 (5.8%)	2 (3.3%)	0 (0.0%)
<i>emm59</i>	35 (6.7%)	42 (4.8%)	3 (5.0%)	0 (0.0%)
<i>emm3</i>	32 (6.1%)	1 (0.1%)	19 (31.7%)	0 (0.0%)
<i>emm80</i>	28 (5.4%)	45 (5.1%)	0 (0.0%)	0 (0.0%)
<i>emm28</i>	21 (4.0%)	20 (2.3%)	1 (1.7%)	1 (0.8%)
<i>emm4</i>	20 (3.8%)	16 (1.8%)	6 (10.0%)	7 (5.5%)
<i>emm89</i>	20 (3.8%)	10 (1.1%)	1 (1.7%)	2 (1.6%)
<i>emm82</i>	17 (3.3%)	42 (4.8%)	0 (0.0%)	1 (0.8%)
Other	100 (19.2%)	215 (24.5%)	9 (15.0%)	22 (17.3%)
Total with <i>emm</i> type	522 (64.8%)	877 (81.8%)	60 (73.2%)	127 (81.9%)
Total without <i>emm</i> type	283 (35.2%)	195 (18.2%)	22 (26.8%)	28 (18.1%)
Total	805 (100.0%)	1,072 (100.0%)	82 (100.0%)	155 (100.0%)

Data source: iPHIS

* Cases with an unknown age are excluded from this table.

**For the previous season, only data for confirmed iGAS cases reported October 1, 2023 – March 31, 2024 is presented, for comparability to the current iGAS season.

Technical Notes

- The data for this report were based on information entered in iPHIS as of:
 - **April 7, 2025 at 9 a.m.** for cases reported October 1, 2023 onwards
 - **November 12, 2024 at 9 a.m.** for cases reported during the five pre-pandemic seasons (October 1, 2014 – September 30, 2019) and the 2022-23 season (October 1, 2022 to September 30, 2023).
- 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.
- These data only represent laboratory-confirmed cases of iGAS 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.
- Population estimates used to calculate rates for total cases were calculated using the Ontario 2024 and 2025 population projections³, sourced from the Ontario Ministry of Finance.
- Only iGAS cases meeting the confirmed case classification as listed in the Ontario Ministry of Health (MOH) surveillance case definitions are included in the reported case counts.¹
 - Provincial surveillance case definitions available online under the Infectious Diseases Protocol are the most current.
 - 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.^{4,5}
- Cases 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.
- Hospitalized iGAS cases were determined based on a reported intervention type description of "Hospitalization" or "ICU" (Intensive Care Unit) and a reported intervention start date on or after the case's episode date.
- Fatal iGAS cases were determined based on a case outcome description of "Fatal" and the type of death not being reported as "Reportable disease was unrelated to cause of death."
- Cases for which the Diagnosing Health Unit (DHU) was reported as Ontario Ministry of Health and Long-Term Care (MOHLTC) (to signify a case that is not a resident of Ontario) or MUSKOKA-PARRY SOUND (a public health unit that no longer exists) were excluded from this analysis.

References

1. 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: Group A Streptococcal Disease, invasive (iGAS). Effective: July 2022 [Internet]. Toronto, ON: King's Printer for Ontario; 2022 [cited 2024 Nov 11]. Available from: <https://files.ontario.ca/moh-ophs-group-a-streptococcal-disease-invasive-en-2022.pdf>
2. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Invasive Group A Streptococcal (iGAS) Disease in Ontario: October 1, 2023 to September 30, 2024. Toronto, ON: King's Printer for Ontario; 2024 [cited 2024 Nov 11]. Available from: https://www.publichealthontario.ca/-/media/Documents/I/2023/igas-enhanced-epi-2023-2024.pdf?rev=12469f7990ab44a2b559d669a4b6e776&sc_lang=en&hash=D0AE4C50804C5BD0C9D57BF3EC5ADE47
3. Population Reporting. Population projections public health unit, 2023-2046 [data file]. Toronto, ON: Ontario. Ministry of Finance [producer]; Toronto, ON: Ontario. Ministry of Health, IntelliHealth Ontario [distributor]; [data extracted 2024 Jun 10].
4. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Factors affecting reportable diseases in Ontario (1991-2016) [Internet]. Toronto, ON: Queen's Printer for Ontario; 2018 [cited 2024 Nov 11]. Available from: <https://www.publichealthontario.ca/-/media/documents/F/2018/factors-reportable-diseases-ontario-1991-2016.pdf>
5. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Infectious disease trends in Ontario, 2022: technical notes [Internet]. Toronto, ON: King's Printer for Ontario; 2023 [cited 2024 Nov 11]. Available from: <https://www.publichealthontario.ca/-/media/documents/I/2019/idto-technical-notes.pdf>

Appendix A

Table A1: Confirmed iGAS Case Counts by Month Across All Ages: Current Season (October 1, 2024 – March 31, 2025)* Compared to the 2022-23, 2023-24 Seasons and the Five Pre-Pandemic Seasons

Month	2014 – 2015	2015 – 2016	2016 – 2017	2017 – 2018	2018 – 2019	2022-2023	2023 – 2024	2024 – 2025
October	31	29	55	81	70	76	168	117
November	42	41	63	63	99	102	157	136
December	72	47	95	92	96	129	257	144
January	78	76	96	138	97	124	267	183
February	42	75	87	121	80	128	191	163
March	62	69	102	96	114	158	189	144
April	55	53	82	126	89	193	163	-
May	63	52	76	106	99	208	144	-
June	49	40	68	83	75	179	113	-
July	41	45	72	73	79	180	110	-
August	39	44	61	74	85	128	111	-
September	35	50	55	61	81	118	102	-
Total	609	621	912	1,114	1,064	1,723	1,972	887

Data source: iPHIS

*Data for the most recent reporting month should be interpreted with caution due to reporting and/or data entry lags.

Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Invasive Group A Streptococcal (iGAS) Disease in Ontario: October 1, 2024 to March 31, 2025. Toronto, ON: King's Printer for Ontario; 2025.

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