

TECHNICAL NOTES

Chronic Disease Incidence and Prevalence Snapshot

This Snapshot captures people with a chronic condition of interest, reported by calendar year of discharge for 34 Public Health Units, 14 Local Health Integration Networks (LHINs), and other geographic comparators in Ontario from 2010–2019. Data for these indicators are based on derived chronic condition cohorts developed at ICES using linked data algorithms.

Specific indicators:

- Incidence of asthma
- Prevalence of asthma
- Incidence of diabetes in adults 20+
- Prevalence of diabetes in adults 20+
- Incidence of COPD in adults 20+
- Prevalence of COPD in adults 20+
- Incidence of hypertension in adults 20+
- Prevalence of hypertension in adults 20+

Measures included:

Age-standardized rates

- Age-standardized rate (both sexes)
- Age-standardized rate (males)
- Age-standardized rate (females)

Standardized incidence ratios (SIR)

- Standardized incidence ratio (both sexes)
- Standardized incidence ratio (males)
- Standardized incidence ratio (females)

Crude rates

- Crude rate (both sexes)
- Crude rate (males)
- Crude rate (females)

Age-specific rates

- Age-specific rate (ages 0 to 19) (Asthma only)
- Age-specific rate (ages 20 to 44)
- Age-specific rate (ages 45 to 64)
- Age-specific rate (ages 65 to 74)
- Age-specific rate (ages 75+)

Metrics included:

- Rates (Age-standardized, SIRs, crude, age-specific)
- 95% confidence intervals (CIs for rates calculated using a Poisson approximation of the binomial distribution, CIs for SIRs calculated using Byar's Approximation)
- Statistical significance compared to Ontario (for rates, confidence interval around the difference between the health unit rate and the Ontario rate does not include zero; for SIRs, confidence interval around SIR does not include one)
- Cases (numerator)
- Population (denominator)

Geographic comparisons included:

- Ontario
- Ontario minus Toronto
- Snapshots peer groups (based on Statistics Canada peer groups). For more information on Statistics Canada peer group methodology see [Health region peer groups – working paper, 2018](#) on the Statistics Canada website. Table 1 shows the mapping between the peer groupings used in Snapshots and the nationally defined 2018 Statistics Canada peer groups:

Table 1. Mapping between Snapshots Peer Groups and Statistics Canada 2018 Peer Groups

Mainly urban centres with moderate population density (Statistics Canada peer group B)

Durham Region Health Department
Halton Region Public Health
City of Hamilton Public Health Services
Middlesex-London Health Unit
Ottawa Public Health
Region of Waterloo Public Health and Emergency Services
Windsor-Essex County Health Unit

Sparsely populated urban-rural mix (Statistics Canada peer group C)

Algoma Public Health
Brant County Health Unit
Chatham-Kent Health Unit
Eastern Ontario Health Unit
Haliburton, Kawartha, Pine Ridge District Health Unit
Hastings Prince Edward Public Health
Kingston, Frontenac and Lennox & Addington Public Health
Lambton Public Health
Niagara Region Public Health
North Bay Parry Sound District Health Unit
Porcupine Health Unit
Peterborough Public Health
Public Health Sudbury & Districts
Thunder Bay District Health Unit
Timiskaming Health Unit

Mainly rural (Statistics Canada peer group D)

Grey Bruce Health Unit
Haldimand-Norfolk Health Unit
Huron Perth Public Health
Leeds, Grenville & Lanark District Health Unit
Northwestern Health Unit
Renfrew County and District Health Unit
Simcoe Muskoka District Health Unit
Southwestern Public Health
Wellington-Dufferin-Guelph Public Health

Largest population centres with high population density (Statistics Canada peer groups G & H)

Toronto Public Health
Peel Public Health
York Region Public Health

Exclusion criteria:

Records without a valid age have been excluded from overall age standardized rates and standardized incidence ratios. Records without a valid sex have been excluded from sex-specific age standardized rates, standardized incidence ratios and crude rates.

Methods:

- An individual is considered as both an incident case and a prevalent case in the year they were diagnosed and will be considered a prevalent case in subsequent years up to and including the year of their death.
- Denominators for incidence rates exclude individuals who were identified as having that chronic disease in the previous year. Denominators for prevalence rates include the entire population regardless of disease status.
- Records without a valid age have been excluded from overall age standardized rates and standardized incidence ratios. Records without a valid sex have been excluded from sex-specific age standardized rates, standardized incidence ratios and crude rates.
- Elgin St. Thomas Public Health and Oxford County Public Health & Emergency Services merged to form Southwestern Public Health in 2018. Perth District Health Unit and Huron County Health Unit merged to form Huron Perth Public Health in 2020. In this Snapshot, case counts and population counts of the participating public health units were summed to calculate rates for the merged health units.

Data sources:

Numerator:

- ICES Derived Chronic Disease Cohorts (Asthma/COPD/Diabetes/Hypertension), 2010-2019, Institute for Clinical Evaluative Sciences, extracted 2021 September 20.

Denominator:

- Registered Persons Database (RPDB), 2010-2019, Institute for Clinical Evaluative Sciences, extracted 2021 September 20.

Suggested citation

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Author. Content tool: Title of indicator. Place of publication: Publisher; copyright year [last updated date; date of access]. Available from: insert URL to page being referenced.

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