Guide to Health Neighbourhoods: Indicators

Durham Region Health Department

Date modified: March 2026

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Indicator Definitions, Data Sources and Notes

As of June 2020, Health Neighbourhoods presents information on 96 indicators. **Appendix 1** provides a list of all currently available Health Neighbourhoods indicators, including information on status, section, years available and primary data source.

Socio-Demographic Indicators

Population

Population growth rate

Description: The population growth rate reflects how much the population grew in the five years between 2011 and 2016.

Impact on Health: no impact.

- Higher percentages are shown on maps in dark red.
- Higher and lower than Durham Region and Ontario shown in blue.

Data Sources:

- Numerator and denominator: 2011, 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program (CDP).

Method of Calculation:

$$\frac{2016\ total\ population - 2011\ total\ population}{2011\ total\ population}\ X\ 100$$

Quintiles: Based on rate, with an approximately equal number of Neighbourhoods in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: January 2015, updated June 2022.

Data Notes:

- Population counts from the Census differed from the Statistics Canada estimates that the Health Department generally uses for statistics. As a result, counts and rates for Durham Region and the municipalities may vary from those presented in other Health Department reports.

Population density

Description: The population density reflects the number of people per square kilometre.

Impact on Health: No impact.

- Higher densities are shown on maps in dark red.
- Higher and lower than Durham Region and Ontario shown in blue.

Data Sources:

- Numerator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.
- Denominator: 2016 Land Area Estimates, Durham Region Information Technology, GIS Services.

Method of Calculation:

$$\frac{total\ population}{total\ land\ area\ (km^2)}$$

Quintiles: Based on density, with an approximately equal number of Neighbourhoods in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: June 2022.

Data Notes:

- Population counts from the Census differed from the Statistics Canada estimates that the Health Department generally uses for statistics. As a result, counts and rates for Durham Region and the municipalities may vary from those presented in other Health Department reports.

Population age groups

Indicators: Population Aged 0-14, Aged 0-4, Aged 5-9, Aged 10-14, Aged 15-19, Aged 20-24, Aged 25-29, Aged 30-39, Aged 40-49, Aged 50-59, Aged 60-64, Aged 65+ years.

Description: The percentage of the population made up by people in the specific age group.

Impact on Health: Complex, higher percentages could be better or worse for health.

- The mix of age groups impacts the health of a Neighbourhood. Young children (less than four years of age) and older adults (65 years and older) are at higher risk of illness and injury, which is worse for health.
- Higher percentages are shown on maps in dark red.
- Higher and lower than Durham Region and Ontario shown in blue.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{total\ population\ in\ an\ age\ group}{total\ population}\ X\ 100$$

Quintiles: Based on counts, approximately equal numbers of people in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: January 2015, updated June 2022.

Data Notes:

- Population counts from the 2016 Census differed from the Statistics Canada 2016 estimates that are commonly used by the Health Department, which are adjusted for undercounts. As a result, counts and rates for Durham Region and the municipalities may vary from those presented in other Health Department reports.

Demographics

Female lone-parent families

Description: The percentage of female-lone parent families.

Impact on Health: Higher percentages and increases are worse for health.

- Female lone-parent families may have less income and more stress than traditional families. This is worse for health, but the impact is less if the family has strong social supports and relationships.
- Higher percentages are shown on maps in dark red.
- Higher and lower than Durham Region and Ontario shown in blue.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{number\ of\ female-lone\ parent\ families}{total\ population}\ X\ 100$$

- Total population: Total-Number of census families in private households—25% sample data.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Quintiles: Based on counts, approximately equal numbers of families in each quintile.

Release: February 2016, replaced June 2022.

Data Notes:

- This indicator used 2016 Census data from the long-form Census and replaced 2011 data from the National Household Survey.
- A female lone-parent family refers to a female of any marital status with at least one child living in the same dwelling. Children may be children by birth, marriage, or adoption regardless of their age or marital status as long as they live in the dwelling and do not have their own spouse or child living in the dwelling.

Seniors living alone

Description: The percentage of seniors, aged 65 years and older, who live alone.

Impact on Health: Complex, higher percentages could be better or worse for health.

- A lower percentage could be better for health because seniors living with others would have more social and physical support, and those who are alone may be at risk of negative health outcomes.
- However, a higher percentage could be better, as seniors living alone could represent independence and good health, especially if they are well supported within the community.
- Higher percentages are shown on maps in dark red.
- Higher and lower than Durham Region and Ontario shown in blue.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{number\ of\ seniors\ living\ alone}{total\ population}\ x\ 100$$

- Total population: Total-Number of seniors living in private households—25% sample data.

Quintiles: Based on counts, approximately equal numbers in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: February 2016, replaced November 2021.

Data Notes:

- This indicator used 2016 Census data from the long-form Census and replaced 2011 data from the National Household Survey.

- The census definition of living alone is based on the concept of one usual place of residence. Each person is counted as living at one and only one dwelling and in one household. Part-time living situations are not captured and as a result, individuals categorized as living alone in the census may have other persons staying with them for part of the year. This indicator also does not reflect how long an individual has been living alone and if it is a temporary living situation.

Aboriginal population

Description: The percentage of the population that reported identifying with the Aboriginal peoples of Canada.

Impact on Health: Complex, higher percentages could be better or worse for health.

- Aboriginal people have a higher risk of illness than non-Aboriginal people. The impact is less if there are strong social supports and connections to Aboriginal culture, language, tradition and ways of knowing.
- Higher percentages are shown on maps in dark red.
- Higher and lower than Durham Region and Ontario shown in blue.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{total\ Aboriginal\ population}{total\ population}\ X\ 100$$

- Total population: Aboriginal identity for the population in private households—25% sample data.

Quintiles: Based on counts, approximately equal numbers in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: February 2016, replaced June 2022.

Data Notes:

- This indicator used 2016 Census data from the long-form Census and replaced 2011 data from the National Household Survey.
- Refers to whether the person reported identifying with the Aboriginal peoples of Canada. This includes those who reported being an Aboriginal person (First Nations, Métis or Inuit), and/or those who reported Registered or Treaty Indian status, and/or those who reported membership in a First Nation or Indian band. Aboriginal peoples of Canada are defined in the Constitution Act, 1982, Section 35(2) as including the Indian, Inuit, and Métis peoples of Canada.

Visible minorities

Description: The percentage of the population that indicated they were non-Caucasian in race or non-white in colour.

Impact on Health: Complex, higher percentages could be better or worse for health.

- Visible minorities may experience discrimination and have different health vulnerabilities which may be worse for health.
- Higher percentages are shown on maps in dark red.
- Higher and lower than Durham Region and Ontario shown in blue.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{total\ visible\ minority\ population}{total\ population}\ X\ 100$$

- Total population: Total-Visible minority for the population in private households—25% sample data.

Release: January 2015, replaced June 2022.

Quintiles: Based on counts, approximately equal numbers of people in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Data Notes:

- This indicator used 2016 Census data from the long-form Census and replaced 2011 data from the National Household Survey.
- The Employment Equity Act defines visible minorities as "persons, other than Aboriginal peoples, who are non-Caucasian in race or non-white in colour." This population is mostly comprised of these groups: South Asian, Chinese, Black, Filipino, Latin American, Arab, Southeast Asian, West Asian, Korean, Japanese.

Foreign-born population

Description: The percentage of the population who are immigrants.

Impact on Health: Complex, higher percentages could be better or worse for health.

- Recent immigrants are usually healthier than Canadian-born residents but this difference decreases over time. Immigrants may experience discrimination and have different health vulnerabilities which may be worse for health.
- Higher percentages are shown on maps in dark red.
- Higher and lower than Durham Region and Ontario shown in blue.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{population\ born\ outside\ of\ Canada}{total\ population}\ X\ 100$$

- Total population: Total-Immigrant status and period of immigration for the population in private households—25% sample data.
- Refugees, non-permanent residents and people who landed in Canada after May 10, 2016, were excluded.

Release: June 2022.

Quintiles: Based on counts, approximately equal numbers of people in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Data Notes:

- Immigrants included people who had ever been landed immigrants or permanent residents and people who have become Canadian citizens by naturalization.

Recent newcomers

Description: The percentage of the population that immigrated to Canada between 2011 and 2016.

Impact on health: Complex, higher percentages could be better or worse for health.

- Recent immigrants are usually healthier than Canadian-born residents but this difference decreases over time. Immigrants may experience discrimination and have different health vulnerabilities which may be worse for health.
- Higher percentages are shown on maps in dark red.
- Higher and lower than Durham Region and Ontario shown in blue.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{total\ population\ who\ immigrated\ between\ 2011\ and\ 2016}{2016\ total\ population}\ X\ 100$$

- Total population: Total-Immigrant status and period of immigration for the population in private households—25% sample data.

- Refugees, non-permanent residents and people who landed in Canada after May 10, 2016, were excluded.

Quintiles: Based on counts, approximately equal numbers of people in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: January 2015, Replaced June 2022.

Data Notes:

- This indicator used 2016 Census data from the long-form Census and replaced 2011 data from the National Household Survey.
- Recent immigrants are immigrants who landed in Canada between January 1, 2011, and May 10, 2016. Immigrant refers to a person who is or has ever been a landed immigrant/ permanent resident. This person has been granted the right to live in Canada permanently by immigration authorities. Some immigrants have resided in Canada for many years, while others have arrived recently. Some immigrants are Canadian citizens, while others are not. Most immigrants are born outside Canada, but a small number are born in Canada.

Non-English speakers

Description: The percentage of the population who cannot speak English well enough to hold a conversation.

Impact on Health: Complex, higher percentages could be better or worse for health.

- Ability to speak English may impact a person's ability to access information and healthcare services.
- Higher percentages are shown on maps in dark red.
- Higher and lower than Durham Region and Ontario shown in blue.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{population\ who\ speak\ French\ only + population\ who\ speak\ neither\ English\ nor\ French}{total\ population}\ X\ 100$$

- Total population: Total-knowledge of official languages of the population in private households—25% sample data.

Quintiles: Based on counts, approximately equal numbers of people in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: June 2022.

Data Notes:

- This included children who have not yet learned to speak, if the language the child is learning to speak at home is a language other than English.

Home language not English

Description: Percentage of the population that speak a language other than English most often at home.

Impact on Health: Complex, higher percentages could be better or worse for health.

- If a person speaks a language other than English at home, it may indicate they are more comfortable speaking a language other than English. This may impact their ability to access information and health care services if these services are not available in their home-language.
- Higher percentages are shown on maps in dark red.
- Higher and lower than Durham Region and Ontario shown in blue.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{population\ that\ speak\ (French + non-official\ language + French\ and\ non-official\ language)}{total\ population}\ X\ 100$$

- Total population: Total-Language spoken most often at home for the population in private households—25% sample data.

Quintiles: Based on counts, approximately equal numbers of people in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: June 2022.

Data Notes:

- A person can report more than one language as the most often language spoken at home if the languages are spoken equally often. For a person who lives alone, this is the language they feel most comfortable speaking. For a child who has not learned how to speak, it is the language spoken most often to the child at home.

Socio-economic status

Median income

Description: The median after-tax household income for 2015 income.

Impact on Health: Higher incomes are better for health.

- Lower values are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in green, lower in red.

Data Sources:

- 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Quintiles: Based on medians, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: January 2015, replaced June 2022.

Data Notes:

- This indicator used 2016 Census data from the short-form Census and replaced 2011 data from the National Household Survey.
- The after-tax income refers to total 2015 income from all sources minus federal, provincial and territorial income taxes paid for 2015. The median is the household income that splits the higher half of all the income values from the lower half.
- The Canadian Council on Social Development's Community Data Program (CDP) supplied Neighbourhood-level data through a custom geography request. Median income data from the custom geography files provided by the CDP differ from what is reported by Statistics Canada, as the CDP data is based on the 25% Census sample (long-form census), whereas the data usually reported by Statistics Canada is based on the 100% Census sample (short-form census).

Low income

Definition: The percentage of people who live in low-income households as determined by the 2015 low-income measure after-tax (LIM-AT).

Impact on Health: Higher percentages are worse for health.

- Higher percentages are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{population\ in\ low\ income\ households}{total\ population}\ X\ 100$$

- Total population: Total-Low-income status in 2015 for the population in private households to whom low-income concepts are applicable—25% sample data.

Quintiles: Based on counts, approximately equal numbers of people in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: January 2015, replaced June 2022.

Data Notes:

- This indicator used 2016 Census data from the long-form Census and replaced 2011 data from the National Household Survey.
- For this measure, the income used is after-tax income of households, which refers to the 2015 income from all sources minus federal, provincial and territorial income taxes paid for 2015.
- The low-income measure after tax (LIM-AT) is a fixed percentage (50%) of median adjusted after-tax income of households observed at the person level, where 'adjusted' indicates that a household's needs are taken into account. Adjustment for household sizes reflects the fact that a household's needs increase as the number of members increase, although not necessarily by the same proportion per additional member. The LIMs derivation begins by calculating the 'adjusted household income' for each household by dividing household income by the square root of the number of persons in the household, otherwise known as the 'equivalence scale.' This adjusted household income is assigned to each individual in the private household, and the median of the adjusted household income (where half of all individuals will be above it and half below) is determined over the population. The LIM for a household of one person is 50% of this median, and the LIMs for other sizes of households are equal to this value multiplied by their equivalence scale.

Children in low-income households

Description: The percentage of children under the age of 6 years who live in low-income households as determined by the 2015 low-income measure after-tax (LIM-AT).

Impact on Health: Higher percentages are worse for health.

- Higher percentages are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{number\ aged\ 0\ to\ 5\ years\ in\ low\ income\ households}{total\ population}\ X\ 100$$

- Total population: Total-Low-income status in 2015 for the population in private households to whom low-income concepts are applicable—25% sample data.

Quintiles: Based on counts, approximately equal numbers of people in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: January 2015, replaced June 2022.

Data Notes:

- This indicator used 2016 Census data from the long-form Census and replaced 2011 data from the National Household Survey.
- For this measure, the income used is after-tax income of households, which refers to the 2015 income from all sources minus federal, provincial and territorial income taxes paid for 2015.
- The low-income measure after tax (LIM-AT) is a fixed percentage (50%) of median adjusted after-tax income of households observed at the person level, where 'adjusted' indicates that a household's needs are taken into account. Adjustment for household sizes reflects the fact that a household's needs increase as the number of members increase, although not necessarily by the same proportion per additional member. The LIMs derivation begins by calculating the 'adjusted household income' for each household by dividing household income by the square root of the number of persons in the household, otherwise known as the 'equivalence scale.' This adjusted household income is assigned to each individual in the private household, and the median of the adjusted household income (where half of all individuals will be above it and half below) is determined over the population. The LIM for a household of one person is 50% of this median, and the LIMs for other sizes of households are equal to this value multiplied by their equivalence scale.

Seniors in low-income households

Description: The percentage of seniors aged 65 and older who live in low-income households as determined by the 2015 low-income measure after-tax (LIM-AT).

Impact on Health: Higher percentages are worse for health.

- Higher percentages are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{number\ aged\ 65\ years\ and\ older\ in\ low\ income\ households}{total\ population}\ X\ 100$$

- Total population: Total-Low-income status in 2015 for the population in private households to whom low-income concepts are applicable—25% sample data.

Quintiles: Based on counts, approximately equal numbers of people in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: June 2022.

Data Notes:

- For this measure, the income used is after-tax income of households, which refers to the 2015 income from all sources minus federal, provincial and territorial income taxes paid for 2015.
- The low-income measure after tax (LIM-AT) is a fixed percentage (50%) of median adjusted after-tax income of households observed at the person level, where 'adjusted' indicates that a household's needs are taken into account. Adjustment for household sizes reflects the fact that a household's needs increase as the number of members increase, although not necessarily by the same proportion per additional member. The LIMs derivation begins by calculating the 'adjusted household income' for each household by dividing household income by the square root of the number of persons in the household, otherwise known as the 'equivalence scale.' This adjusted household income is assigned to each individual in the private household, and the median of the adjusted household income (where half of all individuals will be above it and half below) is determined over the population. The LIM for a household of one person is 50% of this median, and the LIMs for other sizes of households are equal to this value multiplied by their equivalence scale.

Postsecondary education

Description: The percentage of adults aged 25-64 years who have received a postsecondary education.

Impact on Health: Higher percentages are better or health.

- Lower percentages are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in green, lower in red.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{number\ with\ a\ postsecondary\ certificate, diploma\ or\ degree, ages\ 25\ to\ 64}{total\ population\ aged\ 25\ to\ 64}\ X\ 100$$

- Total population: Total- Major field of study: Classification of Instructional Programs (CIP) 2016 for the population aged 25 to 64 years in private households—25% sample data.

Quintiles: Based on counts, approximately equal numbers of people in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: June 2022.

Data Notes:

- The number with postsecondary education corresponds to the number of adults 25 to 64 years of age who have successfully completed a postsecondary certificate, diploma or degree. This was based on the highest certificate, diploma or degree awarded.
- Postsecondary education was classified based on the highest level of education a person had successfully completed. The highest level was used to measure educational attainment as someone who has completed one type of certificate, diploma or degree will not necessarily have completed the credentials listed below it in the hierarchy. For example, a person with a trades certificate may not have completed a high school certificate or diploma.
- This indicator was limited to those aged 25-64 years because those less than 25 may still be in school and those older than 64 tend to have lower levels of education because of fewer educational opportunities available to this cohort. Restricting the age groups allows better comparisons between Neighbourhoods that have different age structures.

Unemployment

Description: The percentage aged 15 and older who were unemployed.

Impact on Health: Higher percentages are worse for health.

- Higher percentages are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{number\ unemployed}{total\ population\ aged\ 15\ years\ and\ over}\ X\ 100$$

- Total population: Total- Population aged 15 years and over in the labour force—25% sample data.

Quintiles: Based on counts, approximately equal numbers of people in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: January 2015, updated June 2022.

Data Notes:

- This indicator used 2016 Census data from the long-form Census and replaced 2011 data from the National Household Survey.
- Unemployment applies to those persons aged 15+ years who, during the week of Sunday, May 1 to Saturday, May 7, 2016, were without paid work or without self-employment work and were available for work and either: (a) had actively looked for paid work in the past four weeks; or (b) were on temporary lay-off and expected to return to their job; or (c) had definite arrangements to start a new job in four weeks or less.

Housing

Movers

Description: The percentage of the population aged one year or older that moved their place of residence in the past year.

Impact on Health: Complex, higher percentages can be better or worse for health.

- Lower percentages could be better for health if it reflects greater stability. However, higher percentages could be better for health if it is better for housing and opportunity, and worse if people cannot find adequate housing.
- Higher percentages are shown on maps in dark red.
- Higher and lower than Durham Region and Ontario shown in blue.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{number\ who\ moved\ in\ the\ last\ year}{total\ population}\ X\ 100$$

- Total population: Total-Mobility status 1 year ago—25% sample data.

Quintiles: Based on counts, approximately equal numbers of people in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: February 2016, replaced June 2022.

Data Notes:

- This indicator used 2016 Census data from the long-form Census and replaced 2011 data from the National Household Survey.
- Mobility refers to the status of a person with regard to the place of residence on the reference day, May 10, 2016, in relation to the place of residence on the same date one year earlier. Persons who have moved from one residence to another are referred to as movers. Movers include non-migrants (persons who did move but remained in the same city, town, township, village, or Indian Reserve), and migrants (persons who moved to a different city, town, township, village or Indian Reserve from within or outside of Canada).

Renters

Description: The percentage of households that rent.

Impact on Health: No impact.

- The quality and affordability of housing is most important, rather than whether a dwelling is rented or owned.
- Higher percentages are shown on maps in dark red.
- Higher and lower than Durham Region and Ontario shown in blue.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{number\ of\ households\ that\ rent}{total\ population\ of\ private\ households}\ X\ 100$$

- Total population: Total-Private households by tenure—25% sample data.

Quintiles: Based on counts, approximately equal numbers of households in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: February 2016, replaced June 2022.

Data Notes:

- This indicator used 2016 Census data from the long-form Census and replaced 2011 data from the National Household Survey.

Shelter costs

Description: The percentage of households that have shelter costs that are 30% or more of their total household income.

Impact on Health: Higher percentages are worse for health.

- Higher percentages are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{number\ of\ households\ that\ spend\ 30\%\ or\ more\ of\ income\ on\ shelter\ costs}{total\ population\ of\ private\ households}\ X\ 100$$

- Total population: Total-Owner and tenant households with household total income greater than zero, in non-farm, non-reserve private dwellings by shelter-cost-to-income ratio—25% sample data.

Quintiles: Based on counts, approximately equal numbers of households in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: February 2016, replaced June 2022.

Data Notes:

- This indicator used 2016 Census data from the long-form Census and replaced 2011 data from the National Household Survey.
- Shelter costs include rent/mortgage payments, utilities (e.g., heating, water, electricity), and insurance costs. The share of household income spent on shelter costs is known as the shelter-cost-to-income ratio; a threshold of 30 per cent is accepted as the upper limit for defining affordable housing in Canada.

Not suitable housing

Description: The percentage of households without suitable housing (i.e., housing smaller than what the family needs).

Impact on Health: Higher percentages are worse for health.

- Higher percentages are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{number\ of\ households\ without\ suitable\ housing}{total\ population\ of\ private\ households}\ X\ 100$$

- Total population: Total-Private households by housing suitability—25% sample data.

Quintiles: Based on counts, approximately equal numbers of households in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: February 2016, replaced June 2022.

Data Notes:

- This indicator used 2016 Census data from the long-form Census and replaced 2011 data from the National Household Survey.
- Not suitable housing refers to households that do not have the required number of bedrooms as measured by the National Occupancy Standard, based on the age, sex, and relationships among household members.

Major dwelling repairs

Description: The percentage of households with major repairs needed to the dwelling.

Impact on Health: Higher percentages are worse for health.

- Higher percentages are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator and denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{number\ of\ dwellings\ that\ require\ major\ repairs}{total\ population\ of\ occupied\ private\ dwellings}\ X\ 100$$

- Total population: Total-Occupied private dwellings by dwelling condition—25% sample data.

Quintiles: Based on counts, approximately equal numbers of households in each quintile.

Neighbourhood Assignment: The CDP supplied Neighbourhood-level data through a custom geography request. Dissemination area was used to determine Neighbourhood.

Release: February 2016, replaced June 2022.

Data Notes:

- This indicator used 2016 Census data from the long-form Census and replaced 2011 data from the National Household Survey.
- Dwellings in need of major repairs, includes dwellings with defective plumbing or electrical wiring and those needing structural repairs to walls, floors, or ceilings.

Child Health Indicators

Births

Live birth rate

Description: The annual number of live births per 1,000 population.

Impact on Health: No impact.

- Higher rates are shown on maps in dark red.
- Higher and lower than Durham Region and Ontario shown in blue.

Data Sources:

- Numerator: Public Health Unit Analytic Reporting Tool (Cube) and Public Health Reports 2016-2018, BORN Information System, BORN Ontario.
- Denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{number\ of\ live\ births}{total\ population}\ X\ 1{,}000$$

Quintiles: Based on counts, approximately equal numbers of births in each quintile.

Neighbourhood Assignment: Dissemination area was used to determine Neighbourhood.

Release: January 2015, replaced June 2022.

Data Notes:

- The live birth rate is also known as the crude birth rate. It includes the number of live births based on the mother's place of residence, not where the birth occurred. Births with postal codes that were missing or could not be coded to a neighbourhood were excluded.
- This indicator used 2016 birth data from BORN and replaced 2011 hospital in-patient discharge data.
- Population counts from the 2016 Census differed from the Statistics Canada 2016 estimates that are commonly used by the Health Department. As a result, counts and rates for Durham Region and the municipalities may vary from those presented in other Health Department reports.

Teen pregnancy rate

Description: The number of live births, stillbirths and therapeutic abortions among females aged 15 to 19 years per 1,000 population of females in that age group.

Impact on Health: Higher rates and increases are worse for health.

- Higher rates and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator:
    - Birth data: Public Health Unit Analytic Reporting Tool (Cube) and Public Health Reports 2010-2012, 2015-2017, BORN Information System, BORN Ontario.
    - Therapeutic abortion data: Hospital In-Patient Discharges, National Ambulatory Care Reporting System & Medical Services 2010-2012, 2015-2017, Ministry of Health, IntelliHealth ONTARIO.
- Denominator: 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{number\ of\ live\ births + number\ of\ stillbirths + number\ of\ therapeutic\ abortions\ among\ mothers\ aged\ 15\ to\ 19\ years}{total\ population,\ females\ aged\ 15\ to\ 19\ \ years} X\ 1{,}000$$

Quintiles: Based on counts, approximately equal numbers of teen pregnancies in each quintile.

Neighbourhood Assignment: Dissemination area (DA) was used to determine Neighbourhood.

- DA was based on the mother's residence and missing DAs or those that could not be coded to a Neighbourhood were excluded.

Release: January 2015, replaced June 2022.

Data Notes:

- The number of live births and stillbirths were determined by counting the number of births and stillbirths reported by BORN, which captures births that occurred at a hospital or at home.
- Therapeutic abortions included those occurring in hospitals, clinics and private physician offices, which were determined by combining hospital and medical services (OHIP) data.

Births to young mothers

Description: The percentage of deliveries that are among young mothers aged 23 years or younger.

Impact on Health: Higher percentages and increases are worse for health.

- Higher percentages and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator and denominator: Public Health Unit Analytic Reporting Tool (Cube) and Public Health Reports 2013-2015 and 2016-2018, BORN Information System, BORN Ontario.

Method of Calculation:

$$\frac{number\ of\ deliveries\ to\ mothers\ aged\ 23\ years\ or\ younger}{total\ number\ of\ deliveries}\ X\ 100$$

Quintiles: Based on counts, approximately equal numbers of deliveries in each quintile.

Neighbourhood Assignment: Dissemination area (DA) was used to determine Neighbourhood.

- DA was based on the mother's residence and missing DAs or those that could not be coded to a Neighbourhood were excluded.

Release: February 2016, replaced June 2022.

Data Notes:

- This indicator used 2013-2018 delivery data from BORN and replaced 2010-2014 hospital in-patient discharge data.
- Deliveries include both live births and stillbirths. A multiple birth was counted as one delivery.

Births to older mothers

Description: The percentage of deliveries that are among mothers aged 35 years or older.

Impact on Health: Complex, higher percentages and increases could be better or worse for health.

- An older mother is associated with increased health risks for mother and baby. However, some health outcomes may be more positive for older mothers as they tend to have higher education levels and be more finically secure.
- Higher percentages and increases are shown on maps in dark red.
- Higher and lower than Durham Region and Ontario shown in blue.

Data Sources:

- Numerator and denominator: Public Health Unit Analytic Reporting Tool (Cube) and Public Health Reports 2013-2015 and 2016-2018, BORN Information System, BORN Ontario.

Method of Calculation:

$$\frac{number\ of\ deliveries\ to\ mothers\ aged\ 35\ years\ or\ older}{total\ number\ of\ deliveries}\ X\ 100$$

Quintiles: Based on counts, approximately equal numbers of deliveries in each quintile.

Neighbourhood Assignment: Dissemination area (DA) was used to determine Neighbourhood.

- DA was based on the mother's residence and missing DAs or those that could not be coded to a Neighbourhood were excluded.

Release: February 2016, replaced June 2022.

Data Notes:

- This indicator used 2013-2018 delivery data from BORN and replaced 2010-2014 hospital in-patient discharge data.
- Deliveries include both live births and stillbirths. A multiple birth was counted as one delivery.

Preterm births

Description: The percentage of live births delivered before 37 completed weeks of gestation.

Impact on Health: Higher percentages and increases are worse for health.

- Higher percentages and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator and denominator: Public Health Unit Analytic Reporting Tool (Cube) and Public Health Reports 2013-2015 and 2016-2018, BORN Information System, BORN Ontario.

Method of Calculation:

$$\frac{number\ of\ live\ births\ delivered\ before\ 37\ completed\ weeks\ of\ gestation}{total\ number\ of\ live\ births}\ X\ 100$$

Quintiles: Based on counts, approximately equal numbers of preterm births in each quintile.

Neighbourhood Assignment: Dissemination area (DA) was used to determine Neighbourhood.

- DA was based on the mother's residence and missing DAs or those that could not be coded to a Neighbourhood were excluded.

Release: Updated December 2017, replaced June 2022.

Data Notes:

- Pregnancy lasts about 40 weeks. A preterm or premature birth occurs more than three weeks before the baby's estimated due date and is at higher risk of complications.
- This indicator used 2013-2018 BORN live birth delivery data and replaced 2010-2015 hospital in-patient discharge data. Previously, this indicator excluded multiple births, as they are at high risk of prematurity and have different risk factors than preterm singleton births. However, as the Ontario-level premature birth indicator from BORN includes multiple births, calculation of this indicator at the Neighbourhoods levels has been updated to reflect this difference.

Small-for-gestational age (SGA)

Description: The percentage of singleton live births that have a birth weight below the standard 10th percentile of the sex-specific birth weight for gestational age.

Impact on Health: Higher percentages and increases are worse for health.

- Higher percentages and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator and denominator: Public Health Unit Analytic Reporting Tool (Cube) and Public Health Reports 2013-2015 and 2016-2018, BORN Information System, BORN Ontario.

Method of Calculation:

$$\frac{number\ of\ live\ singleton\ SGA\ births}{total\ number\ of\ live\ singleton\ births}\ X\ 100$$

Quintiles: Based on counts, approximately equal numbers of SGA births in each quintile.

Neighbourhood Assignment: Dissemination area (DA) was used to determine Neighbourhood.

- DA was based on the mother's residence and missing DAs or those that could not be coded to a Neighbourhood were excluded.

Release: Updated December 2017, replaced June 2022.

Data Notes:

- Since most low birth weight babies are preterm, it is important to consider how far along the pregnancy is when the baby was born. SGA measures birth weight relative to gestational age. For example, a boy born at 39 weeks weighing less than 2,942g (6.5 lbs.) would be SGA. SGA percentages include only singleton live births of male and female newborns with gestational age 22-43 weeks. The reference percentile tables for Canadian babies are based on Kramer, 2001. These percentile cut-offs may misclassify healthy infants of some ethnicities as

SGA because newborns of parents originating from non-European/ Western nations tend to be smaller at birth.

- This indicator used 2013-2018 BORN live birth delivery data and replaced 2010-2015 hospital in-patient discharge data.

Large-for-gestational age (LGA)

Description: The percentage of singleton live births with birth weight above the standard 90th percentile of the sex-specific birth weight for gestational age.

Impact on Health: Higher percentages and increases are worse for health.

- Higher percentages and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator and denominator: Public Health Unit Analytic Reporting Tool (Cube) and Public Health Reports 2013-2015 and 2016-2018, BORN Information System, BORN Ontario.

Method of Calculation:

$$\frac{number\ of\ live\ singleton\ LGA\ births}{total\ number\ of\ live\ singleton\ births}\ X\ 100$$

Quintiles: Based on counts, approximately equal numbers of LGA births in each quintile.

Neighbourhood Assignment: Dissemination area (DA) was used to determine Neighbourhood.

- DA was based on the mother's residence and missing DAs or those that could not be coded to a Neighbourhood were excluded.

Release: Updated December 2017, replaced June 2022.

Data Notes:

- Birth weight must be examined within the context of how far along the pregnancy is when the baby was born. LGA measures the birth weight of a baby relative to their gestational age. For example, a girl born at 40 weeks weighing more than 4,034g (8.9 lbs.) would be considered LGA. LGA percentages include only singleton live births of male and female newborns with gestational age 22-43 weeks. The reference percentile tables for Canadian babies are based on Kramer, 2001.
- This indicator used 2013-2018 BORN live birth delivery data and replaced 2010-2015 hospital in-patient discharge data.

Adverse Childhood Events (ACE)-like risk factors

Maternal mental illness

Description: The percentage of newborns born to a mother with a history of anxiety, depression or mental illness identified by the HBHC screening tool.

Impact on Health: higher percentages and increases are worse for health.

- Higher percentages and increases are shown on maps in dark red.
- Higher than Durham Region shown in red, lower in green.

Data Sources:

- Numerator and denominator: Healthy Babies Healthy Children (HBHC) Screening, Integrated Services for Children Information System (ISCIS) 2013-2015 and 2016-2018, Ministry of Children and Youth Services.

Method of Calculation:

$$\frac{number\ of\ newborns\ born\ to\ a\ mother\ with\ a\ history\ of\ mental\ illness}{total\ number\ of\ newborns} X100$$

- Total number of newborns: number of newborns screened using the HBHC screening tool
- Hospital births for which consent was not obtained and midwife-attended home births are excluded

Quintiles: Based on counts, approximately equal numbers of newborns in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on the mother's residence, not where the baby was born.
- Missing postal codes or those that could not be coded to a Neighbourhood were excluded.

Release: June 2022.

Data Notes:

- The HBHC postpartum screen targets all live births that occur in a hospital. Newborns, for which the parent consents for further follow-up, are screened by hospital nurses within the first 48 hours after birth.
- The prevalence may be inflated compared to the actual prevalence in the population as hospital nurses may be more likely to say yes to HBHC screening questions to ensure patients are not missed to follow up.

Maternal smoking or substance use

Description: The percentage of newborns born to a mother who smoked cigarettes or used alcohol or drugs during pregnancy identified with the HBHC screening tool.

Impact on Health: higher percentages and increases are worse for health.

- Higher percentages and increases are shown on maps in dark red.
- Higher than Durham Region shown in red, lower in green.

Data Sources:

- Numerator and denominator: Healthy Babies Healthy Children (HBHC) Screening, Integrated Services for Children Information System (ISCIS) 2013-2015 and 2016-2018, Ministry of Children and Youth Services.

Method of Calculation:

$$\frac{number\ of\ newborns\ born\ to\ a\ mother\ who\ smoked\ or\ used\ alcohol\ or\ drugs\ during\ pregnancy}{total\ number\ of\ newborns} X100$$

- Total number of newborns: number of newborns screened using the HBHC screening tool
- Midwife-attended home births are excluded

Quintiles: Based on counts, approximately equal numbers of newborns in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on the mother's residence, not where the baby was born.
- Missing postal codes or those that could not be coded to a Neighbourhood were excluded.

Release: June 2022.

Data Notes:

- Drug use included all illicit and recreational drugs as well as prescription medications that affect daily living or are teratogenic, in other words, drugs that can negatively affect fetus development.
- The HBHC postpartum screen targets all live births that occur in a hospital. Newborns, for which the parent consents for further follow-up, are screened by hospital nurses within the first 48 hours after birth.
- The prevalence may be inflated compared to the actual prevalence in the population as hospital nurses may be more likely to say yes to HBHC screening questions to ensure patients are not missed to follow up.

One or more ACE-like risk factors

Description: The percentage of newborns with one or more ACE-like risk factors based on the HBHC screening tool.

Impact on Health: Higher percentages and increases are worse for health.

- Higher percentages and increases are shown on maps in dark red.
- Higher than Durham Region shown in red, lower in green.

Data Sources:

- Numerator and denominator: Healthy Babies Healthy Children (HBHC) Screening, Integrated Services for Children Information System (ISCIS) 2013-2015 and 2016-2018, Ministry of Children and Youth Services.

Method of Calculation:

$$\frac{number\ of\ newborns\ with\ one\ or\ more\ ACE-like\ risk\ factors}{total\ number\ of\ newborns} X100$$

- Total number of newborns: number of newborns screened using the HBHC screening tool
- Midwife-attended home births are excluded

Quintiles: Based on counts, approximately equal numbers of newborns in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on the mother's residence, not where the baby was born.
- Missing postal codes or those that could not be coded to a Neighbourhood were excluded.

Release: June 2022.

Data Notes:

- The seven ACE-like risk factors are: maternal alcohol use during pregnancy, maternal drug use during pregnancy, maternal smoking during pregnancy, maternal history of depression, anxiety or other mental illness, involvement with child protective services, no support person for parenting, and relationship with parenting partner strained.
- The HBHC postpartum screen targets all live births that occur in a hospital. Newborns, for which the parent consents for further follow-up, are screened by hospital nurses within the first 48 hours after birth.
- The prevalence may be inflated compared to the actual prevalence in the population as hospital nurses may be more likely to say yes to HBHC screening questions to ensure patients are not missed to follow-up.

Breastfeeding

Early breastfeeding

Description: The percentage of newborns fed breastmilk (either exclusively or with breastmilk substitute) at the time the baby was discharged from hospital or birth centre or three days post-partum for home births.

Impact on Health: Higher percentages are better for health.

- Lower percentages are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in green, lower in red.

Data Sources:

- Numerator and denominator: Public Health Unit Analytic Reporting Tool (Cube) and Public Health Reports, 2014-2017 BORN Information System, BORN Ontario.

Method of Calculation:

$$\frac{number\ of\ newborns\ breastfed}{total\ number\ of\ newborns\ discharged}\ X\ 100$$

- Total number discharged included homebirths, three days post-partum.

Quintiles: Based on percentages, approximately 10 Neighbourhoods in each quintile.

Neighbourhood Assignment: Dissemination area (DA) was used to determine Neighbourhood.

- DA was based on the mother's residence, missing DAs or those that could not be coded to a Neighbourhood were excluded.

Release: June 2022.

Data Notes:

- This indicator combines the number of newborns receiving only breastmilk (exclusive breastfeeding) as well as breastmilk used in combination with a substitute (formula). Feeding status was determined by care provider upon discharge or by midwife three days after the home birth.
- Missing data where breastfeeding status or dissemination area was unknown were excluded. Missing data ranged by Health Neighbourhood from 1.3 to 13.9 per cent and were highest in Pickering and Ajax where results should be interpreted with more caution.

Early exclusive breastfeeding

Description: The percentage of newborns fed breastmilk exclusively by the time the baby was discharged from hospital or birth centre or three days post-partum for home births.

Impact on Health: Higher percentages are better for health.

- Lower percentages are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in green, lower in red.

Data Sources:

- Numerator and denominator: Public Health Unit Analytic Reporting Tool (Cube) and Public Health Reports, 2014-2017 BORN Information System, BORN Ontario.

Method of Calculation:

$$\frac{number\ of\ newborns\ exclusively\ breastfed}{total\ number\ of\ newborns\ discharged}\ X\ 100$$

- Total number discharged included homebirths, three days post-partum.

Quintiles: Based on percentages, approximately 10 Neighbourhoods in each quintile.

Neighbourhood Assignment: Dissemination area (DA) was used to determine Neighbourhood.

- DA was based on the mother's residence, missing DAs or those that could not be coded to a Neighbourhood were excluded.

Release: June 2022.

Data Notes:

- This indicator counts the number of newborns receiving only breastmilk (exclusive breastfeeding). Feeding status was determined by care provider upon discharge or by midwife three days after the home birth.
- Missing data where breastfeeding status or dissemination area was unknown were excluded. Missing data ranged by Health Neighbourhood from 1.3 to 13.9 per cent and were highest in Pickering and Ajax where results should be interpreted with more caution.

Breastfeeding for 6 months or more

Description: The percentage of mothers who breastfed their babies for at least 6 months, based on women who completed the telephone survey as part of the Infant Feeding Surveillance System.

Impact on Health: Higher percentages and increases are better for health.

- Lower percentages and decreases are shown on maps in dark red.
- Higher than Durham Region shown in green, lower in red.

Data Sources:

- Numerator and denominator: Durham Region Infant Feeding Surveillance System (IFSS), 2007 to 2012 and 2013 to 2017, Durham Region Health Department.

Method of Calculation:

$$\frac{number\ of\ mothers\ who\ breastfed\ their\ babies\ for\ at\ least\ 6\ months}{total\ number\ of\ mothers\ who\ completed\ the\ IFSS\ telephone\ survey}\ X\ 100$$

Quintiles: Based on percentages, approximately 10 Neighbourhoods in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on the mother's residence, missing postal codes or those that could not be matched to a Neighbourhood were excluded.

Release: March 2019, Updated June 2022.

Data Notes:

- This indicator reflects the combined percentage of mothers providing either breastmilk only (exclusive breastfeeding) or breastmilk and breastmilk substitute (formula) six months following delivery. This does not account for any formula the infant may have received prior to discharge. Breastfeeding status was determined through a telephone survey of mothers conducted by public health staff six to seven months after the birth of their baby.
- Six and five years of data were grouped to obtain sufficient sample size at the neighbourhood level. Because the IFSS oversamples teen mothers, the data were weighted accordingly to reflect the distribution of teen and adult mothers in the population.

Well-baby visits

18-month well-baby visit

Description: The percentage of two-year old children who visited a health care provider for an enhanced 18-month well-baby visit in a two-year period.

Impact on Health: Higher percentages and increases are better for health.

- Lower percentages and decreases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in green, lower in red.

Data Sources:

- Numerator: Medical Services Data 2010/12 and 2013/15, Ministry of Health, IntelliHealth ONTARIO.
- Denominator: Ontario Registered Persons Database, March 31, 2013 and March 31, 2015, Ministry of Health, IntelliHealth ONTARIO.

Method of Calculation:

$$\frac{number\ of\ children\ who\ had\ an\ enhanced\ 18-month\ well-baby\ visit}{total\ number\ of\ children\ aged\ two\ years}\ X\ 100$$

Quintiles: Based on counts, approximately equal numbers of well-baby visits in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on the mother's residence, missing postal codes or those that could not be matched to a Neighbourhood were excluded.

Release: Updated December 2016.

Data Notes:

- The Enhanced 18-month Well-Baby Visit is a provincial government strategy to support standardized developmental review and evaluations at 18-months for each child in Ontario. It is the last regularly scheduled visit with a doctor or nurse practitioner before the child enters school and an opportunity to see how well a child is developing and reaching key milestones.
- Well-baby visits are determined using fee codes A002 for family physicians and A268 for paediatricians. We estimated the number of two-year old children from the Ontario Registered Persons database through the Ministry of Health. The provincial government introduced the fee schedule codes in October 2009. The billing requirement to claim this increased fee is the documentation of a discussion of the child's development using screening tools completed by the parent/caregiver and the physician.
- An important limitation of the data is that since not all health care providers submit for remuneration, visit rates may be underestimated. We did not capture well-baby visits done by community health centres in this data.

School readiness

Vulnerable in physical health and well-being

Description: The percentage of senior kindergarten children who scored below the 10th percentile of the Ontario Cycle 1 baseline for physical health and well-being.

Impact on Health: Higher percentages and increases are worse for health.

- Higher percentages and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator and denominator: Early Development Instrument (EDI), Durham Region, Cycle 3 2012, Cycle 4 2015 & Cycle 5 2018.

Method of Calculation:

$$\frac{number\ of\ vulnerable\ SK\ children}{total\ number\ of\ SK\ children\ that\ had\ an\ EDI\ completed\ by\ their\ teacher}\ X\ 100$$

- Children with special needs and those who had been in a class for less than one month at the time of the survey were excluded.
- Statistical significance was assessed using critical difference, as this method is more precise than using 95 per cent confidence intervals.

Quintiles: Based on counts, approximately equal numbers of vulnerable children in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- For students in the southern municipalities, postal code was based on the child's residence, not the school where the EDI screening was completed.
- For students in the northern municipalities, postal code was based on the postal code of the school the child attended. If the student attended a school outside of the northern municipalities, or Durham Region, the Neighbourhood which was closest to the school and within a northern municipality was assigned.
- Missing postal codes or those that could not be matched to a Neighbourhood were excluded.

Release: March 2013, updated June 2022.

Data Notes:

- Physical health includes gross and fine motor skills (e.g., holding a pencil, running on the playground), motor coordination, and having adequate energy levels for classroom activities.
- Teachers complete the EDI for all students, except for children with special needs and those who had been in a class for less than one month at the time of the survey.

Vulnerable in social competence

Description: The percentage of senior kindergarten children who scored below the 10th percentile of the Ontario Cycle 1 baseline for social competence.

Impact on Health: Higher percentages and increases are worse for health.

- Higher percentages and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator and denominator: Early Development Instrument (EDI), Durham Region, Cycle 3 2012, Cycle 4 2015 & Cycle 5 2018.

Method of Calculation:

$$\frac{number\ of\ vulnerable\ SK\ children}{total\ number\ of\ SK\ children\ that\ had\ an\ EDI\ completed\ by\ their\ teacher}\ X\ 100$$

- Children with special needs and those who had been in a class for less than one month at the time of the survey were excluded.
- Statistical significance was assessed using critical difference, as this method is more precise than using 95 per cent confidence intervals.

Quintiles: Based on counts, approximately equal numbers of vulnerable children in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- For students in the southern municipalities, postal code was based on the child's residence, not the school where the EDI screening was completed.
- For students in the northern municipalities, postal code was based on the postal code of the school the child attended. If the student attended a school outside of the northern municipalities, or Durham Region, the Neighbourhood which was closest to the school and within a northern municipality was assigned.
- Missing postal codes or those that could not be matched to a Neighbourhood were excluded.

Release: March 2013, updated June 2022.

Data Notes:

- Social competence includes curiosity about the world, eagerness to try new experiences, knowledge of standard acceptable behaviour in a public place, the ability to control own behaviour, cooperation with others, following rules, and the ability to play and work with other children.
- Teachers complete the EDI for all students, except for children with special needs and those who had been in a class for less than one month at the time of the survey.

Vulnerable in emotional maturity

Description: The percentage of senior kindergarten children who scored below the 10th percentile of the Ontario Cycle 1 baseline for emotional maturity.

Impact on Health: Higher percentages and increases are worse for health.

- Higher percentages and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator and denominator: Early Development Instrument (EDI), Durham Region, Cycle 3 2012, Cycle 4 2015 & Cycle 5 2018.

Method of Calculation:

$$\frac{number\ of\ vulnerable\ SK\ children}{total\ number\ of\ SK\ children\ that\ had\ an\ EDI\ completed\ by\ their\ teacher}\ X\ 100$$

- Children with special needs and those who had been in a class for less than one month at the time of the survey were excluded.
- Statistical significance was assessed using critical difference, as this method is more precise than using 95 per cent confidence intervals.

Quintiles: Based on counts, approximately equal numbers of vulnerable children in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- For students in the southern municipalities, postal code was based on the child's residence, not the school where the EDI screening was completed.
- For students in the northern municipalities, postal code was based on the postal code of the school the child attended. If the student attended a school outside of the northern municipalities, or Durham Region, the Neighbourhood which was closest to the school and within a northern municipality was assigned.
- Missing postal codes or those that could not be matched to a Neighbourhood were excluded.

Release: March 2013, updated June 2022.

Data Notes:

- Emotional maturity includes the ability to reflect before acting, display a balance between too fearful and too impulsive, deal with feelings at an age-appropriate level, and have an empathetic response to other people's feelings.
- Teachers complete the EDI for all students, except for children with special needs and those who had been in a class for less than one month at the time of the survey.

Vulnerable in language and cognitive development

Description: The percentage of senior kindergarten children who scored below the 10th percentile of the Ontario Cycle 1 baseline for language and cognitive development.

Impact on Health: Higher percentages and increases are worse for health.

- Higher percentages and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator and denominator: Early Development Instrument (EDI), Durham Region, Cycle 3 2012, Cycle 4 2015 & Cycle 5 2018.

Method of Calculation:

$$\frac{number\ of\ vulnerable\ SK\ children}{total\ number\ of\ SK\ children\ that\ had\ an\ EDI\ completed\ by\ their\ teacher}\ X\ 100$$

- Children with special needs and those who had been in a class for less than one month at the time of the survey were excluded.
- Statistical significance was assessed using critical difference, as this method is more precise than using 95 per cent confidence intervals.

Quintiles: Based on counts, approximately equal numbers of vulnerable children in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- For students in the southern municipalities, postal code was based on the child's residence, not the school where the EDI screening was completed.
- For students in the northern municipalities, postal code was based on the postal code of the school the child attended. If the student attended a school outside of the northern municipalities, or Durham Region, the Neighbourhood which was closest to the school and within a northern municipality was assigned.
- Missing postal codes or those that could not be matched to a Neighbourhood were excluded.

Release: March 2013, updated June 2022.

Data Notes:

- Language and cognitive development includes reading awareness, age appropriate reading, writing and numeracy skills, and the ability to play board games, understand similarities and differences and to recite back specific pieces of information from memory.
- Teachers complete the EDI for all students, except for children with special needs and those who had been in a class for less than one month at the time of the survey.

Vulnerable in communication skills and general knowledge

Description: The percentage of senior kindergarten children who scored below the 10th percentile of the Ontario Cycle 1 baseline for communication skills and general knowledge.

Impact on Health: Higher percentages and increases are worse for health.

- Higher percentages and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator and denominator: Early Development Instrument (EDI), Durham Region, Cycle 3 2012, Cycle 4 2015 & Cycle 5 2018.

Method of Calculation:

$$\frac{number\ of\ vulnerable\ SK\ children}{total\ number\ of\ SK\ children\ that\ had\ an\ EDI\ completed\ by\ their\ teacher}\ X\ 100$$

- Children with special needs and those who had been in a class for less than one month at the time of the survey were excluded.
- Statistical significance was assessed using critical difference, as this method is more precise than using 95 per cent confidence intervals.

Quintiles: Based on counts, approximately equal numbers of vulnerable children in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- For students in the southern municipalities, postal code was based on the child's residence, not the school where the EDI screening was completed.
- For students in the northern municipalities, postal code was based on the postal code of the school the child attended. If the student attended a school outside of the northern municipalities, or Durham Region, the Neighbourhood which was closest to the school and within a northern municipality was assigned.
- Missing postal codes or those that could not be matched to a Neighbourhood were excluded.

Release: March 2013, updated June 2022.

Data Notes:

- Communication skills and general knowledge includes skills to communicate needs and wants in socially appropriate ways, symbolic use of language, story-telling, and age appropriate knowledge about life and the world around.
- Teachers complete the EDI for all students, except for children with special needs and those who had been in a class for less than one month at the time of the survey.

Vulnerable in one or more EDI domains

Description: The percentage of senior kindergarten children who scored below the 10th percentile of the Ontario Cycle 1 baseline for one or more EDI domains. This is an overall measure of the percentage of vulnerable children.

Impact on Health: Higher percentages and increases are worse for health.

- Higher percentages and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator and denominator: Early Development Instrument (EDI), Durham Region, Cycle 3 2012, Cycle 4 2015 & Cycle 5 2018.

Method of Calculation:

$$\frac{number\ of\ vulnerable\ SK\ children}{total\ number\ of\ SK\ children\ that\ had\ an\ EDI\ completed\ by\ their\ teacher}\ X\ 100$$

- Children with special needs and those who had been in a class for less than one month at the time of the survey were excluded.
- Statistical significance was assessed using critical difference, as this method is more precise than using 95 per cent confidence intervals.

Quintiles: Based on counts, approximately equal numbers of vulnerable children in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- For students in the southern municipalities, postal code was based on the child's residence, not the school where the EDI screening was completed.
- For students in the northern municipalities, postal code was based on the postal code of the school the child attended. If the student attended a school outside of the northern municipalities, or Durham Region, the Neighbourhood which was closest to the school and within a northern municipality was assigned.
- Missing postal codes or those that could not be matched to a Neighbourhood were excluded.

Release: March 2013, updated June 2022.

Data Notes:

- The five EDI domains are: physical health and well-being, social competence, emotional maturity, language and cognitive development, and communication skills and general knowledge.
- Teachers complete the EDI for all students, except for children with special needs and those who had been in a class for less than one month at the time of the survey.

General Health Indicators

Health & longevity

Self-rated health

Description: The percentage of adults aged 18 years or older who rate their health as excellent or very good.

Impact on Health: Higher percentages and increases are better for health.

- Lower percentages and decreases are shown on maps in dark red.
- Higher than Durham Region shown in green, lower in red.

Data Sources:

- Numerator and denominator: Durham data – Rapid Risk Factor Surveillance System (RRFSS), Durham Region Health Department and Institute for Social Research, York University, 2009-2018.

Method of Calculation:

$$\frac{number\ who\ rate\ their\ health\ as\ excellent + number\ who\ rate\ their\ health\ as\ very\ good}{Durham\ Region\ adults\ aged\ 18\ years\ and\ older} X\ 100$$

- Respondents were asked to rate their health as excellent, very good, good, fair or poor. The excellent and very good categories were combined for analysis.

- Durham Region adults includes all adults who completed the RRFSS telephone survey.
- Analysis was completed using survey software and household weights were applied.

Quintiles: Based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Missing postal codes or those that could not be matched to a Neighbourhood were excluded.

Release: October 2019.

Data Notes:

- Five years of RRFSS data were combined to provide a large enough sample for analysis at the Neighbourhood level.

Life expectancy in males

Description: How many years a newborn boy is likely to live based on the current mortality rate.

Impact on Health: Higher values and increases are better for health.

- Lower percentages and decreases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in green, lower in red.

Data Sources:

- Numerator: Mortality Data, 2009-2013 and 2014-2018, Ontario Ministry of Health, IntelliHealth ONTARIO.
- Denominator: 2011 and 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

- Population counts and the number of deaths by 5 year age groups were used to calculate the average number of years a newborn is expected to live if current mortality rates continue to apply.
- The Chiang II method of calculation was used, as recommended for small geographical areas by the Office for National Statistics in the United Kingdom.
- Non-Ontario residents who died in Ontario were excluded from the Ontario-level analysis.

Quintiles: Based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on the individual's residence at time of death.

- Missing postal codes or those that could not be matched to a Neighbourhood were excluded.

Release: January 2015, updated June 2022.

Data Notes:

- Life expectancy at birth is an overall measure of the health status of the population.
- The 2011 and 2016 Census population was used to calculate mortality rates for the two time periods. For Neighbourhoods with high population growth, mortality rates will be underestimated for the earlier years, causing life expectancy to be overestimated. For consistency with the Neighbourhood data, the same method using only Census population counts was used for Durham Region and Ontario, even though more accurate population estimates are available for each year.

Life expectancy in females

Description: How many years a newborn girl is likely to live based on the current mortality rate.

Impact on Health: Higher values and increases are better for health.

- Lower percentages and decreases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in green, lower in red.

Data Sources:

- Numerator: Mortality Data, 2009-2013 and 2014-2018, Ontario Ministry of Health, IntelliHealth ONTARIO.
- Denominator: 2011 and 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

- Population counts and the number of deaths by 5 year age groups were used to calculate the average number of years a newborn is expected to live if current mortality rates continue to apply.
- The Chiang II method of calculation was used, as recommended for small geographical areas by the Office for National Statistics in the United Kingdom.
- Non-Ontario residents who died in Ontario were excluded from the Ontario-level analysis.

Quintiles: Based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on the individual's residence at time of death.
- Missing postal codes or those that could not be matched to a Neighbourhood were excluded.

Release: January 2015, updated June 2022.

Data Notes:

- Life expectancy at birth is an overall measure of population health status.
- The 2011 and 2016 Census population was used to calculate mortality rates for the two time periods. For Neighbourhoods with high population growth, mortality rates will be underestimated for the earlier years, causing life expectancy to be overestimated. For consistency with the Neighbourhood data, the same method using only Census population counts was used for Durham Region and Ontario, even though more accurate population estimates are available for each year.

Premature mortality

Premature mortality in males

Description: The number of premature deaths in males aged 0 to 74, per 10,000 males in that age group.

Impact on Health: Higher rates are worse for health.

- Higher rates are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Ontario Registrar General Data (ORGD) 2012-2016, Institute for Clinical Evaluative Services (ICES).
- Denominator: Registered Persons Database (RPDB) 2012-2016, Institute for Clinical Evaluative Services (ICES).
- Standard population: 2011 Canadian Census, Statistics Canada.
- Reference: Institute for Clinical Evaluative Sciences (ICES). Neighbourhoods-Update, Applied Health Research Questions (AHRQ) 2019 0900 784 001.

Method of Calculation:

- Age-standardized premature mortality rates were calculated by ICES and provided to the Health Department through an Applied Health Research Question Request.
- The rate was directly age-standardized using the 2011 Canadian census population.

Quintiles: Based on premature mortality rates, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Dissemination area (DA) was used to determine Neighbourhood.

Release: June 2022.

Data Notes:

- Premature deaths are those before the age of 75.

Premature mortality in females

Description: The number of premature deaths in females aged 0 to 74, per 10,000 males in that age group.

Impact on Health: Higher rates are worse for health.

- Higher rates are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Ontario Registrar General Data (ORGD) 2012-2016, Institute for Clinical Evaluative Services (ICES).
- Denominator: Registered Persons Database (RPDB) 2012-2016, Institute for Clinical Evaluative Services (ICES).
- Standard population: 2011 Canadian Census, Statistics Canada.
- Reference: Institute for Clinical Evaluative Sciences (ICES). Neighbourhoods-Update, Applied Health Research Questions (AHRQ) 2019 0900 784 001.

Method of Calculation:

- Age-standardized premature mortality rates were calculated by ICES and provided to the Health Department through an Applied Health Research Question Request.
- The rate was directly age-standardized using the 2011 Canadian census population.

Quintiles: Based on premature mortality rates, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Dissemination area (DA) was used to determine Neighbourhood.

Release: June 2022.

Data Notes:

- Premature deaths are those before the age of 75.

Mental health & additions (MHA)

Self-rated mental health

Description: The percentage of adults aged 18 years or older who rate their mental health as excellent or very good.

Impact on Health: Higher percentages are better for health.

- Lower percentages are shown on maps in dark red.

- Higher than Durham Region and Ontario shown in green, lower in red.

Data Sources:

- Numerator and denominator: Durham data – Rapid Risk Factor Surveillance System (RRFSS), Durham Region Health Department and Institute for Social Research, York University, 2014-2018.

Method of Calculation:

$$\frac{number\ who\ rate\ their\ mental\ health\ as\ excellent + number\ who\ rate\ their\ mental\ health\ as\ very\ good}{Durham\ Region\ adults\ aged\ 18\ years\ and\ older} X\ 100$$

- Respondents were asked to rate their mental health as excellent, very good, good, fair or poor. The excellent and very good categories were combined for analysis.
- Durham Region adults includes all adults who completed the RRFSS telephone survey.
- Analysis was completed using survey software and household weights were applied.

Quintiles: Based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

Release: October 2019.

Data Notes:

- Five years of RRFSS data were combined to provide a large enough sample for analysis at the Neighbourhood level.

Mental health and addictions (MHA) doctor visits, ages 0 to 24

Description: The number of doctor visits for MHA for children and youth aged 0 to 24 years, per 100 children and youth. The rate was directly standardized by age and sex using the 2006 Ontario Census population.

Impact on Health: Complex, higher rates and increases can be better or worse for health.

- Higher rates and increases may be better for health if they are because of decreased stigma and increased access to healthcare. However, increases may be worse for health if they reflect increases in the incidence or severity of mental illness and addictions in the community.
- This indicator is best interpreted in conjunction with the MHA Emergency Department (ED) visit rate indicator.
- Higher rates and increases are shown on maps in dark red.
- Higher and lower than Durham Region and Ontario shown in blue.

Data Sources:

- Numerator: Ontario Health Insurance Plan (OHIP) 2013 and 2016, Institute for Clinical Evaluative Services (ICES).
- Denominator: Registered Persons Database (RPDB) 2013 and 2016, Institute for Clinical Evaluative Services (ICES).
- Standard population: 2006 Ontario Census, Statistics Canada.
- Reference: Institute for Clinical Evaluative Sciences (ICES). Neighbourhoods-Update, Applied Health Research Questions (AHRQ) 2019 0900 784 001.

Method of Calculation:

- Age-Sex standardized MHA doctor visit rates were calculated by ICES and provided to the Health Department through an Applied Health Research Question Request.
- The rate was directly age-sex standardized using the 2006 Ontario Census population.

Quintiles: Based on doctor visit rates, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Dissemination area (DA) was used to determine Neighbourhood.

Release: June 2022.

Data Notes:

- Doctor's office visits (outpatient physician visits) include scheduled visits to family doctors, pediatricians and psychiatrists. This includes visits for substance-related disorders, sleep disorders, behaviour disorders, sexual deviations, delays in development, family problems and issues with social adjustment.
- The eligible population (denominator) was from the RPDB and included Ontario residents eligible for OHIP in the last quarter of 2013 or 2016 and the date of last contact was less than 8 years.

Mental health and addictions (MHA) emergency department (ED) visits, ages 0 to 24

Description: The number of ED visits for MHA for children and youth aged 0 to 24 years, per 100 children and youth. The rate was directly standardized by age and sex using the 2006 Ontario Census population.

Impact on Health: Higher rates and increases are worse for health.

- Higher rates and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Ontario Health Insurance Plan (OHIP) 2013 and 2016, Institute for Clinical Evaluative Services (ICES).

- Denominator: Registered Persons Database (RPDB) 2013 and 2016, Institute for Clinical Evaluative Services (ICES).
- Standard population: 2006 Ontario Census, Statistics Canada.
- Reference: Institute for Clinical Evaluative Sciences (ICES). Neighbourhoods-Update, Applied Health Research Questions (AHRQ) 2019 0900 784 001.

Method of Calculation:

- Age-Sex standardized MHA ED visit rates were calculated by ICES and provided to the Health Department through an Applied Health Research Question Request.
- The rate was directly age-sex standardized using the 2006 Ontario Census population.

Quintiles: Based on ED visit rates, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Dissemination area (DA) was used to determine Neighbourhood.

Release: June 2022.

Data Notes:

- ED visits for MHA includes visits for substance-related disorders, schizophrenia and other psychotic disorders, mood disorders and anxiety disorders.
- The eligible population (denominator) was from the RPDB and included Ontario residents eligible for OHIP in the last quarter of 2013 or 2016 and the date of last contact was less than 8 years.

Chronic diseases

Asthma emergency visits in children

Description: The number of Emergency Department (ED) visits for asthma among children aged 0 to 14 years, per 1,000 children.

Impact on Health: Higher rates and increases are worse for health.

- Higher rates and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Emergency Department (ED) Visits, 2010-2012 and 2015-2017, Ministry of Health, IntelliHealth ONTARIO.
- Denominator: 2011 and 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{number\ of\ ED\ visits\ for\ asthma, ages\ 0\ to\ 14}{total\ population\ aged\ 0\ to\ 14\ years} X1{,}000$$

- Asthma ED visits were defined as those with ICD10-CA code J45.

Quintiles: Based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on patient residence, not the location of the hospital.
- Missing postal codes or those that could not be matched to a Neighbourhood were excluded from analysis.

Release: January 2015, updated June 2022.

Data Notes:

- ED visits for asthma were defined as ED visits where the "main problem" that was deemed to be the clinically significant reason for the ED visit was asthma.

Asthma prevalence in children

Description: The number of children aged 0 to 14 years diagnosed with asthma, per 100 children.

Impact on Health: Higher prevalence and increases are worse for health.

- Higher prevalence and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Ontario Asthma Dataset (ASTHMA) 2013 and 2016, Institute for Clinical Evaluative Services (ICES).
- Denominator: Registered Persons Database (RPD) 2013 and 2016, Institute for Clinical and Evaluative Services (ICES).
- Standard population: 1991 Canadian Census, Statistics Canada.
- Reference: Institute for Clinical Evaluative Sciences (ICES). Neighbourhoods-Update, Applied Health Research Questions (AHRQ) 2019 0900 784 001.

Method of Calculation:

- Age-sex standardized asthma prevalence in children was calculated by ICES and provided to the Health Department through an Applied Health Research Question Request.
- The rate was directly age-sex standardized using the 1991 Canadian Census population.

Quintiles: Based on prevalence, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Dissemination area (DA) was used to determine Neighbourhood.

- Individuals without a valid health card number were excluded from analysis.

Release: February 2016, updated June 2022.

Data Notes:

- A patient is said to have asthma if, within a two-year period, they had at least two OHIP claims with an asthma diagnostic code (OHIP diagnosis code: 493) or a hospital admission for asthma (ICD-9 diagnosis code: 493; ICD-10 diagnosis codes: J45, J46).
- The Asthma Database identifies patients since 1991. For 2013 data, patients with a diagnosis on or before December 31, 2013, and who are alive as of this date are included. For 2016 data, patients with a diagnosis on or before December 31, 2016, and who are alive as of this date are included. Prevalence counts those living with the disease at a point in time.

Diabetes prevalence

Description: The number of people aged 20 years and older who have been diagnosed with diabetes, per 100 people in that age group**.**

Impact on Health: Higher prevalence and increases are worse for health.

- Higher prevalence and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Ontario Diabetes Database (ODD) 2013 and 2016, Institute for Clinical Evaluative Services (ICES).
- Denominator: Registered Persons Database (RPD) 2013 and 2016, Institute for Clinical and Evaluative Services (ICES).
- Standard population: 1991 Canadian Census, Statistics Canada.
- Reference: Institute for Clinical Evaluative Sciences (ICES). Neighbourhoods-Update, Applied Health Research Questions (AHRQ) 2019 0900 784 001.

Method of Calculation:

- Age-sex standardized diabetes prevalence in adults, aged 20 years and older, was calculated by ICES and provided to the Health Department through an Applied Health Research Question Request.
- The prevalence was directly age-sex standardized using the 1991 Canadian Census population.

Quintiles: Based on prevalence, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Dissemination area (DA) was used to assign Neighbourhood.

- Individuals without a valid health card number were excluded from analysis.

Release: February 2016, updated June 2022.

Data Notes:

- A patient is said to have diabetes if, within a two-year period, they had a least two Ontario Health Insurance Plan (OHIP) claims with a diabetes diagnostic code or one selected diabetes-related OHIP service claim (OHIP diagnosis code: 250), or a hospital admission for diabetes (ICD-9 diagnosis code: 250; ICD-10 diagnosis codes: E10, E11, E13, E14).
- The ODD identifies patients since 1991. For 2013 data, patients with a diagnosis on or before December 31, 2013 and who are alive as of this date are included. For 2016 data, patients with a diagnosis on or before December 31, 2016 and who are alive as of this date are included. Prevalence counts those living with the disease at a point in time.

Diabetes incidence

Description: The rate of new cases of diabetes diagnosed in people aged 20 years and older, per 1,000 people in that age group.

Impact on Health: Higher rates and increases are worse for health.

- Higher rates and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Ontario Diabetes Database (ODD) 2013 and 2016, Institute for Clinical Evaluative Services (ICES).
- Denominator: Registered Persons Database (RPD) 2013 and 2016, Institute for Clinical and Evaluative Services (ICES).
- Standard population: 1991 Canadian Census, Statistics Canada.
- Reference: Institute for Clinical Evaluative Sciences (ICES). Neighbourhoods-Update, Applied Health Research Questions (AHRQ) 2019 0900 784 001.

Method of Calculation:

- Age-sex standardized diabetes incidence rates in adults, aged 20 years and older, was calculated by ICES and provided to the Health Department through an Applied Health Research Question Request.
- The rate was directly age-sex standardized using the 1991 Canadian Census population.

Quintiles: Based on rate, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Dissemination area (DA) was used to assign Neighbourhood.

- Individuals without a valid health card number were excluded from analysis.

Release: February 2016, updated June 2022.

Data Notes:

- A patient is said to have diabetes if, within a two-year period, they had a least two OHIP physician billing claims with a diagnosis for diabetes (OHIP diagnosis code: 250), or one inpatient hospitalization or same day surgery record with a diagnosis for diabetes (ICD-9 diagnosis code: 250; ICD-10 diagnosis codes: E10, E11, E13, E14).
- Physician claims and hospitalizations with a diagnosis of diabetes occurring within 120 prior to and 180 days after a gestational hospitalization record were excluded.

The ODD identifies patients since 1991. For 2013 data, patients with a diagnosis on or before December 31, 2013, and who are alive as of this date are included. For 2016 data, patients with a diagnosis on or before December 31, 2016, and who are alive as of this date are included.

Hypertension prevalence

Description: The prevalence of hypertension (high blood pressure) in adults aged 20 years and older, per 100 adults in that age group.

Impact on Health: Higher prevalence and increases are worse for health.

- Higher prevalence and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Ontario Hypertension Dataset (HYPER) 2013 and 2016, Institute for Clinical Evaluative Services (ICES).
- Denominator: Registered Persons Database (RPD) 2013 and 2016, Institute for Clinical and Evaluative Services (ICES).
- Standard population: 1991 Canadian Census, Statistics Canada.
- Reference: Institute for Clinical Evaluative Sciences (ICES). Neighbourhoods-Update, Applied Health Research Questions (AHRQ) 2019 0900 784 001.

Method of Calculation:

- Age-sex standardized hypertension prevalence in adults, aged 20 years and older, was calculated by ICES and provided to the Health Department through an Applied Health Research Question Request.
- The rate was directly age-sex standardized using the 1991 Canadian Census population.

Quintiles: Based on prevalence, approximately equal numbers of Neighbourhoods in each quintile.

- Individuals without a valid health card number were excluded from analysis.

Neighbourhood Assignment: Dissemination area (DA) was used to determine Neighbourhood.

Release: June 2022.

Data Notes:

- An individual was said to have high blood pressure if they had at least two or more physician billing claims with a diagnosis of hypertension (OHIP diagnosis codes: 401-405) and/or one or more inpatient hospitalization or same day surgery with a diagnosis of hypertension (ICD-9 diagnosis codes: 401-405; ICD-10 diagnosis codes: I10-I13, I15) in a two-year period.
- Physician claims and hospitalizations with a diagnosis of hypertension occurring within 120 prior to and 180 days after a gestational hospitalization are excluded.
- For 2013 data, patients with a diagnosis on or before December 31, 2013, and who are alive as of this date are included. For 2016 data, patients with a diagnosis on or before December 31, 2016, and who are alive as of this date are included. Prevalence counts those living with the disease at a point in time.

Lung disease (COPD) prevalence

Description: The number of people aged 35+ years diagnosed with chronic obstructive pulmonary disease (COPD), per 100 people in that age group.

Impact on Health: Higher prevalence and increases are worse for health.

- Higher prevalence and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Ontario Chronic Obstructive Pulmonary Disease Dataset (COPD) 2013 and 2016, Institute for Clinical Evaluative Services (ICES).
- Denominator: Registered Persons Database (RPD) 2013 and 2016, Institute for Clinical and Evaluative Services (ICES).
- Standard population: 1991 Canadian Census, Statistics Canada.
- Reference: Institute for Clinical Evaluative Sciences (ICES). Neighbourhoods-Update, Applied Health Research Questions (AHRQ) 2019 0900 784 001.

Method of Calculation:

- Age-sex standardized COPD prevalence in adults, aged 35 years and older, was calculated by ICES and provided to the Health Department through an Applied Health Research Question Request.
- The rate was directly age-sex standardized using the 1991 Canadian Census population.

Quintiles: Based on prevalence, approximately equal numbers of Neighbourhoods in each quintile.

- Individuals without a valid health card number were excluded from analysis.

Neighbourhood Assignment: Dissemination area (DA) was used to determine Neighbourhood.

Release: February 2016, updated June 2022.

Data Notes:

- A patient was said to have COPD if they had at least one health care intervention specific to COPD. This includes inpatient hospitalizations or same day surgeries with a COPD diagnosis record (ICD-9 diagnosis codes: 491, 492, 496; ICD-10 diagnosis codes: J41-J44) or a physician billing claim for COPD (OHIP diagnosis codes: 491, 492, 496).
- The COPD Dataset identifies patients since 1991. For 2013 data, patients with a diagnosis on or before December 31, 2013, and who are alive as of this date are included. For 2016 data, patients with a diagnosis on or before December 31, 2016, and who are alive as of this date are included. Prevalence counts those living with the disease at a point in time.

Cardiovascular disease hospitalization

Description: The rate of hospital discharges for cardiovascular disease (CVD) among people aged 45 to 65 years, per 1,000 people in that age group.

Impact on Health: Higher rates and increases are worse for health.

- Higher rates and increases are shown on maps in dark red.

Data Sources:

- Numerator: Hospital In-Patient Discharges, 2010-2012 and 2015-2017, Ministry of Health, IntelliHealth ONTARIO.
- Denominator: 2011 and 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{total\ number\ of\ hospital\ discharges\ for\ CVD, ages\ 45\ to\ 65}{total\ population, ages\ 45\ to\ 65} X1{,}000$$

- CVD was defined as in-patient hospitalization separations with the "most responsible diagnosis" coded by the hospital as ICD10-CA code I00-I99.

Quintiles: Based on counts, approximately equal numbers of hospitalizations in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on patient residence, not the location of the hospital.
- Missing postal codes or those that could not be matched to a Neighbourhood were excluded from analysis.

Release: January 2015, updated June 2022.

Data Notes:

- CVD includes heart disease, stroke, and hypertensive disease.
- Separations are discharges, deaths, or transfers from hospital.

Obesity

Description: The percentage of adults aged 18 years or older who are obese based on a Body Mass Index (BMI) of 30 or greater.

Impact on Health: Higher percentages and increases are worse for health.

- Higher percentages and increases are shown on maps in dark red.
- Higher than Durham Region shown in red, lower in green.

Data Sources:

- Numerator and denominator: Durham data – Rapid Risk Factor Surveillance System (RRFSS), Durham Region Health Department and Institute for Social Research, York University, 2009-2013 and 2014-2018.

Method of Calculation:

$$\frac{number\ of\ adults\ with\ a\ BMI\ of\ 30\ or\ greater}{Durham\ Region\ adults\ aged\ 18\ years\ and\ older} X100$$

- Respondents were asked to report their weight and height, and their BMI was calculated.
- Durham Region adults includes all adults who completed the RRFSS telephone survey.
- Analysis was completed using survey software and household weights were applied.

Quintiles: Based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

Release: October 2019.

Data Notes:

- The Body Mass Index (BMI) is a ratio of weight-to-height. It is not a direct measure of body fat but an indicator of health risk associated with being underweight or overweight. BMI can be classified into ranges associated with health risk. There are four BMI categories in the Canadian weight classification system: underweight (less than 18.5), normal weight (18.5 to 24.9), overweight (25.0 to 29.9) and obese (30 and over).
- Five years of RRFSS data were combined to provide a large enough sample for analysis at the Neighbourhood level.

Infectious diseases

Chlamydia in young females

Description: The rate of new cases of chlamydia reported in young females aged 15 to 24 years, per 1,000 young females.

Impact on Health: Higher rates and increases are worse for health.

- Higher rates and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Ontario Ministry of Health, integrated Public Health Information System (iPHIS) database, 2010-2012 and 2015-2017, extracted by Durham Region Health Department.
- Denominator: 2011 and 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{total\ number\ of\ new\ cases\ of\ chlamydia, females\ ages\ 15\ to\ 24}{total\ female\ population, ages\ 15\ to\ 24} X 1{,}000$$

Quintiles: Based on counts, approximately equal numbers of cases in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on patient residence.
- Cases without a valid postal code or one that could not be matched to a Neighbourhood were excluded from analysis.

Release: January 2015, updated June 2022.

Data Notes:

- Chlamydia is a sexually transmitted infection.
- A higher incidence rate may reflect a higher rate of infection but may also be an indication that more cases are being detected and treated. As a reportable infectious disease, physicians, hospitals and laboratories must report cases to the local Medical Officer of Health. Notification is usually through confirmed laboratory results. There is under-reporting of cases because an infected person with mild or no clinical symptoms may not seek medical care and/or laboratory testing may not be performed

Enteric diseases

Description: The rate of new cases of enteric diseases reported per 100,000 people.

Impact on Health: Higher rates and increases are worse for health.

- Higher rates and increases are shown on maps in dark red.

- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Ontario Ministry of Health, integrated Public Health Information System (iPHIS) database, 2010-2012 and 2015-2017, extracted by Durham Region Health Department.
- Denominator: 2011 and 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{total\ number\ of\ new\ cases\ of\ enteric\ diseases}{total\ population} X100{,}000$$

Quintiles: Based on counts, approximately equal numbers of cases in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on patient residence.
- Cases without a valid postal code or one that could not be matched to a Neighbourhood were excluded from analysis.

Release: January 2015, updated June 2022.

Data Notes:

- Enteric diseases affect the stomach and intestines. The reportable enteric diseases captured in this indicator include: amebiasis, botulism, brucellosis, campylobacter enteritis, cholera, cryptosporidiosis, cyclosporiasis, food poisoning (all causes), giardiasis, hepatitis A, listeriosis, paratyphoid fever, salmonellosis, shigellosis, trichinosis, typhoid fever, verotoxin-producing Escherichia coli (VTEC) infection, and yersiniosis.
- A higher incidence rate may reflect a higher rate of infection but may also be an indication that more cases are being detected and treated. Physicians, hospitals, and laboratories must report cases of these reportable diseases to the local Medical Officer of Health. Notification is usually through confirmed laboratory results. There is under-reporting of cases because an infected person with mild or no clinical symptoms may not seek medical care and/or laboratory testing may not be performed.

Hepatitis C

Description: The rate of new cases of hepatitis C infections reported per 100,000 people.

Impact on Health: Higher rates and increases are worse for health.

- Higher rates and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Ontario Ministry of Health, integrated Public Health Information System (iPHIS) database, 2009-2013 and 2014-2018, extracted by Durham Region Health Department.
- Denominator: 2011 and 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{total\ number\ of\ new\ cases\ of\ hepatitis\ C}{total\ population} X100{,}000$$

Quintiles: Based on counts, approximately equal numbers of cases in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on patient residence.
- Cases without a valid postal code or one that could not be matched to a Neighbourhood were excluded from analysis.

Release: January 2015, updated June 2022.

Data Notes:

- Hepatitis C is a liver disease caused by the hepatitis C virus.
- Hepatitis C infections are typically underestimated because they can be asymptomatic. A higher incidence rate may reflect a higher rate of infection but may also be an indication that more cases are being detected and treated. As a reportable infectious disease, physicians, hospitals and laboratories must report cases to the local Medical Officer of Health. Notification is usually through confirmed laboratory results. Under-reporting occurs because an infected person with mild or no clinical symptoms may not seek medical care and/or laboratory testing may not be performed.

Tuberculosis

Description: The rate of new cases of latent tuberculosis infection (LTBI) reported, per 100,000 people.

Impact on Health: Higher rates and increases are worse for health.

- Higher rates and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Ontario Ministry of Health, integrated Public Health Information System (iPHIS) database, 2009-2013 and 2014-2018, extracted by Durham Region Health Department.

- Denominator: 2011 and 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{total\ number\ of\ new\ cases\ of\ LTBI}{total\ population} X100{,}000$$

Quintiles: Based on counts, approximately equal numbers of cases in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on patient residence.
- Cases without a valid postal code or one that could not be matched to a Neighbourhood were excluded from analysis.

Release: January 2015, updated June 2022.

Data Notes:

- Tuberculosis (TB) is a bacterial disease present in two forms: 1) active TB, and 2) latent or inactive TB infection. LTBI cases are mainly asymptomatic and are non-infectious. A higher incidence rate may reflect a higher rate of infection but may also be an indication that more cases are being detected and treated.
- As a reportable infectious disease, physicians, hospitals, and laboratories must report cases of LTBI to the local Medical Officer of Health. Notification is usually through confirmed laboratory results. There is under-reporting of cases because an infected person with mild or no clinical symptoms may not seek medical care and/or laboratory testing may not be performed.

Injury

Sports injuries, ages 10 to 14

Description: The number of Emergency Department (ED) visits for sports injuries among youth aged 10 to 14 years, per 1,000 youth.

Impact on Health: Higher rates and increases are worse for health.

- Higher rates and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Emergency Department (ED) Visits, 2010-2012 and 2015-2017, Ministry of Health, IntelliHealth ONTARIO.
- Denominator: 2011 and 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{total\ number\ of\ ED\ visits\ for\ sports\ injuries, ages\ 10\ to\ 14}{total\ population, ages\ 10\ to\ 14} X1{,}000$$

- Sports injuries are defined as those with ICD-10-CA external cause codes W02, W21, W22 (.00-.07) and W51 (.00-.07).

Quintiles: Based on counts, approximately equal numbers of ED visits in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on patient residence, not the location of the hospital where the ED visit occurred.
- ED visits without a valid postal code or one that could not be matched to a Neighbourhood were excluded from analysis.

Release: January 2015, updated June 2022.

Data Notes:

- This includes ED visits where the "main problem" that is deemed to be the clinically significant reason for the visit was an injury.
- Sports injuries include falls involving skates, skis, skateboards and rollerblades, and injuries as a result of being struck by sports equipment (i.e., balls, bat, hockey stick or puck) or while playing (i.e., skiing, tobogganing, hockey, soccer, baseball).

Assault, ages 10 to 14

Description: The number of Emergency Department (ED) visits for intentional injuries (not self-inflected) among youth aged 10 to 24 years, per 1,000 youth.

Impact on Health: Higher rates and increases are worse for health.

- Higher rates and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Emergency Department (ED) Visits, 2010-2012 and 2015-2017, Ministry of Health, IntelliHealth ONTARIO.
- Denominator: 2011 and 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{total\ number\ of\ ED\ visits\ for\ intentional\ injuries, ages\ 10\ to\ 14}{total\ population, ages\ 10\ to\ 14} X1{,}000$$

- Intentional injuries are defined as ED visits with ICD-10-CA external cause codes X85-Y09 and Y87.1.

- Self-inflicted intentional injuries (e.g., self-harm and suicide) and injuries with undetermined intent were excluded.

Quintiles: Based on counts, approximately equal numbers of ED visits in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on patient residence, not the location of the hospital where the ED visit occurred.
- ED visits without a valid postal code or one that could not be matched to a Neighbourhood were excluded from analysis.

Release: June 2022.

Data Notes:

- This includes ED visits where the “main problem” that is deemed to be the clinically significant reason for the visit was an injury.
- This includes intentional injuries cause by someone else using chemicals, drugs, physical violence, firearms, other objects (e.g., blunt, sharp, hot), drowning and suffocation, and maltreatment (e.g., neglect, abandonment, mistreatment).

Motor vehicle traffic collisions, ages 15 to 24

Description: The number of Emergency Department (ED) visits among those aged 15 to 24 years for a motor vehicle traffic collision (MVTC) per 1,000 people in that age group.

Impact on Health: Higher rates and increases are worse for health.

- Higher rates and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Emergency Department (ED) Visits, 2010-2012 and 2015-2017, Ministry of Health, IntelliHealth ONTARIO.
- Denominator: 2011 and 2016 Census, Statistics Canada, Canadian Council on Social Development’s Community Data Program.

Method of Calculation:

$$\frac{total\ number\ of\ ED\ visits\ for\ MTVC\ injuries, ages\ 15\ to\ 24}{total\ population, ages\ 15\ to\ 24}\ X\ 1{,}000$$

- MVTC injuries are defined as those with ICD-10-CA external cause codes V02-V04 (.1,.9), V09.2, V12-V14 (.3-.9), V19 (.4-.6), V20-V28 (.3-.9), V29 (.4-.6,.9), V30-V79 (.4-.9 excluding V39.8, V49.8, V59.8, V69.8, V79.8), V80 (.3-.5), V81-V82 (.1), V83-V86 (.0-.3), V87 (.0-.8), and V89.2.
- Non-traffic collisions were excluded.

Quintiles: Based on counts, approximately equal numbers of ED visits in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on patient residence, not the location of the hospital where the ED visit occurred.
- ED visits without a valid postal code or one that could not be matched to a Neighbourhood were excluded from analysis.

Release: January 2015, updated June 2022.

Data Notes:

- This includes ED visits where the "main problem" that is deemed to be the clinically significant reason for the visit was an injury.
- Traffic crashes occur on public streets, roadways or highways involving pedestrians, and/or drivers and passengers of bicycles, motorized tricycles, cars, pick-up trucks or vans, motorcycles, heavy transport vehicles or buses, or other land vehicles such as animal-driven vehicles, railway trains or vehicles, streetcars, all-terrain vehicles, and snowmobiles.

Falls, ages 0 to 4

Description: The number of ED visits for unintentional falls among children aged 4 or younger, per 1,000 children.

Impact on Health: Higher rates and increases are worse for health.

- Higher rates and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Emergency Department (ED) Visits, 2010-2012 and 2015-2017, Ministry of Health, IntelliHealth ONTARIO.
- Denominator: 2011 and 2016 Census, Statistics Canada, Canadian Council on Social Development's Community Data Program.

Method of Calculation:

$$\frac{total\ number\ of\ ED\ visits\ for\ falls, ages\ 0\ to\ 4}{total\ population, ages\ 0\ to\ 4}\ X\ 1{,}000$$

- Falls were defined as ED visits with ICD-10-CA external cause codes W00-W19.
- Intentional falls (self-inflicted and assault) and falls with undetermined intent were excluded.

Quintiles: Based on counts, approximately equal numbers of ED visits in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on patient residence, not the location of the hospital where the ED visit occurred.

- ED visits without a valid postal code or one that could not be matched to a Neighbourhood were excluded from analysis.

Release: January 2015, updated June 2022.

Data Notes:

- This includes ED visits where the “main problem” that is deemed to be the clinically significant reason for the visit was an injury.

Falls, ages 65+

Description: The number of ED visits for unintentional falls among those aged 65 or older, per 1,000 people in that age group.

Impact on Health: Higher rates and increases are worse for health.

- Higher rates and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Emergency Department (ED) Visits, 2010-2012 and 2015-2017, Ministry of Health, IntelliHealth ONTARIO.
- Denominator: 2011 and 2016 Census, Statistics Canada, Canadian Council on Social Development’s Community Data Program.

Method of Calculation:

$$\frac{total\ number\ of\ ED\ visits\ for\ falls, ages\ 65+}{total\ population, ages\ 65+}\ X\ 1{,}000$$

- Falls were defined as ED visits with ICD-10-CA external cause codes W00-W19.
- Intentional falls (self-inflicted and assault) and falls with undetermined intent were excluded.

Quintiles: Based on counts, approximately equal numbers of ED visits in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on patient residence, not the location of the hospital where the ED visit occurred.
- ED visits without a valid postal code or one that could not be matched to a Neighbourhood were excluded from analysis.

Release: January 2015, updated June 2022.

Data Notes:

- This includes ED visits where the “main problem” that is deemed to be the clinically significant reason for the visit was an injury.

Health Behaviours & Risks Indicators

Smoking

Smoking

Description: The percentage of adults aged 18 years or older who smoke occasionally or daily.

Impact on Health: Higher percentages and increases are worse for health.

- Higher percentages and increases are shown on maps in dark red.
- Higher than Durham Region shown in red, lower in green.

Data Sources:

- Numerator and denominator: Durham Region Data 2009-2013 and 2014-2018, Rapid Risk Factor Surveillance System (RRFSS), Durham Region Health Department and Institute for Social Research, York University.

Method of Calculation:

$$\frac{number\ who\ smoke\ cigarettes\ every\ day + number\ who\ smoke\ cigarettes\ some\ days}{Durham\ Region\ adults\ aged\ 18\ years\ and\ older}\ X\ 100$$

- Respondents were asked if they currently smoked cigarettes every day, some days or not at all. Those who smoked every day or smoke days were classified as current smokers.
- Durham Region adults includes all adults who completed the RRFSS telephone survey.
- Analysis was completed using survey software and household weights were applied.

Quintiles: Based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on the respondent's residence. Missing postal codes or those which could not be matched to a Neighbourhood were excluded from analysis.

Release: August 2014, updated June 2022.

Data Notes:

- Five years of RRFSS data were combined to provide a large enough sample for analysis at the Neighbourhood level.

Immunization

School-required immunization rate, ages 7 to 8

Description: The percentage of children aged 7 or 8 fully immunized for the nine infectious diseases named in the Immunization of School Pupils Act (ISPA): diphtheria, tetanus, poliomyelitis, pertussis, meningococcal disease, measles, mumps, rubella, and varicella.

Impact on Health: Higher percentages and increases are better for health.

- Lower percentages and increases are shown on maps in dark red.
- Higher than Durham Region shown in green, lower in red.

Data Sources:

- Numerator and Denominator: Ministry of Health, Digital Health Immunization Repository, extracted by Durham Region Health Department [2019/09/03].

Method of Calculation:

- The Panorama Forecaster tool was used to determine the percentage of children fully immunized against the nine diseases identified by ISPA.
- Fully immunized refers to receiving the recommended number of immunization doses at the appropriate age and sequence specified by the Ontario Immunization Schedule. Children were considered to be fully immunized, or protected against a disease, if they were not overdue for their next dose for any of the ISPA-related immunizations or if they had a medical exemption based on evidence of immunity.

Quintiles: Based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on the student's residence, not the location of the school they attend.
- Missing postal codes or those which could not be matched to a Neighbourhood were excluded from analysis.

Release: August 2017, updated June 2022.

Data Notes:

- For the 2018/19 school year, this corresponds to the cohort born in 2011.
- Ontario's ISPA requires that all primary and secondary students attending school in Ontario provide proof of immunization against the nine ISPA-related diseases, unless they have an exemption. Exemptions may be granted for medical reasons or conscience or religious beliefs. Parents or guardians are required to report their child's immunizations to their local public health unit. Children may not be allowed to attend school if they are not immunized or do not have a valid exemption.

School-required immunization rate, ages 16 to 17

Description: The percentage of children aged 16 or 17 fully immunized for the eight infectious diseases identified in the Immunization of School Pupils Act (ISPA): diphtheria, tetanus, poliomyelitis, pertussis, meningococcal disease, measles, mumps, and rubella.

Impact on Health: Higher percentages and increases are better for health.

- Lower percentages and increases are shown on maps in dark red.
- Higher than Durham Region shown in green, lower in red.

Data Sources:

- Numerator and Denominator: Ministry of Health, Digital Health Immunization Repository, extracted by Durham Region Health Department [2019/09/03].

Method of Calculation:

- The Panorama Forecaster tool was used to determine the percentage of children fully immunized against the eight diseases identified by ISPA.
- Fully immunized refers to receiving the recommended number of immunization doses at the appropriate age and sequence specified by the Ontario Immunization Schedule. Children were considered to be fully immunized, or protected against a disease, if they were not overdue for their next dose for any of the ISPA-related immunizations or if they had a medical exemption based on evidence of immunity.

Quintiles: Based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on the student's residence, not the location of the school they attend.
- Missing postal codes or those which could not be matched to a Neighbourhood were excluded from analysis.

Release: August 2017, updated June 2022.

Data Notes:

- For the 2018/19 school year, this corresponds to the cohort born in 2002.
- Ontario's ISPA requires that all primary and secondary students attending school in Ontario provide proof of immunization against the nine ISPA-related diseases, unless they have an exemption. Exemptions may be granted for medical reasons or conscience or religious beliefs. Parents or guardians are required to report their child's immunizations to their local public health unit. Children may not be allowed to attend school if they are not immunized or do not have a valid exemption.

Meningococcal disease immunization

Description: The percentage of Grade 7 boys and girls (aged 12 or 13) fully immunized against meningococcal disease.

Impact on Health: Higher percentages and increases are better for health.

- Lower percentages and increases are shown on maps in dark red.
- Higher than Durham Region shown in green, lower in red.

Data Sources:

- Numerator and Denominator: Ministry of Health, Digital Health Immunization Repository, extracted by Durham Region Health Department [2019/09/03].

Method of Calculation:

- The Panorama Forecaster tool was used to determine the percentage of children fully immunized against meningococcal disease.
- To be fully immunized, children required one dose of the meningococcal-conjugate-C vaccine no earlier than one year of age and one dose of meningococcal conjugate-ACYW-135 vaccine at age 12 or older, as specified by the Ontario Immunization Schedule. Children were considered fully immunized, or protected against the disease, if they were not due, eligible or overdue for a dose of meningococcal vaccine, or if they had a medical exemption based on evidence of immunity.

Quintiles: Based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on the student's residence, not the location of the school they attend.
- Missing postal codes or those which could not be matched to a Neighbourhood were excluded from analysis.

Release: August 2017, updated June 2022.

Data Notes:

- For the 2018/19 school year, this corresponds to the cohort born in 2006.

Hepatitis B immunization

Description: The percentage of Grade 7 boys and girls (aged 12 or 13) fully immunized against hepatitis B.

Impact on Health: Higher percentages and increases are better for health.

- Lower percentages and increases are shown on maps in dark red.
- Higher than Durham Region shown in green, lower in red.

Data Sources:

- Numerator and Denominator: Ministry of Health, Digital Health Immunization Repository, extracted by Durham Region Health Department [2019/09/03].

Method of Calculation:

- The Panorama Forecaster tool was used to determine the percentage of children fully immunized against hepatitis B.
- To be fully immunized, children required two or three doses of vaccine at the appropriate age and sequence specified by the Ontario Immunization Schedule. Children were considered to be fully immunized, or protected against the disease, if they were not due, eligible, overdue, or up-to-date but not yet due for their next dose, or if they had a medical exemption based on evidence of immunity.

Quintiles: Based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on the student's residence, not the location of the school they attend.
- Missing postal codes or those which could not be matched to a Neighbourhood were excluded from analysis.

Release: August 2017, updated June 2022.

Data Notes:

- For the 2018/19 school year, this corresponds to the cohort born in 2006.

HPV immunization

Description: The percentage of Grade 7 boys and girls (aged 12 or 13) fully immunized against Human Papilloma Virus (HPV).

Impact on Health: Higher percentages and increases are better for health.

- Lower percentages and increases are shown on maps in dark red.
- Higher than Durham Region shown in green, lower in red.

Data Sources:

- Numerator and Denominator: Ministry of Health, Digital Health Immunization Repository, extracted by Durham Region Health Department [2019/09/03].

Method of Calculation:

- The Panorama Forecaster tool was used to determine the percentage of children fully immunized against HPV.
- To be fully immunized, children required two doses of vaccine at the appropriate age and sequence specified by the Ontario Immunization Schedule. Children were considered to be fully immunized, or protected against the disease, if they

were not due, eligible, overdue, or up-to-date but not yet due for their next dose, or if they had a medical exemption based on evidence of immunity.

Quintiles: Based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Postal code was used to determine Neighbourhood.

- Postal code was based on the student's residence, not the location of the school they attend.
- Missing postal codes or those which could not be matched to a Neighbourhood were excluded from analysis.

Release: August 2017, updated June 2022.

Data Notes:

- For the 2018/19 school year, this corresponds to the cohort born in 2006.

Cancer Screening

Breast cancer screening (mammography)

Description: The number of females aged 52 to 74 years with at least one mammogram within a two-year interval, per 100 women in that age group.

Impact on Health: Higher percentages and increases are better for health.

- Lower percentages and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in green, lower in red.

Data Sources:

- Numerator: Ontario Breast Cancer Screening Program (OBSP) & Ontario Health Insurance Plan (OHIP) & Ontario Cancer Registry (OCR) 2013 and 2016, Institute for Clinical Evaluative Sciences (ICES).
- Denominator: Registered Persons Database (RPD) 2013 and 2016, Institute for Clinical and Evaluative Services (ICES).
- Standard population: 2011 Canadian Census, Statistics Canada.
- Reference: Institute for Clinical Evaluative Sciences (ICES). Neighbourhoods-Update, Applied Health Research Questions (AHRQ) 2019 0900 784 001.

Method of Calculation:

- Age standardized breast cancer screening percentages were calculated by ICES and provided to the Health Department through an Applied Health Research Question Request.
- The rate was directly age-sex standardized using the 2011 Canadian Census population.
- Analysis was restricted to Ontario women aged 52-74 as of December 31, 2013 for the 2013 estimate and December 31, 2016 for the 2016 estimate.

- Women were counted as having been screened if they had at least one mammogram in the previous two years as indicated in the OBSP dataset or if there was an OHIP claim with FEECODE X185, X172, X178. Some women may appear in both data sources.
- Women were excluded (from both numerator and denominator) if they had a prior diagnosis of breast cancer in the OCR (ICD-9 code 174).

Quintiles: Based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Dissemination area (DA) was used to determine Neighbourhood.

Release: February 2016, updated June 2022.

Data Notes:

- Although ICES uses slightly different methods for calculating cancer screening rates than the Cancer Quality Council of Ontario (CQCO), such as different index dates, the general information is the similar. See CQCO cancer screening information for more information.

Cervical Cancer Screening

Description: Proportion of eligible women who had Pap tests within the last three years. The number of women aged 21 to 69 years who had Pap tests between April 1, 2021 and March 31, 2024, per 100 women in that age group.

Those who are eligible for Pap tests include women, Two-Spirit, transmasculine or nonbinary people with a cervix who are 21 to 69 years of age. Some people are not included because Pap tests are not recommended, such as those who had a hysterectomy or have previously had cervical cancer. To make comparisons more accurate, percentages are adjusted based on age differences between neighbourhoods.

Impact on Health: Higher percentages are better for health.

Update Date: March 2026.

Data Notes:

- As of March 2025, Pap smear testing has transitioned to Human Papillomavirus (HPV) testing in Ontario. The timeframe of this indicator does not include HPV testing.

Data Sources:

- Numerator: Ontario Health Insurance Plan (OHIP), & Canadian Institute of Health Information - Hospital Discharge Abstract Database (CIHI-DAD), linked using unique, encoded identifiers and analyzed at ICES, Ontario Community Health Profiles Partnership (OCHPP).
- Exclusions: Ontario Cancer Registry (OCR) 2024, Ontario Community Health Profiles Partnership (OCHPP).

- Denominator: Ontario Ministry of Health and Long-Term Care Registered Persons Database (RPD) 2024, Ontario Community Health Profiles Partnership.
- Standard population: 2011 Canadian Census, Statistics Canada.
- Reference: Ontario Community Health Profiles Partnership; www.ontariohealthprofiles.ca; Accessed on: January 21, 2026.

Method of Calculation:

- Age standardized cervical cancer screening percentages were calculated by OCHPP and provided to the Health Department through a partnership agreement.
- For eligible people, screening status was determined within 3-year period (April 1, 2021 – March 31, 2024) defined using:
    - OHIP codes G365, or G394, or E430 or E431, Q678
    - Lab code for Pap smear billing L713, L733, L643 or L812
    - Tracking codes in OHIP – FEECODE Q011 (tracking) or Q678 (nurse practitioner tracking)
- People were excluded due to ineligibility if they had
    - a previous diagnosis of cervical cancer, (during the whole history of OCR), International Classification of Diseases for Oncology, Third Edition (ICD-O-3) codes starting with C53, using the CURR_TOPOG_CD variable from the OCR3.
    - Ever had a hysterectomy.
        - If had a hysterectomy prior to index: OHIP fee codes P042, S710, S727, S758, S759, S762, S763, S765, S766, S767, S810, S816.
        - If OHIP FEECODE Q140 was billed within the last 3 years.
- Additional exclusions included:
    - No health system contact during the last 10 years.
    - Patients without a valid OHIP number.
    - Patients without an Ontario residence.
- Neighbourhoods were assigned using census dissemination areas. The rate was directly age standardized using the 2011 Canadian Census population.
- Quintiles are based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Overdue for colorectal cancer screening

Description: The number of people aged 50-74 years who were overdue for colorectal screening, per 100 people in that age group.

Impact on Health: Higher percentages and increases are worse for health.

- Higher percentages and increases are shown on maps in dark red.
- Higher than Durham Region and Ontario shown in red, lower in green.

Data Sources:

- Numerator: Discharge Abstract Database (DAD) & Ontario Health Insurance Plan (OHIP) & Ontario Cancer Registry (OCR) 2013 and 2016 Institute for Clinical Evaluative Sciences (ICES).
- Denominator: Registered Persons Database (RPD) 2013 and 2016, Institute for Clinical and Evaluative Services (ICES).
- Standard population: 2011 Canadian Census, Statistics Canada.
- Reference: Institute for Clinical Evaluative Sciences (ICES). Neighbourhoods-Update, Applied Health Research Questions (AHRQ) 2019 0900 784 001.

Method of Calculation:

- Age-sex standardized percentages were calculated by ICES and provided to the Health Department through an Applied Health Research Question Request.
- The rate was directly age-sex standardized using the 2011 Canadian Census population.
- Analysis was restricted to Ontarians aged 52-74 as of December 31, 2013 for the 2013 estimate and December 31, 2016 for the 2016 estimate.
- Individuals were counted as overdue for screening if they did not have any of the following: colonoscopy in the last 10 years as determined by OHIP fee codes Z555 and one of E740, E741, E747, E705; fecal occult blood test (FOBT) in the last 2 years as determined by OHIP fee codes L181, G004, L179, Q152, Q043, Q133 or FEESUFF = A or B; other colorectal investigations in the last 5 years as determined by OHIP fee codes Z535 or Z536 (rigid sigmoidoscopy), Z555 (without E740 or E741 or E747 or E705 on the same day) or Z580 (flexible sigmoidoscopy), X112 (single contrast barium enema), or X113 (double contrast barium enema).
- People were excluded (from both numerator and denominator) if they had a previous diagnosis of any colorectal cancer prior in the OCR (ICD-9 codes: 153, 154, except cancer of the appendix code 153.5), or if they were diagnosed with any severe inflammatory bowel disease prior to December 31, 2013 (using DAD, SDS) with ICD-9 codes: starting with 555, 556 or ICD-10 codes starting with K50, K51; colonoscopy in the last 10 years, fecal occult blood test (FOBT) in the last 2 years, or other colorectal investigations in the last 5 years including sigmoidoscopy and barium enema.

Quintiles: Based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Dissemination area (DA) was used to determine Neighbourhood.

Release: February 2016, updated June 2022.

Data Notes:

- Although ICES uses slightly different methods for calculating cancer screening rates than the Cancer Quality Council of Ontario (CQCO), such as different index

dates, the general information is the similar. See CQCO cancer screening information for more information.

Ambulance

Residence ambulance calls

Description: The number of residential ambulance calls, per 100 people.

Impact on Health: Higher rates and increases are worse for health.

- Higher rates and increases are shown on maps in dark red.
- Higher than Durham Region shown in red, lower in green.

Data Sources:

- Numerator: Ambulance Call Report Database and Dispatch Database, Durham Region Paramedic Services, 2012-2014 and 2015-2017.
- Denominator: Registered Persons Database (RPD) 2012-2014 and 2015-2017, Institute for Clinical and Evaluative Services (ICES).
- Reference: Institute for Clinical Evaluative Sciences (ICES). Neighbourhoods-Update, Applied Health Research Questions (AHRQ) 2019 0900 784 001.
- Standard population: 1991 Canadian Census, Statistics Canada.

Method of Calculation:

- The rate of residential ambulance calls was directly age-standardized using the 1991 Canadian Census population.
- Calls to non-residential buildings (e.g., nursing homes, hospitals, medical offices, shopping malls) and scheduled calls, transfers and standbys were excluded.

Quintiles: Based on rates, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Geographic coordinates were used to determine Neighbourhood.

- Ambulance calls were geocoded to the pickup location of the patient, not the patient's address.
- Ambulance calls with missing coordinates or those that could not be coded to a Neighbourhood were excluded from analysis.

Release: February 2016, updated June 2022.

Data Notes:

- Ambulance calls consist of 911 calls resulting in paramedic response to a house, townhouse, apartment, condominium, or farm. All calls where paramedics arrived at a residence are included, regardless if the patient was transported or not.

Residence ambulance calls in seniors

Description: The number of residential ambulance calls among seniors aged 65 years and older, per 100 seniors.

Impact on Health: Higher rates and increases are worse for health.

- Higher rates and increases are shown on maps in dark red.
- Higher than Durham Region shown in red, lower in green.

Data Sources:

- Numerator: Ambulance Call Report Database and Dispatch Database, Durham Region Paramedic Services, 2012-2014 and 2015-2017.
- Denominator: Registered Persons Database (RPD) 2012-2014 and 2015-2017, Institute for Clinical and Evaluative Services (ICES).
- Reference: Institute for Clinical Evaluative Sciences (ICES). Neighbourhoods-Update, Applied Health Research Questions (AHRQ) 2019 0900 784 001.
- Standard population: 1991 Canadian Census, Statistics Canada.

Method of Calculation:

- The rate was directly age-standardized using the 1991 Canadian Census population.
- Calls to non-residential buildings (e.g., nursing homes, hospitals, medical offices, shopping malls) and scheduled calls, transfers and standbys were excluded.

Quintiles: Based on rates, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Geographic coordinates were used to determine Neighbourhood.

- Ambulance calls were geocoded to the pickup location of the patient, not the patient's address.
- Ambulance calls with missing coordinates or those that could not be coded to a Neighbourhood were excluded from analysis.

Release: February 2016, updated June 2022.

Data Notes:

- Ambulance calls consist of 911 calls resulting in paramedic response to a house, townhouse, apartment, condominium, or farm. All calls where paramedics arrived at a residence are included, regardless if the patient was transported or not.

Non-urgent ambulance calls

Description: The percentage of residential ambulance calls that are less urgent or non urgent, based on a Canadian Triage and Acuity Scale (CTAS) level of 4 or 5.

Impact on Health: Higher percentages and increases are worse for health.

- Higher percentages and increases are shown on maps in dark red.
- Higher than Durham Region shown in red, lower in green.

Data Sources:

- Numerator and denominator: Ambulance Call Report Database and Dispatch Database, Durham Region Paramedic Services, 2012-2014 and 2015-2017.

Method of Calculation:

$$\frac{number\ of\ CTAS\ level\ 4\ ambulance\ calls + number\ of\ CTAS\ level\ 5\ ambulance\ calls}{total\ number\ of\ ambulance\ calls}\ X\ 100$$

- Calls to non-residential buildings (e.g., nursing homes, hospitals, medical offices, shopping malls) and scheduled calls, transfers and standbys were excluded.

Quintiles: Based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Geographic coordinates were used to determine Neighbourhood.

- Ambulance calls were geocoded to the pickup location of the patient, not the patient's address.
- Ambulance calls with missing coordinates or those that could not be coded to a Neighbourhood were excluded from analysis.

Release: June 2022.

Data Notes:

- Ambulance calls consist of 911 calls resulting in paramedic response to a house, townhouse, apartment, condominium, or farm. All calls where paramedics arrived at a residence are included, regardless if the patient was transported or not. CTAS helps paramedics determine the urgency of the medical care required, e.g., CTAS level 1 patients have life-threatening needs. A CTAS level of 4 or 5 is given when the patient's condition does not pose any immediate health risk and these patients may be better served by a different health care provider or an alternative destination than the Emergency Department.

Non-urgent ambulance calls in seniors

Description: The percentage of residential ambulance calls among seniors aged 65 years and older, that are less urgent or non urgent, based on a Canadian Triage and Acuity Scale (CTAS) level of 4 or 5.

Impact on Health: Higher percentages and increases are worse for health.

- Higher percentages and increases are shown on maps in dark red.
- Higher than Durham Region shown in red, lower in green.

Data Sources:

- Numerator and denominator: Ambulance Call Report Database and Dispatch Database, Durham Region Paramedic Services, 2012-2014 and 2015-2017.

Method of Calculation:

$$\frac{number\ of\ CTAS\ level\ 4\ ambulance\ calls + number\ of\ CTAS\ level\ 5\ ambulance\ calls, seniors\ ages\ 65+}{total\ number\ of\ ambulance\ calls\ among\ seniors\ aged\ 65+} X\ 100$$

- Calls to non-residential buildings (e.g., nursing homes, hospitals, medical offices, shopping malls) and scheduled calls, transfers and standbys were excluded.

Quintiles: Based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Geographic coordinates were used to determine Neighbourhood.

- Ambulance calls were geocoded to the pickup location of the patient, not the patient's address.
- Ambulance calls with missing coordinates or those that could not be coded to a Neighbourhood were excluded from analysis.

Release: June 2022.

Data Notes:

- Ambulance calls consist of 911 calls resulting in paramedic response to a house, townhouse, apartment, condominium, or farm. All calls where paramedics arrived at a residence are included, regardless if the patient was transported or not. CTAS helps paramedics determine the urgency of the medical care required, e.g., CTAS level 1 patients have life-threatening needs. A CTAS level of 4 or 5 is given when the patient's condition does not pose any immediate health risk and these patients may be better served by a different health care provider or an alternative destination than the Emergency Department.

Police-reported incidents

Domestic incidents

Description: The number police-reported domestic incidents, per 10,000 people.

Impact on Health: Higher rates and increases are worse for health.

- Higher rates and increases are shown on maps in dark red.
- Higher than Durham Region shown in red, lower in green.

Data Sources:

- Numerator: Durham Region Police Service, Durham Region 2012-2014 and 2015-2017, Incident-based Uniform Crime Reporting (UCR) Survey.
- Denominator: Registered Persons Database (RPDB) 2012-2014 and 2015-2017, Institute for Clinical Evaluative Services (ICES).
    - Reference: Institute for Clinical Evaluative Sciences (ICES). Neighbourhoods- Update, Applied Health Research Questions (AHRQ) 2019 0900 784 001.

Method of Calculation:

$$\frac{number\ of\ police-reported\ domestic\ incidents}{total\ population}\ X\ 10{,}000$$

Quintiles: Based on counts, approximately equal numbers of domestic incidents in each quintile.

Neighbourhood Assignment: Geographic coordinates were used to determine Neighbourhood.

- Domestic incidents were geocoded to the location of the incident.
- Incidents with missing geographic coordinates or coordinators which could not be coded to Neighbourhood were excluded.

Release: December 2017, updated June 2022.

Data Notes:

- Incident-based reporting provides one record for each incident although each could include multiple offences, victims, offenders, and charges. Police could be called to a specific household multiple times with each counted as an incident.
- Domestic means that intimate partners are involved.
- Intergenerational incidents such as child or elder abuse that do not also include intimate partners are not included in this indicator.

Domestic incidents with children present

Description: The number police-reported domestic incidents with children less than 18 years of age physically present during the incident, per 10,000 people.

Impact on Health: Higher rates and increases are worse for health.

- Higher rates and increases are shown on maps in dark red.
- Higher than Durham Region shown in red, lower in green.

Data Sources:

- Numerator: Durham Region Police Service, Durham Region 2012-2014 and 2015-2017, Incident-based Uniform Crime Reporting (UCR) Survey.
- Denominator: Registered Persons Database (RPDB) 2012-2014 and 2015-2017, Institute for Clinical Evaluative Services (ICES).
    - Reference: Institute for Clinical Evaluative Sciences (ICES). Neighbourhoods- Update, Applied Health Research Questions (AHRQ) 2019 0900 784 001.

Method of Calculation:

$$\frac{number\ of\ police-reported\ domestic\ incidents\ with\ children\ present}{total\ population}\ X\ 10{,}000$$

Quintiles: Based on counts, approximately equal numbers of domestic incidents in each quintile.

Neighbourhood Assignment: Geographic coordinates were used to determine Neighbourhood.

- Domestic incidents were geocoded to the location of the incident.
- Incidents with missing geographic coordinates or coordinators which could not be coded to Neighbourhood were excluded.

Release: December 2017, updated June 2022.

Data Notes:

- Incident-based reporting provides one record for each incident although each could include multiple offences, victims, offenders, and charges. Police could be called to a specific household multiple times with each counted as an incident.

- Domestic means that intimate partners are involved.
- Intergenerational incidents such as child or elder abuse that do not also include intimate partners are not included in this indicator.
- The reporting officer flags incidents when children are physically present. Children are persons less than 18 years old.
- This indicator is a subset of the domestic incidents indicator.

Active travel

Walk or cycle trips to school, ages 11 to 17

Description: The percentage of children and youth aged 11 to 17 years who walk or cycle to school.

Impact on Health: Higher percentages are better for health.

- Lower percentages are shown on maps in dark red.
- Higher than Durham Region and Greater Toronto Hamilton Area (GTHA) shown in green, lower in red.

Data Sources:

- Numerator and denominator: Transportation Tomorrow Survey (TTS) 2016, Data Management Group, University of Toronto. Custom request for Durham Region, August 2018.

Method of Calculation:

$$\frac{number\ of\ trips\ to\ school\ by\ walking\ or\ cycling}{total\ number\ of\ trips\ to\ school\ for\ children\ and\ youth\ aged\ 11\ to\ 17\ during\ a\ typical\ weekday}\ X\ 100$$

Quintiles: Based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Forward sortation area (FSA) was used to determine Neighbourhood.

- Postal code was based on the child's residence, not the location of their school.

Release: June 2022.

Data Notes:

- Percentages reflect the number of children and youth who walked or cycled to school on the day before the household completed the Transportation Tomorrow Survey.
- The mode options for trips to school were: school bus, bicycle, walk, auto driver, auto passenger, public transit, GO rail, joint GO rail and public transit, taxi, paid rideshare and other. This indicator combined the categories of bicycle and walk. The auto total included both auto driver and auto passenger.

Walk or cycle trips to work, ages 18+

Description: The number of trips to work by walking, cycling or transit, divided by the total number of trips to work multiplied by 100, for ages 18 and older during a typical weekday.

Impact on Health: Higher percentages are better for health.

- Lower percentages are shown on maps in dark red.
- Higher than Durham Region and Greater Toronto Hamilton Area (GTHA) shown in green, lower in red.

Data Sources:

- Numerator and denominator: Transportation Tomorrow Survey (TTS) 2016, Data Management Group, University of Toronto. Custom request for Durham Region, August 2018.

Method of Calculation:

$$\frac{total\ number\ of\ trips\ to\ work\ by\ walking, cycling\ or\ taking\ the\ bus}{total\ number\ of\ trips\ to\ work\ during\ a\ tyical\ weekday, adults\ 18+} X\ 100$$

Quintiles: Based on percentages, approximately equal numbers of Neighbourhoods in each quintile.

Neighbourhood Assignment: Forward sortation area (FSA) was used to determine Neighbourhood.

- Postal code was based on the respondent's residence, not the location of their workplace.

Release: June 2022.

Data Notes:

- Percentages reflect the number of adults who walked, cycled or took transit to work on the day before the household completed the Transportation Tomorrow Survey.
- The mode options for trips to work were: bicycle, walk, auto driver, auto passenger, motorcycle, public transit, GO rail, joint GO and transit, school bus, taxi, paid rideshare and other. This indicator combined the categories of bicycle, walk and transit, with transit including public transit, GO rail, and joint GO rail and public transit. The auto total included auto driver, auto passenger and motorcycle. The mode does not specifically consider carpooling.

Retired Indicators

Health Neighbourhoods is a constantly evolving project which continues to expand and improve. Consequently, the indicators included in the Health Neighbourhoods project have changed over time. These changes are due to a variety of factors including data availability, usefulness of indicators, and updates to survey methods.

There are 20 indicators, reported in previous Health Neighbourhoods releases, that were excluded from Release 4:

- 9 indicators were permanently dropped
- 4 indicators were suspended
- 7 indicators were replaced

Indicators were **permanently dropped** if the data were no longer available or the indicator was not informative or helpful. Relevant replacement indicators are not available.

Indicators were **replaced** if they were renamed, or if there was a substantial change to the indicator definition, definition or analysis method.

Indicators were **suspended** if they provide essential information but current data are unavailable. They will be updated once current data are available.

The Appendix provides detailed information for all indicators not included in the most recent Health Neighbourhoods release. The information provided includes indicator descriptions, data sources, data availability, and availability of replacement or alternative indicators.

References

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McCandless RR, Oliva G. Guidelines for Statistical Analysis of Public Health Data with Attention to Small Numbers [Internet]. [University of California, San Francisco]: Family Health Outcomes Project Technical Advisory Group; 2003.

If you require this information in an accessible format, contact 1-800-841-2729.

Appendix: Retired & Replaced Indicators

Alcohol use in excess of Canada's low-risk alcohol drinking guidelines, ages 18+

Status	Historical data available	Replacement or alternative indicators available
Dropped (2022) Unavailable after 2013	• 2009, 2010, 2013 *(3 years grouped)*	Not available.

Description: The percentage of adults aged 18 or older who drink in excess of Canada's Low-Risk Alcohol Drinking Guidelines.

Data Sources:

- Numerator and denominator: Rapid Risk Factor Surveillance System (RRFSS), Durham Region Health Department and Institute for Social Research, York University, 2008, 2010, 2013.

Release: January 2015.

All injuries, ED visit rate

Status	Historical data available	Replacement or alternative indicators available
Dropped (2022) Indicator replaced by 6 more specific injury indicators.	• 2011	• Assault, ages 10-14 • Falls, ages 0-4 • Falls, ages 65+ • Motor vehicle traffic collisions, ages 15-24 • Self-harm, ages 10-24 • Sports injuries, ages 10-24

Description: The number of unscheduled ED visits where there is an injury external cause diagnosis for the visit, divided by the total population, multiplied by 1,000.

- The ICD-10-CA codes used to classify cause of injury are taken from Chapter 19 - External Causes of Morbidity and Mortality, ICD-10-CA codes V01-Y98.

Data Sources:

- Numerator: Emergency Department (ED) Visits, 2011, Ministry of Health, IntelliHealth Ontario.
- Denominator: 2011 Census, Statistics Canada.

Release: January 2015.

Breastfeeding at hospital discharge

Status	Historical data available	Replacement or alternative indicators available
Replaced (2022) Data source changed from ISCIS to BORN. Indicator definition updated to capture homebirths.	• 2010-2012	• Early breastfeeding

Description: The breastfeeding at hospital discharge rate is the number of women who breastfed when discharged from hospital divided by the total number of women who delivered, multiplied by 100.

- This indicator reflects the combined percentage of mothers providing only breastmilk (exclusive breastfeeding) as well as both breastmilk and breastmilk substitute (formula).

Data Sources:

- Numerator and denominator: Integrated Services for Children Information System (ISCIS) 2010-2012, Durham Region Health Department.

Release: January 2015.

Breast milk only at hospital discharge

Status	Historical data available	Replacement or alternative indicators available
Replaced (2022) Data source changed from ISCIS to BORN. Indicator definition updated to capture homebirths.	• 2010-2012	• Early exclusive breastfeeding

Description: The number of women who were feeding their baby breastmilk only when discharged from hospital divided by the total number of women who delivered, multiplied by 100.

- Reflects the percentage of mothers providing breastmilk only (exclusive breastfeeding) at the time they were discharged from hospital.
- This indicator does not account for any formula the infant may have received prior to discharge.

Data Sources:

- Numerator and denominator: Integrated Services for Children Information System (ISCIS) 2010-2012, Durham Region Health Department.

Release: January 2015.

Child-friendly neighbourhood

Status	Historical data available	Replacement or alternative indicators available
Suspended (2022) 2018 KPS sample size too small for Neighbourhood analysis.	2012	Not available.

Description: Percentage of senior kindergarten children whose parents answered "true" to the statement "My neighbourhood is child-friendly".

Data Sources:

- Numerator and denominator: Kindergarten Parent Survey (KPS), 2012, Durham Region.

Release: January 2015.

Commuting duration

Status	Historical data available	Replacement or alternative indicators available
Suspended (2022) Neighbourhood-level data currently unavailable.	2011	Not available.

Description: The number of minutes it took for a person to travel from home to work.

Data Sources:

- Numerator and denominator: National Household Survey (NHS) 2011, Statistics Canada.

Release: January 2015.

Dental decay prevalence in school in grade 2 students

Status	Historical data available	Replacement or alternative indicators available
Dropped (2022) Individual and Neighbourhood-level data unavailable.	School years: • 2013/14 • 2014/15	Not available.

Description: Dental decay prevalence is determined by the oral health screening results of all Grade 2 (G2) students in Durham Region public schools. Schools with high dental decay are those with 14% or more of G2 students with at least two decayed teeth; medium with 9.5% to 13.9%; and low decay with fewer than 9.5% with at least two decayed teeth. Schools with enhanced screening are those with low or medium decay results but are treated as if they have high decay because of other information.

- Dental decay information is provided by school and not by Health Neighbourhood.

Data Sources:

- Numerator and denominator: Oral Health School Screening Program, 2013/14 & 2014/15, Durham Region Health Department.

Release: January 2015.

EDI- Vulnerable in two or more domains

Status	Historical data available	Replacement or alternative indicators available
Dropped (2017) Critical difference not provided for calculating statistically significant differences.	• 2012 • 2015	Not available.

Description: The EDI indicator measures the percentage of SK children who scored below the Ontario 10th percentile cut-off in two or more EDI domains. The five EDI domains are: physical health and well-being, social competence, emotional maturity, language and cognitive development, and communication skills and general knowledge.

Data Sources:

- Numerator and denominator: Early Development Instrument (EDI), Durham Region, Cycle 3 2012 and Cycle 4 2015.

Release: January 2015.

Flu immunization rate, ages 18+

Status	Historical data available	Replacement or alternative indicators available
Dropped (2022) Indicator primarily identified Neighbourhoods with high senior populations.	• 2009 to 2013	Not available.

Description: The percentage of adults aged 18 years or older who get a flu shot.

Data Sources:

- Numerator and denominator: Rapid Risk Factor Surveillance System (RRFS), Durham Region Health Department and Institute for Social Research, York University, 2009-2013.

Release: January 2015.

Influenza

Status	Historical data available	Replacement or alternative indicators available
Dropped (2022) Indicator not informative and does not do a good job at showing patterns that could be targeted by public health efforts. Uneven testing, older adults, and those in long-term care facilities and retirement homes were likely to be picked up more.	• 2009 to 2013	Not available.

Description: The number of cases of influenza divided by the total population, multiplied by 100,000.

Data Sources:

- Numerator and denominator: Ontario Ministry of Health, integrated Public Health Information System (iPHIS) database, 2009-2013.

Release: January 2015.

Mothers aged 23 years or younger

Status	Historical data available	Replacement or alternative indicators available
Replaced (2022) Data source changed from hospital discharges to BORN to capture homebirths. Indicator renamed.	• 2010-2014	Births to young mothers

Description: The percentage of deliveries that are among young mothers aged 23 years or younger.

- Deliveries include both live births and stillbirths.
- A multiple birth is counted as one delivery.

Data Sources:

- Numerator and denominator: Hospital In-Patient Discharges 2010-2014, Ministry of Health, IntelliHealth ONTARIO.

Release: February 2016.

Mothers aged 35 years or older

Status	Historical data available	Replacement or alternative indicators available
Replaced (2022) Data source changed from hospital discharges to BORN to capture homebirths. Indicator renamed.	• 2010-2014	Births to older mothers

Description: The percentage of deliveries that are among mothers aged 35 years or older.

- Deliveries include both live births and stillbirths.
- A multiple birth is counted as one delivery.

Data Sources:

- Numerator and denominator: Hospital In-Patient Discharges 2010-2014, Ministry of Health, IntelliHealth ONTARIO.

Release: February 2016.

No high school completion (low education)

Status	Historical data available	Replacement or alternative indicators available
Replaced (2022) Replaced by an indicator with a positive outcome.	• 2011	Postsecondary education

Description: The percentage aged 25 to 64 years that did not complete high school.

Data Sources:

- Numerator and denominator: National Household Survey (NHS) 2011, Statistics Canada.

Release: January 2015.

Parent-rated health of SK children

Status	Historical data available	Replacement or alternative indicators available
Suspended (2022) 2018 KPS sample size too small for Neighbourhood analysis.	• 2012	Not available.

Description: Percentage of senior kindergarten (SK) children whose parents rated their child's health as excellent or very good.

Data Sources:

- Numerator and denominator: Kindergarten Parent Survey (KPS), 2012, Durham Region.

Release: January 2015.

Physical activity rate, ages 18-69 years

Status	Historical data available	Replacement or alternative indicators available
Dropped (2022) Data unavailable after 2013.	2007, 2009, 2011 (3 years grouped)	Not available.

Description: The percentage of adults aged 18 to 69 with a high level of physical activity.

- Physical activity was assessed based on a series of questions taken from the International Physical Activity Questionnaire (IPAQ) that are used to estimate levels of physical activity, assessing physical activity across a comprehensive set of domains including leisure time, domestic and gardening activities, work-related and transport-related activities.

Data Sources:

- Numerator and denominator: Durham data - Rapid Risk Factor Surveillance System (RRFSS), Durham Region Health Department and Institute for Social Research, York University, 2007, 2009, 2011. Ontario data - Rapid Risk Factor Surveillance System (RRFSS) Provincial Sample Pilot Project, 2011.

Release: January 2015.

Population with a Primary Care Physician

Status	Historical data available	Replacement or alternative indicators available
Dropped (2022) Not informative.	2013	Not available.

Description: The number of people over the age of one year with a primary care physician, per 100 people in that age group. The rate was age- and sex-standardized using the 2011 Canadian census population.

- A person was considered to have a primary care physician if they were rostered to a physician in the CAPE tables or if they received primary care from a physician within the past two-year period.
- A primary care physician is not restricted to General Practitioners.

Data Sources:

- Numerator and denominator: Client Agency Enrollment Program (CAPE) & Ontario Health Insurance Plan (OHIP) 2013, Institute for Clinical Evaluative Sciences (ICES).
- Reference: ICES AHRQ Project 2016 0900 784 000.

Release: February 2016.

Preterm birth rate in singletons

Status	Historical data available	Replacement or alternative indicators available
Replaced (2022) Data source changed from hospital discharges to BORN. Indicator definition updated to capture homebirths and multiple births.	• 2010 to 2012 • 2013 to 2015	• Preterm births (2013 to 2015; 2015 to 2018)

Description: The percentage of singleton (non-multiple) live births delivered in hospital before 37 completed weeks of gestation.

- Multiple births were excluded because they are at high risk of prematurity and have different risk factors than preterm singleton births.
- A focus on singletons ensures that a chance occurrent of preterm twins in a Neighbourhood with few births will not inflate the rate in that Neighbourhood.

Data Sources:

- Numerator and denominator: Hospital In-Patient Discharges, 2010-2012 and 2013-2015, Ministry of Health, IntelliHealth ONTARIO.

Release: January 2015.

Recent immigrants

Status	Historical data available	Replacement or alternative indicators available
Replaced (2022) Data source updated from the NHS to the long-form census. Indicator renamed using more inclusive language.	• 2011	• Recent newcomers (2016)

Description: The percentage of the population that immigrated to Canada between 2001 and 2011.

Data Sources:

- Numerator and denominator: National Household Survey (NHS) 2011, Statistics Canada.

Release: January 2015.

SK Children walking or biking to school

Status	Historical data available	Replacement or alternative indicators available
Suspended (2022) 2018 KPS sample size too small for Neighbourhood analysis.	2012	Not available.

Description: Percentage of senior kindergarten (SK) children whose parents reported that their child gets to school most often by walking or biking.

Data Sources:

- Numerator and denominator: Kindergarten Parent Survey (KPS), 2012, Durham Region.

Release: January 2015.

Vegetable and fruit consumption rate, ages 18+ years

Status	Historical data available	Replacement or alternative indicators available
Dropped (2022) Data unavailable after 2013.	2007, 2009, 2011 *(3 years grouped)*	Not available.

Description: The percentage of adults aged 18 years or older who eat vegetables and fruits five or more times per day.

Data Sources:

- Numerator and denominator: Durham data - Rapid Risk Factor Surveillance System (RRFSS), Durham Region Health Department and Institute for Social Research, York University, 2007 2009, 2011. Ontario data - Rapid Risk Factor Surveillance System (RRFSS) Provincial Sample Pilot Project, 2011.

Release: January 2015.