



Ontario Cancer Profiles

Data Sources and Notes

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Cancer Incidence

Definition

Age-standardized incidence rates are weighted averages of age-specific rates using a standard population. They provide the incidence rate that would occur if the population of interest had the same age distribution as a given standard population (in Ontario Cancer Profiles, the 2011 Canadian population).

Age-specific incidence rate is calculated by dividing the number of new cases of cancer per 100,000 people in a 5-year age group (0 to 4, 5 to 9... 85+) diagnosed during a time period (e.g., a year) by the total number of people in that age group and time period.

More information on rate standardization can be found on the [Association of Public Health Epidemiologists of Ontario website](#).

Data sources

Ontario Cancer Registry records are created using data collected for purposes other than cancer registration. This information comes from various administrative databases, laboratory reports and clinical records. Four primary sources are used to generate case records in the registry:

- Provincial pathology reports from Ontario's public hospital laboratories and private laboratories;
- An activity-level reporting database containing data from Ontario's 14 regional cancer centres and their associated hospitals for selected systemic therapy and all radiation treatment;
- Admission and discharge information from the Canadian Institute of Health Information's hospital abstracting databases (Discharge Abstract Database, National Ambulatory Care and Reporting System); and
- Cause-of-death data from the Office of the Registrar General for Ontario in the Ministry of Government and Consumer Services.

For more information, visit the [Ontario Cancer Registry](#) web page.

Cancer incidence statistics in Ontario Cancer Profiles were generated using the SEER*Stat software with data extracted from the Ontario Cancer Registry in December 2018.

Data notes

- Incidence rates are per 100,000 person-years and age-adjusted to the 2011 Canadian population.
- Case counts for incidence are randomly rounded to multiples of 5 to ensure no back-calculation of data that were suppressed due to case counts from 0 to 5.

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- To be comparable with the Local Health Integration Network- and public health unit-level statistics, overall Ontario incidence rates exclude cases with unknown residence; therefore, provincial statistics may not match the counts and rates published elsewhere, such as in the [Ontario Cancer Statistics](#) report.
 - The “Insuff data” value in the tables indicates that the measure has been suppressed due to (a) a small case count (i.e., from 0 to 5) to protect personal health information in accordance with the data privacy policy at Ontario Health (Cancer Care Ontario) or (b) an imprecise estimate (relative standard error >23%). The relative standard error is equal to the standard error of the estimate divided by the estimate and multiplied by 100%.
 - For cancer incidence, data start with the year 2010 to account for changes to the Ontario Cancer Registry rules for counting multiple primary cancers. The Ontario Cancer Registry adopted [The Surveillance, Epidemiology and End Results \(SEER\) Program Multiple Primary and Histology Rules](#) to count cancer cases diagnosed on January 1, 2010, onward, which replaced more conservative rules used previously (a modified version of the International Association of Cancer Registries rules). For more information, please see the [Technical Appendix in the Ontario Cancer Statistics report](#).

Cancer Mortality

Definition

Age-standardized mortality rates are weighted averages of age-specific rates using a standard population. They provide the mortality rate that would occur if the population of interest had the same age distribution as a given standard population (in Ontario Cancer Profiles, the 2011 Canadian population).

Age-specific mortality rate is calculated by dividing the number of deaths from cancer per 100,000 people in a 5-year age group (0 to 4, 5 to 9... 85+) that occurred during a time period (e.g., a year) by the number of people in that age group that and time period.

More information on standardization of rates can be found on the [Association of Public Health Epidemiologists of Ontario website](#).

Data sources

Ontario Cancer Registry records are created using data collected for purposes other than cancer registration. This information comes from various administrative databases, laboratory reports and clinical records. Four primary sources are used to generate case records in the registry:

- Provincial pathology reports from Ontario’s public hospital laboratories and private laboratories;

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- An activity-level reporting database containing data from Ontario’s 14 regional cancer centres and their associated hospitals for selected systemic therapy and all radiation treatment;
 - Admission and discharge information from the Canadian Institute of Health Information’s hospital abstracting databases (Discharge Abstract Database, National Ambulatory Care and Reporting System); and
 - Cause-of-death data from the Office of the Registrar General for Ontario in the Ministry of Government and Consumer Services.

For more information, visit the [Ontario Cancer Registry](#) web page.

Cancer mortality statistics in Ontario Cancer Profiles were generated using the SEER*Stat software with data extracted from the Ontario Cancer Registry in June 2020.

Data notes

- Mortality rates are per 100,000 person-years and age-adjusted to the 2011 Canadian population.
- Case counts for mortality are randomly rounded to multiples of 5 to ensure no back-calculation of data that were suppressed due to case counts from 0 to 5.
- To be comparable with the Local Health Integration Network- and public health unit-level statistics, overall Ontario counts and rates exclude cases with unknown residence; therefore, provincial statistics may not match the counts and rates published elsewhere, such as the [Ontario Cancer Statistics report](#).
- The “Insuff data” value in the tables indicates that the measure has been suppressed due to (a) a small case count (i.e., from 0 to 5) to protect personal health information in accordance with the data privacy policy at Ontario Health (Cancer Care Ontario) or (b) an imprecise estimate (relative standard error >23%). The relative standard error is equal to the standard error of the estimate divided by the estimate and multiplied by 100%.

Cancer Prevalence

Definition

Cancer prevalence is defined as the number of people who were still alive as of January 1, 2017, with a diagnosis of cancer in the previous 30 years. Prevalence includes people who are under active treatment for cancer, who recently completed their primary treatment and who are long-term survivors.

Data sources

Ontario Cancer Registry records are created using data collected for purposes other than cancer registration. This information comes from various administrative databases, laboratory reports and clinical records. Four primary sources are used to generate case records in the registry:

- Provincial pathology reports from Ontario’s public hospital laboratories and private laboratories;
- An activity-level reporting database containing data from Ontario’s 14 regional cancer centres and their associated hospitals for selected systemic therapy and all radiation treatment;
- Admission and discharge information from the Canadian Institute of Health Information’s hospital abstracting databases (Discharge Abstract Database, National Ambulatory Care and Reporting System); and
- Cause-of-death data from the Office of the Registrar General for Ontario in the Ministry of Government and Consumer Services.

For more information, visit the [Ontario Cancer Registry](#) web page.

Cancer prevalence statistics in Ontario Cancer Profiles were generated using the SEER*Stat software with incidence and mortality data extracted from the Ontario Cancer Registry in December 2018.

Data notes

- Case counts for prevalence are randomly rounded to multiples of 5 to ensure no back-calculation of data that were suppressed due to case counts from 0 to 5.
- To be comparable with the Local Health Integration Network- and public health unit- level statistics, overall Ontario counts exclude cases with unknown residence; therefore, provincial statistics may not match the counts and rates published elsewhere, such as the [Ontario Cancer Statistics report](#).
- The “Insuff data” value in the tables indicates that the measure has been suppressed due to a small case count (i.e., from 0 to 5) to protect personal health information in accordance with the data privacy policy at Ontario Health (Cancer Care Ontario).

Cancer Screening

Definition

Breast cancer screening participation

The percentage of Ontario screen-eligible women, 50 to 74 years old, who completed at least 1 mammogram within a 30-month period.

Numerator: Total number of Ontario screen-eligible women, 50 to 74 years old, who have completed at least 1 mammogram in a 30-month period.

Denominator: Total number of Ontario screen-eligible women, 50 to 74 years old, in the reporting period.

Cervical cancer screening participation

The percentage of Ontario screen-eligible women, 21 to 69 years old, who completed at least 1 Pap test in a 42-month period.

Numerator: Total number of Ontario screen-eligible women, 21 to 69 years old, who have completed at least 1 Pap test in a 42-month period.

Denominator: Total number of Ontario screen-eligible women, 21 to 69 years old, in the reporting period.

Overdue for colorectal cancer screening

The percentage of Ontario screen-eligible people, 50 to 74 years old, who were overdue for colorectal screening.

Numerator: Total number of Ontario screen-eligible people, 50 to 74 years old, who were overdue for colorectal screening by the end of the reporting period. People were considered overdue for colorectal screening if they did not have a guaiac fecal occult blood test (gFOBT) within the last 2 years AND did not have a colonoscopy in the last 10 years AND did not have a flexible sigmoidoscopy in the last 10 years.

Denominator: Total number of Ontario screen-eligible people, 50 to 74 years old, in the reporting period.

Data sources

Breast cancer screening participation

The following data sources are used to generate the breast cancer screening participation indicator:

- Integrated Client Management System – Ontario Breast Screening Program mammograms;
- Ontario Health Insurance Plan (OHIP)'s Claims History Database – non-Ontario Breast Screening Program mammogram and mastectomy claims;
- Ontario Cancer Registry – invasive and in-situ breast cancers;

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- Registered Persons Database – demographics; and
 - Postal Code Conversion File Plus – residence and socio-demographic information.

Cervical cancer screening participation

The following data sources are used to generate the cervical cancer screening participation indicator:

- CytoBase – Pap tests;
- OHIP's Claims History Database – Pap tests, hysterectomy claims;
- Ontario Cancer Registry – resolved invasive cervical cancers;
- Registered Persons Database – demographics; and
- Postal Code Conversion File Plus – residence and socio-demographic information.

Overdue for colorectal cancer screening

The following data sources are used to generate the overdue for colorectal cancer screening indicator:

- OHIP's Claims History Database – colectomy claims, non-ColonCancerCheck and ColonCancerCheck gFOBT, colonoscopy, flexible sigmoidoscopy;
- Colonoscopy Interim Reporting Tool – ColonCancerCheck program colonoscopy records;
- Gastrointestinal Endoscopy Data Submission Portal – hospital colonoscopy data;
- Laboratory Reporting Tool – ColonCancerCheck gFOBTs;
- Ontario Cancer Registry – resolved invasive colorectal cancers;
- Registered Persons Database – demographics; and
- Postal Code Conversion File Plus – residence and socio-demographic info.

Data notes

Breast cancer screening participation

Denominator

Total number of Ontario screen-eligible women, 50 to 74 years old, in the reporting period.

Inclusions:

- Ontario screen-eligible women ages 50 to 74 at the index date;
- Index date was defined as the midpoint of the reporting period;
- Local Health Integration Network and Public Health Unit assignment was determined using the Postal Code Conversion File Plus based on residential postal code.

Exclusions:

- Women with a missing or invalid health insurance number, date of birth, postal code or Local Health Integration Network;
- Women with a prior diagnosis of invasive or in-situ breast cancer before the reporting period and a prior diagnosis of breast cancer defined as ICD-O-3 codes C50 – this morphology is indicative of ductal carcinoma in-situ or invasive breast cancer and must be microscopically confirmed with a pathology report; and
- Women with a mastectomy before the reporting period and the mastectomy was defined in OHIP by fee codes E505, E506, E546, R108, R109 or R117.

Numerator

Total number of Ontario screen-eligible women, 50 to 74 years old, who have completed at least 1 mammogram in a 30-month period.

- Identifying mammograms: Ontario Breast Screening Program (OBSP) mammograms for screening purposes were identified in the Integrated Client Management System and non-OBSP mammograms were identified using fee codes in OHIP:
 - X178 (screening bilateral mammogram)
 - X185 (diagnostic bilateral mammogram)
- All mammograms in the Integrated Client Management System were counted, including those with partial views.
- Each woman was counted once regardless of the number of mammograms performed in a 30-month period; if a woman had a program and non-program mammogram within a 30-month period, the program status was selected.

Considerations

A small proportion of mammograms performed outside of the OBSP because diagnostic tests could not be excluded from the analysis.

Data availability and limitations

- Historical Registered Persons Database address information is incomplete; therefore, the most recent primary address was selected for reporting, even for historical study periods.
- Claims History Database code X178 for screening bilateral mammography was introduced in October 2010.

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- Claims History Database code X185 was used for screening and diagnostic mammography prior to October 2010; since October 2010, X185 has been used for diagnostic mammography only; however, some screening mammograms after October 2010 may still use X185 for claims.

Cervical cancer screening participation

Denominator

Total number of Ontario screen-eligible women, 21 to 69 years old, in the reporting period.

- Ontario screen-eligible women ages 21 to 69 at the index date;
- Index date was defined as the midpoint of the reporting period;
- Local Health Integration Network and Public Health Unit assignment was determined using the Postal Code Conversion File Plus based on residential postal code.

Exclusions:

- Women with a missing or invalid health insurance number, date of birth, Local Health Integration Network or postal code.
- Women diagnosed with an invasive cervical cancer before the reporting period and a prior diagnosis of cervical cancer defined as ICD-O-3 codes C53 – this morphology is indicative of cervical cancer and must be microscopically confirmed with a pathology report.
- Women who had a colposcopy and/or treatment within 2 years before the reporting period.
- Colposcopy and/or treatment were identified through OHIP using the following fee codes:
 - Colposcopy
 - Z731 – initial investigation of abnormal cytology of vulva and/or vagina or cervix under colposcopic technique with or without biopsies and/or endocervical curetting
 - Z787 – follow-up colposcopy with biopsies with or without endocervical curetting
 - Z730 – follow-up colposcopy without biopsy with or without endocervical curetting
 - Treatment
 - Z732 – cryotherapy
 - Z724 – electro
 - Z766 – electrosurgical excision procedure
 - S744 – cervix, cone biopsy, any technique with or without D&C
 - Z729 – cryoconization, electroconization or CO₂ laser therapy with or without curettage for premalignant lesion (dysplasia or carcinoma in-situ), outpatient procedure
- Women with a hysterectomy before the reporting period.
- Women with a hysterectomy were identified through OHIP, using the following fee codes:
 - E862A – when hysterectomy is performed laparoscopically, or with laparoscopic assistance
 - P042A – obstetrics, labour, delivery, caesarean section that includes hysterectomy

- Q140A – exclusion code for enrolled women ages 35 to 70 with hysterectomy
- S710A – hysterectomy, with or without adnexa (unless otherwise specified), with omentectomy for malignancy
- S727A – ovarian debulking for stage 2C, 3B or 4 ovarian cancer and may include hysterectomy
- S757A – hysterectomy, with or without adnexa (unless otherwise specified), abdominal, total or subtotal
- S758A – hysterectomy, with or without adnexa (unless otherwise specified), with anterior and posterior vaginal repair and including enterocele and/or vault prolapse repair when rendered
- S759A – hysterectomy, with or without adnexa (unless otherwise specified), with anterior or posterior vaginal repair and including enterocele and/or vault prolapse repair when rendered
- S762A – hysterectomy, with or without adnexa (unless otherwise specified), radical trachelectomy, excluding node dissection
- S763A – hysterectomy, with or without adnexa (unless otherwise specified), radical (Wertheim or Schauta), includes node dissection
- S765A – amputation of cervix
- S766A – cervical stump, abdominal
- S767A – cervical stump, vaginal
- S816A – hysterectomy, with or without adnexa (unless otherwise specified), vaginal

Numerator

Total number of Ontario screen-eligible women, 21 to 69 years old, who have completed at least 1 Pap test in a 42-month period.

- Identifying Pap tests:
 - Pap tests were identified through CytoBase or identified using fee codes through OHIP:
 - E430A – add-on to A003, A004, A005, A006 when Pap performed outside hospital
 - G365A – periodic, Pap smear
 - E431A – when Pap smear is performed outside of hospital, to G394.
 - G394A – additional for follow-up of abnormal or inadequate smears
 - L713A – cervicovaginal specimen (including all types of cellular abnormality, assessment of flora and/or cytohormonal evaluation)
 - L733A – cervicovaginal specimen (monolayer cell methodology)
 - L812A – cervical vaginal specimens including all types of cellular abnormality, assessment of flora and/or cytohormonal evaluation
 - Q678A – gynaecology, Pap smear, periodic, nurse practitioners
- All Pap tests in CytoBase were counted, including those with inadequate specimens.
- Each woman was counted once regardless of the number of Pap tests performed in a 42-month time frame.

Considerations

The Registered Persons Database address closest to the index date was used to assign postal code.

Data availability and limitations

It is difficult to determine whether a Pap test in Cytobase/OHIP was done for screening or diagnostic purposes; therefore, some Pap tests included in these analyses may have been performed for diagnostic purposes.

Overdue for colorectal cancer screening

Denominator

Total number of Ontario screen-eligible people, 50 to 74 years old, in the reporting period.

Inclusions:

- Ontario residents ages 50 to 74 at the index date;
- Index date was defined as the date in the middle of the reporting period;
- Local Health Integration Network and Public Health Unit assignment was determined using the Postal Code Conversion File Plus based on residential postal code.

Exclusions:

- People with a missing or invalid health insurance number, date of birth, sex or postal code;
- People with an invasive colorectal cancer before the reporting period and prior diagnosis of colorectal cancer that was defined as ICD-O-3 codes C18.0, C18.2-C18.9, C19.9, C20.9 – this morphology is indicative of colorectal cancer and must be microscopically confirmed with a pathology report;
- People with a total colectomy before the reporting period; and
- Total colectomy was defined in OHIP by fee codes S169A, S170A, S172A.

Numerator

Total number of Ontario screen-eligible people, 50 to 74 years old, who were overdue for colorectal screening by the end of the reporting period.

- People were considered overdue for colorectal screening if they did not have a guaiac fecal occult blood test (gFOBT) within the last 2 years AND did not have a colonoscopy in the last 10 years AND did not have a flexible sigmoidoscopy in the last 10 years.
- Identifying gFOBTs:
 - ColonCancerCheck gFOBT was identified in the Laboratory Reporting Tool or OHIP: L179A ColonCancerCheck fecal occult blood testing

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- non-program gFOBT was identified using fee codes in OHIP: L181A lab med, biochem, occult blood
 - Colonoscopies were identified using fee codes Z555A, Z491A to Z499A in OHIP, or in the Colonoscopy Interim Reporting Tool or in the Gastrointestinal Endoscopy Data Submission Portal.
 - Flexible sigmoidoscopies were identified using fee code Z580A in OHIP.
 - Multiple claims with the same health insurance number and service date were assumed for a single procedure.
 - Each person was counted once regardless of the number of tests performed.

Data availability and limitations

- Historical Registered Persons Database address information is incomplete; therefore, the most recent primary address was selected for reporting, even for historical study periods.
- gFOBTs in hospital labs could not be captured.
- A small proportion of gFOBTs performed as diagnostic tests could not be excluded from the analysis.

Cancer Risk Factors

Definition

Data on the 5 modifiable risk factors and 1 socio-demographic variable (household food insecurity) included in Ontario Cancer Profiles were taken from the 2015–17 Canadian Community Health Survey (CCHS), Ontario Share Files, which are defined as:

- Current smoking (“smoking”): the percentage of Ontario adults age 20 and older who report smoking cigarettes daily or occasionally.
- Alcohol consumption (“alcohol”): the percentage of Ontario adults age 19 and older exceeding the maximum recommended level of alcohol consumption for cancer prevention. The maximum recommended alcohol consumption for men is 2 drinks per day and for women is 1 drink per day, as specified by the World Cancer Research Fund and the American Institute for Cancer Research (WCRF/AICR)
- Overweight and obesity: body mass index (BMI) estimates calculated from Canadian Community Health Survey (CCHS) data are based on respondents’ self-reported height and weight. This indicator refers to the percentage of Ontario adults age 18 and older who are overweight (BMI 25.0–29.99) or obese (BMI ≥ 30.0) corrected for biases in using self-reported height and weight based on sex-specific equations developed by Statistics Canada.
- Inadequate vegetable and fruit consumption: the percentage of Ontario adults age 18 and older who reported eating non-starchy vegetables and fruit less than 5 times per day. Respondents who

reported consuming fruit juice more than once daily were considered as having consumed it only once to align with the recommendations by the WCRF/AICR.

- Physical inactivity: the percentage of the population that reported less than the recommended level of moderate-to-vigorous physical activity. The Canadian Physical Activity Guidelines define moderate-to-vigorous physical activity as physical activity causing a person to sweat at least a little and to breathe harder. Recommended levels of moderate-to-vigorous physical activity are 150 minutes or more a week, in bouts of 10 minutes or more.
- Household food insecurity: the percentage of Ontario households that were identified as food insecure at any point in the past 12 months due to lack of money. This measure is based on a set of 18 questions in the CCHS and responses are categorized by Statistics Canada into three kinds of situations: food secure, moderately food insecure and severely food insecure. Included in this indicator are people who were categorized as moderately food insecure (indication of compromise in quality and/or quantity of food consumed) or severely food insecure (indication of reduced food intake and disrupted eating patterns). Although household food insecurity data comes from the CCHS and is listed here, it can be found on the socio-demographic factors dashboard.

Analytic considerations:

- All estimates were age-standardized to the age distribution of the 2011 Canadian population using the age groups from the CCHS person-level sampling strategy: 18 to 34, 35 to 49, 50 to 64, 65 and over.
- Respondents identified as a refusal, don't know or not stated to the required survey questions were excluded.
- Boot strapping techniques were used to obtain variance estimates and 95% confidence intervals of all estimates.
- In accordance with guidelines from Statistics Canada, the coefficient of variation was calculated to determine the sampling variability of the estimate. Statistics Canada requires estimates with coefficients of variation of 15% to 35% to be noted with a warning to users to interpret with caution and estimates with coefficients of variation >35% to be suppressed. Estimates identified with a "Y" in the coefficient of variation flag should be interpreted with caution due to a large amount of sampling variability, as per Statistics Canada guidelines.

Data sources

Data on the 5 modifiable risk factors and 1 socio-demographic variable (household food insecurity) included in Ontario Cancer Profiles come from the 2015–17 CCHS Ontario Share Files from Statistics Canada:

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- The CCHS is a population-based cross-sectional survey conducted by Statistics Canada that collects information on health status, healthcare use and determinants of health for the Canadian population age 12 and older living in private dwellings.
 - It is representative of 98% of the Canadian population age 12 and older, and produces reliable estimates at the health region level.
 - People living on First Nations reserves and other Indigenous settlements, institutional residents, full-time members of the Canadian Forces and residents of certain remote regions are not sampled in the CCHS.
 - The CCHS data are provided by the Ontario Ministry of Health. This report was developed with the support of the Ministry of Health. The views expressed in the report are those of Cancer Care Ontario, a business unit of Ontario Health, and do not necessarily reflect those of Ontario or the Ministry of Health.
 - This information cannot not be used, either alone or with other information to identify an individual. This includes attempting to decrypt information that is encrypted, attempting to identify an individual based on encrypted information and attempting to identify an individual based on prior knowledge.

For more information on the CCHS, visit [Statistics Canada's](#) website.

Data notes

The data on modifiable risk factors and social determinants of health (socio-demographic variables) presented in Ontario Cancer Profiles come from population-based sample surveys and are ecologic in nature.

- The estimates reflect the overall prevalence of risk factors and social determinants of health for the entire geographic region (Local Health Integration Network and public health unit). However, heterogeneity often exists and is difficult to assess using the data available in sample surveys due to small sample sizes. More complex sub-regional analyses were outside the scope of this phase of the project, but they may be explored in future phases.
- All estimates are provided for 1 time period and by sex, except for household food insecurity. Estimates for food insecurity are presented for households and are therefore not sex specific.
- CCHS data on modifiable risk factors are self-reported. Respondents of self-reported surveys tend to under-report behaviours that are socially undesirable or unhealthy, such as alcohol and tobacco use, and over-report behaviours that are socially desirable, such as physical activity and vegetable and fruit intake.
- Major changes to the design and collection strategy of the CCHS were implemented, beginning with the 2015 survey. As a result, comparisons to previous years of the CCHS are not recommended.

Socio-demographic Factors

Definition

Data on 4 of the 5 socio-demographic variables (see Cancer Risk Factors section for information on household food insecurity) in Ontario Cancer Profiles were taken from the 2016 Canadian Census of the Population's mandatory long-form questionnaire. The variables are defined as:

- Income (“low income”): prevalence of low income after tax is the proportion or percentage of economic families or people not in economic families in a given classification that falls below the after-tax low income cut-offs. The low income cut-off is a statistical measure, adjusted for community size and family size, of the income threshold that Canadians fall below when they are estimated to spend at least 20% more of their income than the average family on necessities of food, shelter and clothing. These prevalence rates are calculated from unrounded estimates of economic families and people age 15 and older who are not in economic families.
- Highest level of educational attainment (“education”): proportion of the Ontario population age 15+ without a high school diploma.
- Unemployment: people were considered unemployed if they were not employed during the week before the census day, but were searching for a job in the past 4 weeks, waiting for recall from a temporary lay-off or waiting to begin a new job that started within the next 4 weeks. To be counted as unemployed, a person must have been available for work in the reference week. The unemployment rate refers to unemployed expressed as a percentage of the labour force. The labour force does not include students, homemakers, retired workers, seasonal workers in an “off” season who were not looking for work, and people who could not work because of a long-term illness or disability.
- Visible minority: percentage of the population age 15 and older who self-identify as non-Caucasian in race or non-white in skin colour.

Data sources

Data on 4 of the socio-demographic variables included in Ontario Cancer Profiles (education, low income, unemployment and visible minority) come from the 2016 Canadian Census of the Population from Statistics Canada (see Cancer Risk factors section for information on household food insecurity):

- The census is conducted every 5 years and enumerates everyone living in Canada, including non-institutionalized Canadian citizens native-born and naturalized, landed immigrants and non-permanent residents, and members of their families living with them in Canada.
- Data are not available for incompletely enumerated Indian reserves or Indian settlements.
- Most households (80%) receive the short-form census questionnaire, which contains 8 questions on basic topics such as relationship to person 1, age, sex, marital status and mother tongue. One in 5

households (20%) receive the long-form census questionnaire, which contains the 8 questions from the short-form census, plus 53 additional questions on topics such as education, ethnicity, mobility, income and employment.

For more information on the 2016 Census of Population, visit [Statistics Canada's](#) website.

Data notes

Ontario Cancer Profiles uses data from the 2016 Canadian Census of Population. The 2016 census data represent the most recent data available from the mandatory long-form census questionnaire.

Citation

The following citation for Ontario Cancer Profiles must be used:

Ontario Health (Cancer Care Ontario). Ontario Cancer Profiles [Internet]. 2020 [cited <date>]. Available from: <https://cancercareontario.ca/ontariocancerprofiles>