



Prevention System Quality Index 2023 Technical Appendix

November 2023

Prevention System Quality Index 2023: Technical Appendix

Prepared by the Population Health and Prevention Unit, Ontario Health. Please contact prevention@ontariohealth.ca with questions or comments.

The Prevention System Quality Index 2023 report and associated supplemental materials are available at ontariohealth.ca/psqi. If you need an alternative format, email Ontario Health Communications at info@ontariohealth.ca.

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Overview

This document provides technical information for the indicators in *Prevention System Quality Index 2023*. Sections for each indicator describe its:

- Definition for the report;
- Data source and the dates for the data retrieved; and
- Technical specifications or the portion of the dataset that was selected.

Where applicable, also noted are:

- Calculation method;
- Additional levels of analysis (e.g., socio-demographic factors, public health unit level);
- Considerations or assumptions for readers to be aware of; and
- Data limitations.

Differences in the structure of each section are based on the different types of data reported in the Prevention System Quality Index (PSQI). The types of data include administrative data, Canadian Community Health Survey data, data in existing indicators reproduced from reports by other organizations and data from primary sources collected by the Population Health and Prevention Unit at Ontario Health.

General notes on administrative data and Canadian Community Health Survey data are provided below.

Administrative data

PSQI indicators that use administrative data are indicators in the chapters on alcohol drinking, healthy eating and physical activity. These include lists of addresses from the Alcohol and Gaming Commission for the indicators on alcohol retail stores and Ministry of Education data for the food literacy and health and physical education indicators.

As described in the relevant sections, these data were obtained by submitting a request to the data holders by email.

Indicators using administrative data were limited in what they could measure. Because the data were collected for other purposes, their objectives are not fully consistent with the objectives of the PSQI indicators and do not fully capture what the indicators in this report aim to measure.

Canadian Community Health Survey data

Indicators that use Canadian Community Health Survey data are:

- Current tobacco smoking;
- Second-hand smoke exposure;
- Long-term smoking cessation;
- Drinking more than two alcoholic drinks per week;
- Eating vegetables and fruit fewer than five times a day;
- Inadequate moderate-to-vigorous physical activity;
- Active transportation use; and
- Sun protection and exposure.

Description

Statistics Canada conducts the Canadian Community Health Survey (CCHS) – Annual Component to collect information related to health status, health care utilization and health determinants for the Canadian population.¹ The CCHS is a population-based cross-sectional survey.¹ Data collection for the CCHS is done by either computer assisted personal or telephone interviewing.¹

The CCHS covers about 97 percent of the population age 12 and older in the 10 provinces and the three territories.¹ Excluded from the survey's coverage include people living on reserves and other Indigenous settlements, full-time members of the Canadian Forces, the institutionalized population and children ages 12 to 17 who live in foster care.¹

Data availability

The CCHS produces an annual microdata file and a file combining two years of data.¹ Two years of data are generally required for reliable estimates at the regional (sub-provincial) level, such as for public health units.¹ Additional collection years can also be combined to examine populations or rare characteristics.¹

The Ontario Ministry of Health, Health Analytics and Insights Branch distributes the Ontario portion of the CCHS file (CCHS Ontario Share File) that consists of a subset of respondents who agreed to share their health card number and data with the provincial ministries and health regions that agree to privacy conditions for access.² There may be slight differences between results from the share file from the ministry and data published on the Statistics Canada website for its Health Indicators because rates calculated for Health Indicators use the master CCHS data file.²

Data limitations

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 consumption.

The CCHS indicators in the PSQI report present different years of data due to availability of data. Not all content modules are selected for every survey cycle,¹ and data from multiple survey years were combined to increase the sample to a size acceptable for release by socio-demographic characteristics and geographic regions without introducing a high degree of sampling variability. The years of data presented for each indicator were the most recent consecutive years of data available at the time of writing this report.

Major changes to the design and collection strategy of the CCHS were implemented, beginning with the 2015 survey.¹ As a result, comparisons to previous years of the CCHS are not recommended.

Weighting

Estimates for the indicators using CCHS data were weighted according to individual sampling weights provided by Statistics Canada to ensure that the sample is representative of the overall population.

Variance estimates

Bootstrapping techniques were used to obtain variance estimates and 95% confidence intervals of all estimates.³ 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.³

Age-group estimates

- Estimates were calculated annually for the years of data that are included in the indicator (e.g., 2018, 2019, 2020).
- Ontario-level estimates for adults were age-standardized to the 2011 Canadian population. Age-standardization was done using the direct method of standardization and the following age groups from the Canadian Community Health Survey (CCHS) person-level sampling strategy:
 - Tobacco indicators use the age groups of 20 to 34, 35 to 49, 50 to 64, 65 and over;
 - Alcohol indicators use the groups of 19 to 34, 35 to 49, 50 to 64, 65 and over; and
 - Healthy eating, physical activity and sun protection and exposure indicators use the groups of 18 to 34, 35 to 49, 50 to 64, 65 and over.
- Estimates for adolescents (age 12 to 17) were unadjusted.
- Estimates for First Nations, Inuit, Métis and urban Indigenous populations were age-standardized using the direct method of standardization as follows:
 - For analyses of First Nations, Métis and urban Indigenous populations, all estimates (excluding estimates stratified by age groups) are age-standardized to the Ontario Aboriginal Identity population in the 2006 census using the age groups of 20-24, 25-44, 45-64 and 65 or older.⁴
 - For analyses of Inuit populations, estimates are age-standardized to the Canadian outside Inuit Nunangat identity population in the 2006 census using age groups of 15-24, 25-55, 55-64, 65 or older.

Sub-analyses for Ontario-level estimates

Sub-analyses that were included for each indicator are noted in each section. Details on the analyses are described below.

Socio-demographic factors

- For Ontario-level estimates, factors included sex, income quintile, racial group, immigration status and geography and were compared against the following references: males for sex, income quintile 5 (Q5) for income quintile, White for racial group, Canadian-born for immigration status, and urban for geography.
- These socio-demographic factors were defined as follows:
 - Sex: Based on response to CCHS Sex and Gender (GDR) question, “What was your sex at birth?”
 - Income quintile: Sorts respondents’ derived household income into quintiles based on the ratio of household income to the low-income cut-off (LICO) for the household size and community; starting in 2011, Statistics Canada imputed all missing household incomes to account for the one-third of missing responses to the income question.
 - Racial group: Based on response to a series of CCHS questions, “You may belong to one or more racial or cultural groups on the following list. Are you...?”, to which respondents could select one or more of the following: White, South Asian, Chinese, Black, Filipino, Latin American, Arab, Southeast Asian, West Asian, Korean, Japanese, and other.
 - Immigration status: Respondents who had a valid skip for the CCHS question “Are you now, or have you ever been a landed immigrant in Canada?” were classified as Canadian-born, and a CCHS derived variable which counts the number of years a

respondent has been in Canada since immigration classified respondents as either being an immigrant for 10 years or less, or an immigrant for more than 10 years.

- Geography: Based on a CCHS derived variable that sorts respondents by Statistical Area Classification Type. Respondents in census metropolitan areas and census agglomerations (traced or non-traced) were considered urban, and those in census metropolitan influenced zones (strongly influenced zone, moderately influenced zone, weakly influenced zone, or non-influenced zone) were considered rural.
- Data were pooled from multiple survey years to increase the survey sample to a size that is acceptable for the release of indicators stratified by socio-demographic characteristics without introducing a high degree of sampling variability. Different survey years were combined for different indicators based on availability of data.
- Statistically significant differences in prevalence estimates between categories of a given socio-demographic factor were tested by comparing the absolute difference between two estimates with the square root of the sum of the margin of error (i.e., the upper 95% confidence limit minus the estimate) squared for each estimate being compared. If the difference between the estimates was greater than the square root of the sum of the squares of the two margins of error, the estimates were considered significantly different (approximately $p < 0.05$).

Public health unit

- Data were pooled from multiple survey years to increase the survey sample to a size that is acceptable for the release of indicators stratified by geographic regions without introducing a high degree of sampling variability. Different survey years were combined for different indicators based on availability of data.
- Statistically significant differences between public health unit prevalence estimates and the Ontario prevalence estimate were tested by comparing the absolute difference between the two estimates with the square root of the sum of the margin of error (i.e., the upper 95% confidence limit minus the estimate) squared for each estimate being compared. If the difference between the estimates was greater than the square root of the sum of the squares of the two margins of error, the estimates were considered significantly different (approximately $p < 0.05$).

Analyses for First Nations, Inuit, Métis and urban Indigenous estimates

First Nations, Inuit, Métis and urban Indigenous population-specific analyses were conducted for the following three indicators: current tobacco smoking, long-term smoking cessation and drinking more than two alcoholic drinks per week. Details on the analyses are described below.

Categorizing respondents

- Respondents can self-identify as First Nations, Inuit, and/or Métis in the CCHS survey. For analysis purposes, First Nations, Inuit and Métis were considered mutually exclusive and respondents who self-identified with more than one group were categorized as follows:
 - Respondents who selected both First Nations and Métis were categorized as First Nations.
 - Respondents who selected both First Nations and Inuit were categorized as Inuit.
 - Respondents who selected both Métis and Inuit were categorized as Inuit.
- Respondents were classified as urban Indigenous if they met the following two criteria:
 - They responded “yes” to the question “Are you an Aboriginal person, that is, First Nations, Métis or Inuk (Inuit)? First Nations includes Status and Non-Status Indians” and

- They reside in an urban area (classified as described on page 8 for the socio-demographic factor “Geography”).

Sub-analyses

- Analyses for First Nations, Métis and urban Indigenous populations were stratified by age group and sex. Analyses for the Inuit population were stratified by sex only, due to small sample size.
 - Age group: Based on response to the CCHS question, “What is your age?”, respondents were grouped as age 20 to 29, 30 to 44, 45 to 64, or 65 and older
 - Sex: Based on response to the CCHS Sex and Gender (GDR) question, “What was your sex at birth?”

Additional notes

- Data were pooled from all available survey years (2015–2020 combined) to increase the survey sample to a size that is acceptable for the release of indicators for First Nations, Inuit, Métis and urban Indigenous populations by age group and sex without introducing a high degree of sampling variability.

Exclusions

Respondents in the non-response categories (refusal, don’t know, and not stated) for any of the listed questions were excluded from analyses.

References

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4. Statistics Canada. 2007. Ontario (Code35) (table). Aboriginal Population Profile. 2006 Census. Statistics Canada Catalogue no. 92-594-XWE. Ottawa. Released January 15, 2008. <https://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/92-594/index.cfm?Lang=E> (accessed May 01, 2023).

Social determinants of health

Household food insecurity

Definition

The percentage of households in Ontario that were food insecure, overall, and by level of food insecurity (marginal, moderate, and severe)

Data sources

- Statistics Canada, Canadian Income Survey (CIS) – 2018, 2019, and 2020 survey years combined. Estimates are from Public Health Ontario’s household food insecurity Snapshot.¹

Technical specifications

- For technical information, refer to Public Health Ontario’s technical notes for the Household Food Insecurity Snapshot.¹
- Statistically significant differences between public health unit estimates and the Ontario estimate were tested by comparing the absolute difference between the two estimates with the square root of the sum of the margin of error (i.e., the upper 95% confidence limit minus the estimate) squared for each estimate being compared. If the difference between the estimates was greater than the square root of the sum of the squares of the two margins of error, the estimates were considered significantly different (approximately $p < 0.05$).

Sub-analyses

- Public health unit

Additional notes

- The most recent data available from Public Health Ontario Snapshots¹ at the time of writing this report was included.

References

1. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Snapshots: household food insecurity snapshot [Internet]. Toronto, ON: King’s Printer for Ontario; c2023 [modified 2023 Mar 31; cited 2023 Apr 18]. Available from: <https://www.publichealthontario.ca/en/data-and-analysis/health-equity/household-food-insecurity>

First Nations, Inuit, Métis and urban Indigenous health

Current tobacco smoking

Definition

For each of First Nations, Inuit, Métis and urban Indigenous populations in Ontario:

- The percentage of adults, age 20 and older, who reported smoking cigarettes every day or occasionally

Data source

- Statistics Canada, Canadian Community Health Survey (CCHS) – Annual Component, 2015 to 2020 combined Share Files distributed by the Ontario Ministry of Health

Technical specifications

- CCHS Smoking (SMK) question:
 - At the present time, do you smoke cigarettes every day, occasionally or not at all?

Calculation

For each of First Nations, Inuit, Métis and urban Indigenous populations in Ontario:

Numerator: Weighted number of adults age 20 and older who reported smoking every day or occasionally $\times 100$

Denominator: Weighted total population of adults age 20 and older

Sub-analyses

- Socio-demographic factors: sex and age group

Additional notes

- See details on Canadian Community Health Survey Analyses for First Nations, Inuit, Métis and urban Indigenous population-specific estimates (p. 7)

Long-term smoking cessation

Definition

For each of First Nations, Inuit, Métis and urban Indigenous populations in Ontario:

- The percentage of adults age 20 and older in Ontario reporting past daily or occasional smoking, who stopped smoking completely at least one year ago

Data source

- Statistics Canada, Canadian Community Health Survey (CCHS) – Annual Component, 2015 to 2020 combined Share Files distributed by the Ontario Ministry of Health

Technical specifications

CCHS Smoking (SMK) questions:

- At the present time, do you smoke cigarettes every day, occasionally or not at all?
- Have you smoked more than 100 cigarettes (about 4 packs) in your life?
- Have you ever smoked a whole cigarette?
- Have you ever smoked cigarettes daily?

In addition to the above questions, the CCHS Derived Variable, Number of Years Since Stopping Smoking Completely – Grouped (SMKDVSTP) combines the SMK questions on stopping smoking¹ and was used to determine when respondents completely stopped smoking.

Calculation

For each of First Nations, Inuit, Métis and urban Indigenous populations in Ontario:

Numerator: Weighted number of adults age 20 and older reporting past daily smoking or smoking more than 100 cigarettes in their lifetime, who stopped smoking completely at least one year ago $\times 100$

Denominator: Weighted total population of adults age 20 and older reporting past daily smoking or smoking more than 100 cigarettes in their lifetime

Exclusions:

- Respondents who did not report having smoked more than 100 cigarettes in their lifetime
- Respondents who have never smoked a whole cigarette

Sub-analyses

- Socio-demographic factors: sex and age group

Additional notes

- See details on Canadian Community Health Survey Analyses for First Nations, Inuit, Métis and urban Indigenous population-specific estimates (p. 7)

References

1. Statistics Canada. Canadian Community Health Survey (CCHS) Annual Component, PUMF, 2015–2016, derived variable (DV) specifications [Internet]. Ottawa: University of Ottawa; 2019 [cited 2020 May 12]. Available from: https://gsg.uottawa.ca/data/teaching/soc/cchs201516/CCHS_2015_2016_PUMF_Derived_Variables.pdf.

Drinking more than two alcoholic drinks per week

Definition

For each of First Nations, Inuit, Métis and urban Indigenous populations in Ontario:

- The percentage of adults age 20 and older in Ontario who reported drinking more than two alcoholic drinks in the past week

Data source

- Statistics Canada, Canadian Community Health Survey (CCHS) – Annual Component, 2015 to 2020 combined Share Files distributed by the Ontario Ministry of Health

Technical specifications

CCHS Alcohol use during the past week (ALW) questions:

- Thinking back over the past week, did you have a drink of beer, wine, liquor or any other alcoholic beverage?
- Starting with yesterday, how many drinks did you have? (Asked for each day of the past week.)

Exceeding the amount of alcohol consumption resulting in low to negligible risk of alcohol-related harms, as defined by the 2022 report *Canada's Guidance on Alcohol and Health* by the Canadian Centre on Substance Use and Addiction, is measured as more than two drinks a week, with the number of drinks averaged over the reported week.¹

Calculation

For each of First Nations, Inuit, Métis and urban Indigenous populations in Ontario:

Numerator: Weighted number of adults age 20 and older who reported drinking more than two alcoholic drinks over the past week × 100

Denominator: Weighted total population age 20 and older

Exclusions:

- Respondents who reported being pregnant (Yes response to CCHS Main Activity [MAC] question: To better understand the information you will provide on your health it is important to know if you are pregnant. Are you pregnant?)

Sub-analyses

- Socio-demographic factors: sex and age group

Additional notes

- See details on Canadian Community Health Survey Analyses for First Nations, Inuit, Métis and urban Indigenous population-specific estimates (p. 7)
- An age cut-off of 20 years old was used for this indicator, as opposed to 19 years old as used for the Ontario-level estimate, due to the availability of data from the Ontario Aboriginal Identity population in the 2006 census for age-standardization

References

1. Paradis C, Butt, P., Shield, K., Poole, N., Wells, S., Naimi, T., Sherk, A., & the Low-Risk Alcohol Drinking Guidelines Scientific Expert Panels. Update of Canada’s Low-Risk Alcohol Drinking Guidelines: Final Report for Public Consultation. Ottawa, Ontario: Canadian Centre on Substance Use and Addiction.; 2022.

Commercial tobacco

Current tobacco smoking

Definition

The percentage of adults, age 20 and older in Ontario, who reported smoking cigarettes every day or occasionally

Data source

- Statistics Canada, Canadian Community Health Survey (CCHS) – Annual Component, 2017 to 2020 combined Share Files distributed by the Ontario Ministry of Health

Technical specifications

- CCHS Smoking (SMK) question:
 - At the present time, do you smoke cigarettes every day, occasionally or not at all?

Calculation

Numerator: Weighted number of adults age 20 and older who reported smoking every day or occasionally × 100

Denominator: Weighted total population of adults age 20 and older in Ontario

Sub-analyses

- Socio-demographic factors: sex, income quintile, racial group, immigration status, and geography

Additional notes

- See details on Canadian Community Health Survey data (p. 4)

Tax as a percentage of tobacco retail price

Definition

The percentage of the average total retail price of a carton of 200 cigarettes that is made up by taxes (federal and provincial or territorial excise and sales taxes), by province or territory

Data sources

- Statistics Canada, Average Annual Retail Price (after tax) of Cigarette Cartons, by province or territory, 2022, custom report provided by the Consumer Prices Division, Statistics Canada
- Tax rates from federal, provincial and territorial government websites

Technical specifications

- Total retail price data represent a simple standardized unit price of cigarette cartons across geographies recorded by the Consumer Price Index from Statistics Canada.
- The Consumer Price Index uses the final price paid by the consumer and includes all applicable taxes.
- Rates for excise tobacco taxes and sales taxes that were in effect in 2022 were retrieved from federal, provincial and territorial government websites.

Calculation

The percentage of the average total retail price for a carton of 200 cigarettes that is made up by taxes is calculated as:

Numerator: Total dollar amount of applicable federal and provincial or territorial excise and sales taxes × 100

Denominator: Provincial or territorial average annual retail price (after tax) of a carton of 200 cigarettes

Considerations

- The total dollar amount of taxes includes:
 - Federal and provincial or territorial tobacco excise tax dollar amounts for a carton of 200 cigarettes;
 - Sales tax dollar amounts, including the federal goods and services tax and provincial or territorial sales tax or provincial portion of the harmonized sales tax (HST), on the price of 200 cigarettes without excise or sales taxes; and
 - Sales tax dollar amounts on applicable tobacco excise taxes, where excise taxes are applied by the manufacturer, included in the cost to the retailer and therefore subject to sales taxes.

Data limitations

- Users are advised to exercise caution when comparing the custom average prices data to the official average prices table released by Statistics Canada because the calculation methods are different.

- Average prices should not be used as a measure of pure price change through time because the product and outlet sample can vary from month to month.

References

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Second-hand smoke exposure

Definitions

For each of adults age 20 and older and adolescents ages 12 to 19:

- The percentage of non-smokers in Ontario, who reported exposure to second-hand smoke at home, every day or almost every day, or past month second-hand smoke exposure in a private vehicle, in public places, or at work or school, every day or almost every day

Data source

- Statistics Canada, Canadian Community Health Survey (CCHS) – Annual Component, 2019 to 2020 Share File distributed by the Ontario Ministry of Health

Technical specifications

CCHS Smoking (SMK) questions:

- Including both household members and regular visitors, does anyone smoke inside your home every day or almost every day?
- In the past month, were you exposed to second-hand smoke every day or almost every day in a car or other private vehicle?
- In the past month, were you exposed to second-hand smoke every day or almost every day in public places (such as bars, restaurants, shopping malls, arenas, bingo halls, bowling alleys)?
- In the past month, were you exposed to second-hand smoke every day or almost every day at your workplace or at school?

Calculations

Calculated for each of adults age 20 and older and adolescents ages 12 to 19:

At home:

Numerator: Weighted number of non-smokers reporting exposure to second-hand smoke every day or almost every day at home $\times 100$

Denominator: Weighted total population of non-smokers

In a private vehicle

Numerator: Weighted number of non-smokers reporting exposure to second-hand smoke every day or almost every day in a private vehicle in the past month $\times 100$

Denominator: Weighted total population of non-smokers

In public places

Numerator: Weighted number of non-smokers reporting exposure to second-hand smoke every day or almost every day in public places in the past month $\times 100$

Denominator: Weighted total population of non-smokers

At work or school

Numerator: Weighted number of non-smokers reporting exposure to second-hand smoke every day or almost every day in their workplace or at school in the past month $\times 100$

Denominator: Weighted total population of non-smokers

Sub-analyses

- Socio-demographic factors: sex, income quintile, racial group, immigration status, and geography

Additional notes

- See details on Canadian Community Health Survey data (p. 4)

Smoke-free policies in social housing

Definition

The number of local housing corporations, which are social housing providers in Ontario, that have implemented a smoke-free policy across all of their properties

Data sources

- Ontario's local housing corporation websites and email communications, October to November 2022
- Schedule 1 of Ontario Regulation 644/00: Local Housing Corporations and Successor Housing Providers lists all local housing corporations in Ontario

Technical specifications

- Websites for Ontario's 47 local housing corporations were reviewed to identify a smoke-free policy.
- Each of the 47 local housing corporations were contacted via e-mail to confirm the information that was retrieved from the web, and to obtain additional relevant policies, such as smoke-free building policies. We confirmed or requested a copy of all policies.

Data Limitations

- Not all local housing corporations responded to confirm or clarify the information obtained from the web. Local housing corporations that provided confirmation are indicated in the PSQI Supplementary Table on smoke-free policies in social housing.

Quit attempts

Definition

The percentage of adults age 25 and older in Ontario reporting current daily or occasional smoking or smoking in the past month and smoking over 100 cigarettes in their lifetime, who reported making one or more serious attempts to quit smoking (for at least 24 hours) in the past 12 months

Data source

Centre for Addiction and Mental Health, CAMH Monitor, 2022, custom report provided by Health Promotion Chronic Disease & Injury Prevention, Public Health Ontario

Technical specifications

CAMH Monitor survey questions:

- In the past 12 months, how many times have you made a serious attempt to quit smoking cigarettes?
 - IF NECESSARY: A serious attempt would mean you quit smoking for at least 24 hours.

Calculation

Numerator: Weighted number of adults age 25 and older, reporting current daily or occasional smoking or smoking in the past month and smoking over 100 cigarettes in their lifetime, who reported making one or more serious attempts to quit smoking in the past 12 months × 100

Denominator: Weighted total population of adults age 25 and older in Ontario reporting current daily or occasional smoking

Sub-analyses

- Socio-demographic factors: sex, age group, racial group, income, geography, and immigration status.
- Statistically significant differences in prevalence estimates within categories of each socio-demographic factor were tested using the following references: males for sex, 65 and older for age group, White for racial group, \$100,000 or more for income, Urban for geography, and Canadian-born for immigration status. Testing compared the absolute difference between two estimates with the square root of the sum of the margin of error (i.e., the upper 95% confidence limit minus the estimate) squared for each estimate being compared. If the difference between the estimates was greater than the square root of the sum of the squares of the two margins of error, the estimates were considered significantly different (approximately $p < 0.05$).

Long-term smoking cessation

Definition

The percentage of adults age 20 and older in Ontario reporting past daily or occasional smoking, who stopped smoking completely at least one year ago

Data source

- Statistics Canada, Canadian Community Health Survey (CCHS) – Annual Component, 2017 to 2020 combined Share Files distributed by the Ontario Ministry of Health

Technical specifications

CCHS Smoking (SMK) questions:

- At the present time, do you smoke cigarettes every day, occasionally or not at all?
- Have you smoked more than 100 cigarettes (about 4 packs) in your life?
- Have you ever smoked a whole cigarette?
- Have you ever smoked cigarettes daily?

In addition to the above questions, the CCHS Derived Variable, Number of Years Since Stopping Smoking Completely – Grouped (SMKDVSTP) combines the SMK questions on stopping smoking¹ and was used to determine when respondents completely stopped smoking.

Calculation

Numerator: Weighted number of adults age 20 and older reporting past daily smoking or smoking more than 100 cigarettes in their lifetime, who stopped smoking completely at least one year ago $\times 100$

Denominator: Weighted total population of adults age 20 and older reporting past daily smoking or smoking more than 100 cigarettes in their lifetime

Exclusions:

- Respondents who did not report having smoked more than 100 cigarettes in their lifetime
- Respondents who have never smoked a whole cigarette

Sub-analyses

- Socio-demographic factors: sex, income quintile, racial group, immigration status, and geography
- Public health unit

Additional notes

- See details on Canadian Community Health Survey data (p. 4)
- CCHS data for the 2017 and 2018 survey years have 36 PHUs whereas data for the 2019 and 2020 survey years have 35 PHUs because Elgin-St. Thomas and Oxford PHUs merged to form Southwestern Public Health on May 1, 2018. Therefore, for sub-analyses by public health unit, Elgin-St. Thomas and Oxford PHU data were combined for the 2017 and 2018 survey years to account for the inconsistency across the four years of data.

References

1. Statistics Canada. Canadian Community Health Survey (CCHS) Annual Component, PUMF, 2015–2016, derived variable (DV) specifications [Internet]. Ottawa: University of Ottawa; 2019 [cited 2020 May 12]. Available from: https://gsg.uottawa.ca/data/teaching/soc/cchs201516/CCHS_2015_2016_PUMF_Derived_Variables.pdf.

Alcohol

Drinking more than two alcoholic drinks per week

Definition

The percentage of adults age 19 and older in Ontario who reported drinking more than two alcoholic drinks in the past week

Data source

- Statistics Canada, Canadian Community Health Survey (CCHS) – Annual Component, 2017 to 2020 combined Share Files distributed by the Ontario Ministry of Health

Technical specifications

CCHS Alcohol use during the past week (ALW) questions:

- Thinking back over the past week, did you have a drink of beer, wine, liquor or any other alcoholic beverage?
- Starting with yesterday, how many drinks did you have? (Asked for each day of the past week.)

Exceeding the amount of alcohol consumption resulting in low to negligible risk of alcohol-related harms, as defined by the 2022 report *Canada's Guidance on Alcohol and Health* by the Canadian Centre on Substance Use and Addiction, is measured as more than two drinks a week, with the number of drinks averaged over the reported week.¹

Calculation

Numerator: Weighted number of adults age 19 and older who reported drinking more than two alcoholic drinks over the past week × 100

Denominator: Weighted total population age 19 and older

Exclusions:

- Respondents who reported being pregnant (Yes response to CCHS Main Activity [MAC] question: To better understand the information you will provide on your health it is important to know if you are pregnant. Are you pregnant?)

Sub-analyses

- Socio-demographic factors: sex, income quintile, racial group, immigration status, and geography

Additional notes

- See details on Canadian Community Health Survey data (p. 4)

References

1. Paradis C, Butt, P., Shield, K., Poole, N., Wells, S., Naimi, T., Sherk, A., & the Low-Risk Alcohol Drinking Guidelines Scientific Expert Panels. Update of Canada's Low-Risk Alcohol Drinking Guidelines: Final Report for Public Consultation. Ottawa, Ontario: Canadian Centre on Substance Use and Addiction.; 2022.

Minimum price of alcohol

Definition

The minimum retail price at which alcohol may be sold in alcohol retail stores, as set by the Liquor Control Board of Ontario for selected product types per standard drink (17.05 millilitres of alcohol)

Data source

Liquor Control Board of Ontario (LCBO), MRP Index Factor, 2013 to 2022, available from Trade Resources Online: doingbusinesswithlcbo.com

Technical specifications

The LCBO's MRP Index Factor lists minimum retail prices according to product type. The product types selected for the sample of minimum retail prices to calculate the price per standard drink are:

- 750 millilitre bottle of Class A spirits (e.g., whisky, vodka) with 40.0% alcohol by volume.
- 750 millilitre bottle of Ontario wine with 7% or more alcohol by volume.
- 750 millilitre bottle of imported wine with 7% or more alcohol by volume. Beginning in 2017, the same minimum prices were set for Ontario and imported wines.
- Case of 12, 341 millilitre bottles of non-draft beer with 5.0% alcohol by volume.
- 473 millilitre can of beer with 6.0% alcohol by volume.

Calculation

Spirits, wine, lower alcohol content beer

Using 750 millilitre bottle of Class A spirits (e.g., whisky, vodka) with 40.0% alcohol by volume as an example, the minimum price per standard drink is calculated as follows for spirits, wine and lower alcohol content beer (less than 5.6%):

1. Calculate the alcohol content of the selected product:

- 750 millilitre bottle of spirits × 40.0% alcohol by volume = 300 millilitres of alcohol per bottle
2. Calculate number of standard drinks per product based on the alcohol content:
 - 300 millilitres of alcohol ÷ 17.05 millilitres of alcohol = 17.595 standard drinks per bottle
 3. Calculate the minimum retail product price (e.g., \$28.68 in 2022, including container deposit and taxes) per standard drink:
 - $\$28.68 \div 17.595 \text{ standard drinks} = \$1.63 \text{ minimum retail price per standard drink in 2022}$

Higher alcohol content beer

For non-draft beer with a higher alcohol content (5.6% or higher), the minimum retail price is set by the LCBO based on the litres of absolute alcohol in the product, plus additional charges per product and is calculated as follows:

1. Calculate the alcohol content of the selected product:
 - 473 millilitres of beer × 6.0% alcohol by volume = 28.38 millilitres of alcohol per can
2. Calculate the pricing per litre of absolute alcohol (e.g., \$67.90 in 2022):
 - $28.38 \text{ millilitres} \div 1000 \times \$67.90 = \$1.93$
3. Add container deposit:
 - $\$1.93 + \$0.10 \text{ per container for one can} = \2.03
4. Add environmental levy:
 - $\$2.03 + \$0.104481 \text{ (based on } \$0.0893 \text{ per container plus 13\% HST and 4\% non-refillable container charge for one can)} = \2.13
5. Round up to the nearest \$0.05:
 - = \$2.15 minimum retail price per product
6. Calculate number of standard drinks per product based on the alcohol content:
 - $28.38 \text{ millilitres of alcohol} \div 17.05 \text{ millilitres of alcohol} = 1.665 \text{ standard drinks per can}$
7. Calculate the minimum retail price per standard drink:
 - $\text{Minimum retail price of product } (\$2.15) \div 1.665 \text{ standard drinks} = \$1.29 \text{ minimum retail price per standard drink in 2022}$

Private alcohol retail stores

Definition

The percentage of alcohol retail stores in Ontario that are privately owned

Data sources

Alcohol and Gaming Commission of Ontario address lists as of April 2022, obtained via email for:

- Retail stores on the site of wineries, breweries and distilleries;
- Wine retail stores not on the site of a winery;

- Grocery stores licensed to sell wine or beer; and
- Ferment-on-premise outlets (facilities allowing customers to make wine on site).

Alcohol and Gaming Commission of Ontario address list as of June 2022, obtained via email for:

- Farmers' market locations selling wine.

Brewers' Retail Incorporated website as of June 2022 provided addresses for:

- Beer Store locations.

Liquor Control Board of Ontario (LCBO), doingbusinesswithlcbo.com as of March 2022 provided:

- LCBO retail store list.

Technical specifications

Alcohol retail stores are also called off-premises alcohol outlets and refer to stores where customers buy alcohol to consume elsewhere.

Alcohol retail stores that generate revenue from the sale of alcohol for private businesses are identified as privately owned, which in Ontario are:

- Retail stores on the site of wineries, breweries and distilleries;
- Wine retail stores not on the site of a winery;
- Grocery stores licensed to sell wine or beer;
- Ferment-on-premise outlets;
- Farmers' market locations selling wine; and
- Beer Store locations.

The Liquor Control Board of Ontario stores are identified as publicly owned alcohol retail stores.

Calculation

Numerator: The number of privately owned alcohol retail stores × 100

Denominator: The total number of alcohol retail stores

Exclusions: Only alcohol retail stores regulated by the Ontario government are included in this indicator. Liquor sales at duty-free stores are regulated by the federal government and were not included.

Analysis

- The percentage of alcohol retail stores that were private were calculated for Ontario and for each public health unit.
- To identify the public health unit of alcohol retail stores (by type) in Ontario, the store locations were geographically located (geocoded) using the World Geocode Service (ArcGIS Online) in ArcGIS 10.8.1.
- The number of privately owned alcohol retail stores, and the total number of alcohol retail stores were aggregated at the public health unit level. The percentage of publicly owned alcohol retail stores was then calculated for each public health unit.
- Giesbrecht et al. provides the framework for this analysis.¹

- Statistics Canada Health Region boundary files, 2013 updates.

References

1. Giesbrecht N, Wettlaufer A, April N, Asbridge M, Cukier S, Mann R et al. Strategies to reduce alcohol-related harms and costs in Canada: a comparison of provincial policies. Toronto: Centre for Addiction and Mental Health; 2013.

Alcohol outlet density

Definition

The number of on-premises, off-premises, and total alcohol outlets per 10,000 people age 15 and older in Ontario

On-premises alcohol outlets refer to establishments where customers buy alcohol to consume on site (e.g., restaurants and bars). Off-premises alcohol outlets refer to stores where customers buy alcohol to consume elsewhere.

Data sources

Alcohol and Gaming Commission of Ontario address lists as of April 2022, obtained via email for:

- Licensed bars and restaurants;
- Retail stores on the site of wineries, breweries and distilleries;
- Wine retail stores not on the site of a winery;
- Grocery stores licensed to sell wine or beer; and
- Ferment-on-premise outlets (facilities allowing customers to make wine on site).

Alcohol and Gaming Commission of Ontario address list as of June 2022, obtained via email for:

- Farmers' market locations selling wine.

Brewers' Retail Incorporated website as of June 2022 provided addresses for:

- Beer Store locations.

Liquor Control Board of Ontario (LCBO), doingbusinesswithlcbo.com as of March 2022 provided:

- LCBO retail store list.

Calculations

Density of on-premises alcohol outlets:

Numerator: Number of on-premises alcohol outlets × 10,000

Denominator: Ontario population age 15 and older

Density of off-premises alcohol outlets:

Numerator: Number of off-premises alcohol outlets × 10,000

Denominator: Ontario population age 15 and older

Total alcohol outlet density:

Numerator: Total number of alcohol outlets (on-premises and off-premises) × 10,000

Denominator: Ontario population age 15 and older

Exclusions: Only alcohol retail stores regulated by the Ontario government are included in this indicator. Liquor sales at duty-free stores are regulated by the federal government and were not included.

Analysis

- The number of alcohol retail stores per 10,000 people age 15 and older were calculated for Ontario and for each public health unit.
- To identify the public health unit of alcohol retail stores (by type) in Ontario, store locations were geographically located (geocoded) using the World Geocode Service (ArcGIS Online) in ArcGIS 10.8.1. Alcohol store addresses were geocoded by street address, street name or, when address was invalid or unmatchable, by postal code or town or manually using web searches.
- Ontario's 2022 population distribution, age 15 and older, by public health unit, was estimated based on the Ministry of Finance's population projection, 2021–2046.¹
- Giesbrecht et al. provides the framework for this analysis.²

References

1. Ontario Ministry of Finance. Population Projections [Internet]. 2019 [cited 2023 May 1]. Available from: <https://data.ontario.ca/dataset/population-projections>
2. Giesbrecht N, Wettlaufer A, April N, Asbridge M, Cukier S, Mann R et al. Strategies to reduce alcohol-related harms and costs in Canada: a comparison of provincial policies. Toronto: Centre for Addiction and Mental Health; 2013.

Healthy eating

Eating vegetables and fruit fewer than five times a day

Definition

For each of adults age 18 and older and adolescents ages 12 to 17:

- The percentage of the population in Ontario who reported eating vegetables (excluding potatoes) and fruit fewer than five times per day

Data source

- Statistics Canada, Canadian Community Health Survey (CCHS) – Annual Component, 2015 to 2017 combined Share Files distributed by the Ontario Ministry of Health

Technical specifications

CCHS Fruit and vegetable consumption (FVC) questions:

- In the last month, how many times per day, per week or per month did you drink 100% PURE fruit juices, such as pure orange juice, apple juice or pure juice blends? Do not include fruit-flavored drinks with added sugar or fruit punch.
- In the last month, not counting juice, how many times did you eat fruit? Please remember to include frozen, dried or canned fruit.
- In the last month, how many times did you eat dark green vegetables such as broccoli, green beans, peas and green peppers or dark leafy greens including romaine or spinach? Please

remember to include (frozen or canned vegetables and) vegetables that were cooked in soups or mixed in salad.

- In the last month, how many times did you eat orange-coloured vegetables such as carrots, orange bell pepper, sweet potatoes, pumpkin or squash? (Please remember to include frozen or canned vegetables and vegetables that were cooked in soups or mixed in salad).
- Excluding the green and orange vegetables as well as the potatoes you have already reported, in the last month, how many times did you eat OTHER vegetables? Examples include cucumber, celery, corn, cabbage and vegetable juice.

Calculation

Numerator: Weighted number of population who reported eating vegetables (excluding potatoes) and fruit fewer than 5 times a day \times 100

Denominator: Weighted total population

Exclusions:

- For respondents reporting drinking fruit juice more than once a day, fruit juice was counted for no more than one of the five instances of vegetable and fruit consumption in a day

Sub-analyses

- Socio-demographic factors: sex, income quintile, racial group, immigration status, and geography

Considerations

- The CCHS collects data on the frequency of eating vegetables and fruit. No inference can be made regarding the number of servings or quantity of vegetables and fruit respondents ate each day.

Additional notes

- See details on Canadian Community Health Survey data (p. 4)

Food literacy development in secondary schools

Definition

The percentage of students in publicly funded Ontario secondary schools who earned at least one credit in courses with a food literacy component within five years following their enrolment in Grade 9

Data source

- Ministry of Education, Ontario School Information System (OnSIS), Number and percentage of unique students who completed at least one course with a food literacy component within five years following their enrolment in Grade 9, 2013/14 to 2016/17 Grade 9 cohorts, 2013/14 to 2020/21 school year data, custom report provided by the Ministry of Education

Technical specifications

Courses considered to have a food literacy component in the Ontario secondary school curriculum are:

- Food and Nutrition, Grade 9 or 10, Open (HFN10/HFN20)

- Food and Nutrition Sciences, Grade 12, University/College Preparation (HFA4M)
- Exploring Family Studies, Grade 9 or 10, Open (HIF1O/HIF2O)
- Food and Culture, Grade 11, University/College Preparation (HFC3M)
- Food and Culture, Grade 11, Workplace Preparation (HFC3E)
- Nutrition and Health, Grade 12, University Preparation (HFA4U)
- Nutrition and Health, Grade 12, College Preparation (HFA4C)
- Food and Healthy Living, Grade 12, Workplace Preparation (HFL4E)

Course descriptions are available in the Ontario Ministry of Education's secondary school curriculum for Social Sciences and Humanities courses.¹

Considerations

- Includes public and Roman Catholic schools
- Excludes private schools, publicly funded hospital and provincial schools, Education and Community Partnership Program (ECP) facilities, adult continuing education day schools, summer and night schools
- Includes students who earned one or more credits in a course with a food literacy component in any year within five years of beginning Grade 9
- Excludes courses offered through the Specialist High Skills Majors (SHSM) program, offered by some secondary schools within Ontario

References

1. Ontario Ministry of Education. The Ontario curriculum, Grades 9 to 12, social sciences and humanities, 2013. Toronto: Queen's Printer for Ontario; 2013.

Physical activity

Inadequate moderate-to-vigorous physical activity levels

Definition

For each of adults age 18 and older and adolescents ages 12 to 17 in Ontario:

- The percentage of the population who reported less than the recommended level of moderate-to-vigorous physical activity for their age group

Data source

- Statistics Canada, Canadian Community Health Survey (CCHS) – Annual Component, 2016 to 2018 combined Share Files distributed by the Ontario Ministry of Health

Technical specifications

The 2020 Canadian 24-Hour Movement Guidelines recommend 150 minutes or more of moderate to vigorous aerobic physical activity per week for adults, and 60 minutes or more per day for children and adolescents.¹

CCHS physical activity data were analyzed using combinations of questions described below, which are found in the CCHS Derived Variable Specifications.²

Physical inactivity in adults

This analysis used the CCHS Physical Activity Indicator Derived Variable (PAADVACV), which indicates whether a respondent is physically active according to the CPAG.² PAADVACV covers the following CCHS Physical activities – adults 18 years and older (PAA) questions:

- In the last 7 days, did you use active ways like walking or cycling to get to places such as work, school, the bus stop, the shopping centre or to visit friends?
 - How much time in total, in the last 7 days, did you spend doing these activities? Please only include activities that lasted a minimum of 10 continuous minutes. Enter the number of minutes.
- Did you do sports, fitness or recreational physical activities, organized or non-organized, that lasted a minimum of 10 continuous minutes? Examples are walking, home or gym exercise, swimming, cycling, running, skiing, dancing and all team sports.
 - Did any of these recreational physical activities make you sweat at least a little and breathe harder?
 - In the last 7 days, how much time in total did you spend doing these activities that made you sweat at least a little and breathe harder?
- In the last 7 days, did you do any other physical activities while at work, in or around your home or while volunteering? Examples are carrying heavy loads, shoveling, and household chores such as vacuuming or washing windows. Please remember to only include activities that lasted a minimum of 10 continuous minutes.
 - Did any of these other physical activities make you sweat at least a little and breathe harder?
 - In the last 7 days, how much time in total did you spend doing these activities that made you sweat at least a little and breathe harder?

Physical inactivity in adolescents

This analysis used the CCHS Youth Physical Activity Indicator Derived Variable (PAYDVPAI), which indicates whether a youth is physically active according to the CPAG.² PAYDVPAI covers the following CCHS Physical activities for youth (PAY) questions:

- In the last 7 days, did you use active ways like walking or cycling to get to places such as [school, the bus stop, the shopping centre, work] or to visit friends?
 - How much time did you spend using active ways to get to places? (Asked for each of the previous seven days.)
- In the last 7 days, did you do sports, fitness or recreational physical activities while at [school or day camp, including during physical education classes, during your breaks and any other time you played indoors or outdoors]?
 - Did any of these activities make you sweat at least a little and breathe harder?
 - How much time did you spend doing these activities at [school or day camp] that made you sweat at least a little and breathe harder? (Asked for each of the previous seven days.)

- In the last 7 days, did you do physical activities in your leisure time including exercising, playing an organized or non-organized sport or playing with your friends?
 - Did any of these leisure-time activities make you sweat at least a little and breathe harder?
 - How much time did you spend doing these leisure-time activities that made you sweat at least a little and breathe harder? (Asked for each of the previous seven days.)
- In the last 7 days, did you do any other physical [activities that you have not already reported], for example, while you [were doing paid or unpaid work or] helping your family with chores?
 - Did any of these other physical activities make you sweat at least a little and breathe harder?
 - How much time did you spend doing these other physical activities that made you sweat at least a little and breathe harder? (Asked for each of the previous seven days.)

Calculation

Adults

Numerator: Weighted number of adults age 18 and older who did not meet the guidelines for moderate-to-vigorous physical activity × 100

Denominator: Weighted number of adults age 18 and older

Adolescents

Numerator: Weighted number of adolescents ages 12 to 17 who did not meet the guidelines for moderate-to-vigorous physical activity × 100

Denominator: Weighted number of adolescents ages 12 to 17

Sub-analyses

- Socio-demographic factors: sex, income quintile, racial group, immigration status, and geography

Data limitation

- For the purposes of this indicator active transportation is assumed to be moderate-to-vigorous physical activity and is counted by the CCHS derived variables. However, the CCHS does not ask whether time spent using active transportation caused the person to sweat at least a little or to breathe harder, so may overestimate total time spent in moderate-to-vigorous physical activity.

Additional notes

- See details on Canadian Community Health Survey data (p. 4)

References

1. http://csep.ca/CMFiles/Guidelines/CSEP_PAGuidelines_0-65plus_en.pdf Canadian Society of Exercise Physiology. Canadian 24-hour movement guidelines. Ottawa, ON: Canadian Society of Exercise Physiology; 2020.

2. Statistics Canada. Canadian Community Health Survey (CCHS) Annual Component, PUMF, 2015–2016, derived variable (DV) specifications [Internet]. Ottawa: University of Ottawa; 2019 [cited 2020 May 12]. Available from: gsg.uottawa.ca/data/

Active transportation use

Definition

For each of adults age 18 and older or adolescents ages 12 to 17 in Ontario:

- The percentage of the population who reported using active transportation in the previous week

Data source

- Statistics Canada, Canadian Community Health Survey (CCHS) – Annual Component, 2016 to 2018 combined Share Files distributed by the Ontario Ministry of Health

Technical specifications

CCHS Physical activities – adults 18 years and older (PAA) question:

- In the last 7 days, did you use active ways like walking or cycling to get to places such as work, school, the bus stop, the shopping centre or to visit friends?

CCHS Physical activities for youth (PAY) question:

- In the last 7 days, did you use active ways like walking or cycling to get to places such as school, the bus stop, the shopping centre, work or to visit friends?

Calculation

For each of adults age 18 and older and adolescents ages 12 to 17:

Numerator: Weighted number of people who reported using active transportation in the previous seven days × 100

Denominator: Weighted total population

Sub-analyses

- Socio-demographic factors: sex, income quintile, racial group, immigration status, and geography

Additional notes

- See details on Canadian Community Health Survey data (p. 4)

Health and physical education specialist teachers in schools

Definitions

For each of elementary and secondary schools:

- The percentage of publicly funded schools in Ontario with a full or part-time health and physical education (HPE) specialist teacher.

- The overall provincial ratio of students to one full-time equivalent HPE specialist teacher for schools with a full or part-time specialist teacher assigned to teach HPE, in publicly funded schools in Ontario.

Data source

- Ministry of Education, Ontario School Information System (OnSIS), Number of Full-Time Equivalent (FTE) Specialist Teachers Assigned to Teach Health & Physical Education and Related Student Head Count by Publicly Funded Elementary and Secondary Schools including information for schools with no specialist teachers, for 2017/18 to 2020/21 school years, custom report provided by the Ministry of Education.

Technical specifications

- Specialist teachers are defined as those with an elementary assigned subject of Health and Physical Education.
- ≥ 1.0 FTE per school does not necessarily mean there are one or more full-time HPE specialist teachers, since two or more part-time specialist teachers may account for ≥ 1.0 FTE.
- The FTEs of specialist teachers who were assigned to teach at least one HPE subject or class is based on the total number of teaching hours per week, where:
 - 25 teaching hours per week = 1.0 FTE
 - 12.5 teaching hours per week = 0.5 FTE

Calculation

Calculations were done separately for elementary and secondary schools. Statistically significant ($p < 0.05$) trends were identified using Microsoft Excel's linear regression analysis data tool.

Overall provincial ratio of students to one full-time equivalent HPE specialist teacher for schools with an HPE specialist teacher

Numerator: Total number of students in Ontario, excluding students in schools with no HPE teacher (full or part-time)

Denominator: Total full-time equivalent HPE specialist teachers

Considerations

- Includes public and publicly funded Roman Catholic elementary and secondary schools.
- Includes teachers on Letter of Permission and Temporary Letter of Approval.
- Excludes private schools, publicly funded hospital and provincial schools, Education and Community Partnership Program (ECP) facilities, adult continuing education day schools, summer and night schools.
- Excludes teachers on leave, long term occasional teachers, principals and vice-principals.

Enrolment in health and physical education

Definition

The percentage of students in publicly funded secondary schools in Ontario who earned one or more credits in health and physical education courses in a given school year, by grade.

Data source

- Ministry of Education, Ontario School Information System (OnSIS), Percentage of Secondary School Students Who Earned a Credit in One or More Physical Education Courses, by Grade, 2017/18 to 2020/21 school years, custom report provided by the Ministry of Education

Calculation

Calculated for each of Grade 9 to 12, for each of the school years provided by the Ministry of Education

Numerator: Number of students who earned one or more credits in a health and physical education course × 100

Denominator: Total number of students

Considerations

- Includes publicly funded secondary day schools only.
- Includes students who earned one or more credits.
- Excludes private schools, publicly funded hospital and provincial schools, Education and Community Partnership Program (ECP) facilities, adult continuing education day schools, summer and night schools.
- Grade is defined using the latest enrolment record of the student during the academic year.
- Data includes only active students in the academic year.

Environmental exposures

Sun protection and exposure

Definitions

The percentage of adults (age 18 and older) and adolescents (age 12 to 17) in Ontario who reported use of one or more sun protection measure

The percentage of adults (age 18 and older) in Ontario who reported having had a sunburn in the past 12 months

The percentage of adults (age 18 and older) in Ontario, reporting having had a sunburn in the past 12 months, who reported using one or more sun protection measure

Data source

- Statistics Canada, Canadian Community Health Survey (CCHS) – Annual Component, 2015 to 2016 Share File distributed by the Ontario Ministry of Health

Technical specifications

CCHS Sun safety behaviours (SSB) questions:

- Think about a typical weekend, or day off from work or school during the summer months, about how much time each day do you spend in the sun between 10 am and 4 pm?
- In the summer months, on a typical weekend or day off, when you are in the sun for periods of 30 minutes or more, how often do you:

- Seek shade?
- Wear a hat that shades your face, ears and neck?
- Wear long (pants or a long skirt?)
- Use sunscreen on your face? What Sun Protection Factor (SPF) do you usually use on your face?
- Use sunscreen on your body? What Sun Protection Factor (SPF) do you usually use on your body?
- In the past 12 months, has any part of your body been sunburnt?

Calculation

Use of one or more sun protection measure

Calculation for each of adults age 18 and older and adolescents ages 12 to 17:

Numerator: Weighted number of population who reported always or often using one or more sun protection measure × 100

Denominator: Weighted total population

Using one or more sun protection measure means using one or more of the protective measures described in the sun safety recommendations for Canada¹ as follows:

- Spending less than 30 minutes in the sun between 10 am and 4 pm on a typical weekend or day off from work or school during the summer months.
- Spending more than 30 minutes in the sun AND always or often doing at least one of:
 - Seeking shade
 - Wearing a hat AND long pants or long skirt
 - Wearing sunscreen with an SPF of at least 30 on the face AND body
- Note: wearing sunglasses was not counted as a sun protection measure

Sunburns

Numerator: Weighted number of adults ages 18 and older who reported having had a sunburn in the past 12 months × 100

Denominator: Weighted total number of adults ages 18 and older

Use of one or more sun protection measure among adults reporting a sunburn

Numerator: Weighted number of adults ages 18 and older reporting having had a sunburn in the past 12 months, who reported always or often using one or more sun protection measure × 100

Denominator: Weighted number of adults ages 18 and older reporting having had a sunburn in the past 12 months

Sub-analyses

- Socio-demographic factors: sex, income quintile, racial group, immigration status, and geography

Additional notes

- See details on Canadian Community Health Survey data (p. 4)
- More recent years of data are not available for this indicator as the Sun Safety Behaviours module has not been used in Ontario since the 2015-2016 survey cycle

References

1. Marrett LD, Chu MB, Atkinson J, Nuttall R, Bromfield G, Hershfield L, et al. An update to the recommended core content for sun safety messages for public education in Canada: a consensus report. *Can J Public Health*. 2016;107(4-5):e473-e9.

Shade policies in local municipalities

Definition

The number of local municipalities in Ontario with populations of 100,000 or more that have shade policies, by the strength of policies (strong, moderate, limited, not included)

Data sources

- Municipal planning documents (e.g., official plans, urban design guidelines, site plan control by-laws) available on the web and additional documents sent via email from the municipality for each of the 28 Ontario local municipalities with populations of 100,000 or greater.¹⁻⁵⁰

Technical specifications

- For feasibility purposes, analysis was limited to local municipalities with populations of 100,000 or more, and 28 local municipalities met this threshold based on the 2021 census.
- The homepages on the Internet for the 28 local municipalities were visited to retrieve official plans, urban design guidelines and master plans.
- Search terms used in review of planning documents: “shade,” “shading,” “solar” (i.e., for solar protection).
- Additional search in Google using search terms + “site:[local municipality’s homepage on the Internet]” (e.g., shade OR shading OR solar site:hamilton.ca).
- Each of the local municipalities was contacted by e-mail to confirm the information that was retrieved from the web and to obtain any additional relevant policies in their municipalities that relate to shade.

Calculation

- Assessed as of November 2022 for each of the following 28 local municipalities: Ajax, Barrie, Brampton, Brantford, Burlington, Cambridge, Chatham-Kent, Clarington, Greater Sudbury, Guelph, Hamilton, Kingston, Kitchener, London, Markham, Milton, Mississauga, Oakville, Oshawa, Ottawa, Richmond Hill, St. Catharines, Thunder Bay, Toronto, Vaughan, Waterloo, Whitby and Windsor.
- Planning policy documents for each of the local municipalities, as well as any additional documentation sent by e-mail from the municipalities were reviewed.
- Statements related to shade were identified, and the overall strength of shade policies in each local municipality were categorized as follows:

- Strong shade policies: Planning policy documents include one or more statements indicating that shade should be provided for a broad range of municipally and privately owned sites.
- Moderate shade policies: Planning policy documents include one or more statements indicating that shade should be provided for only a few types of sites (municipally owned, privately owned, or both), but do include statements applicable to a broad range of sites.
- Limited shade policies: Planning policy documents include one or more statements indicating that shade should be considered for one or more types of sites, but it is not essential, and no further statements on shade that could be categorized as a strong or moderate shade policy.
- Shade policy not included: Statements on providing shade are not included in planning policy documents at the present time for the local municipality.

Considerations

- In Ontario, municipalities establish guidelines that are used when evaluating plans for developing or redeveloping a site. These guidelines are found in planning policy documents, such as official plans and urban design guidelines. Statements on providing shade (called shade policies in this indicator) may be included in these guidelines. Guidelines can apply to both municipally and privately owned sites.
- Only shade policies that have been adopted by the local council and approved by the Ontario Municipal Board, if required, are included in this indicator.
- This assessment of shade policies may not reflect how well the policies are implemented and the actual availability of shade in each municipality.
- Municipal shade policies do not require projects to be undertaken for the sole purpose of increasing the availability of shade. In the planning policy documents reviewed, where a shade policy was identified, shade was identified only as an element to be incorporated into plans for new developments or redevelopments and in ongoing municipal landscaping (e.g., shade trees).

Data limitations

- Not all municipalities responded to confirm or clarify the information obtained from the web. Municipalities that provided confirmation are indicated in the PSQI Supplementary Table on shade policies. Unique types of planning documents from the municipalities that did not provide confirmation may have been missed.
- The wording of municipal planning documents varies between municipalities, and direct comparisons can not be made.

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Fine particulate matter (PM_{2.5}) concentrations in outdoor air

Definition

The annual average, daily maximum and 10-year change of ambient fine particulate matter (PM_{2.5}) concentrations in Ontario that are measured by outdoor air monitoring stations.

Data sources

- Ministry of the Environment, Conservation and Parks, Air Quality in Ontario 2020 Report

Technical specifications

- Data were retrieved from the [Air Quality in Ontario 2020 Report](#)¹

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Infectious agents

School-based human papillomavirus and hepatitis B vaccination coverage

Definitions

The percentage of enrolled students who received the age-appropriate number of valid doses of human papillomavirus vaccine as of August 31st of that school year, for the 2013/14 to 2021/22 school years, by public health unit.

The percentage of enrolled students who received the age-appropriate number of valid doses of hepatitis B vaccine as of August 31st of that school year, for the 2013/14 to 2021/22 school years, by public health unit.

Data sources

- Public Health Ontario, Digital Health Immunization Repository (DHIR) –Ontario’s provincial immunization repository. Data were extracted on September 1, 2022 for all data.

Technical specifications

- The school-based coverage indicators for human papillomavirus and hepatitis B vaccination are from the Public Health Ontario’s Immunization Coverage Reports for School Pupils in Ontario for the 2013/14 to 2021/22 school years.¹
- For technical information, refer to Public Health Ontario’s [technical notes](#) in the immunization coverage report listed under data source

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