Influenza Immunization

Description

- Proportion of people who have had an influenza (flu) vaccine for the current influenza season. The influenza season can vary slightly year to year based on the Public Health Agency of Canada (PHAC)'s FluWatch.

Specific Indicators

- Influenza immunization coverage for those 65 years and older with no chronic condition
- Influenza immunization coverage for those 65 years and older with a chronic condition(s)
- Influenza immunization coverage for those 12-64 years with a chronic condition(s)
- Influenza immunization coverage in the general population

Method of Calculation

$$\frac{\text{Weighted number of people aged 65 years and older with no chronic condition(s) who had a flu shot in past year}}{\text{Weighted total number of people aged 65 years and older with no chronic condition(s)}} \times 100$$

$$\frac{\text{Weighted number of people aged 65 years and older with a chronic condition(s) who had a flu shot in past year}}{\text{Weighted total number of people aged 65 years and older with a chronic condition(s)}} \times 100$$

$$\frac{\text{Weighted number of people aged 12-64 years with a chronic condition(s) who had a flu shot in past year (18-64 years for RRFSS)}}{\text{Weighted total number of people aged 12-64 years with a chronic condition(s) (18-64 years for RRFSS)}} \times 100$$

$$\frac{\text{Weighted number of people 12 years and older who had a flu shot in past year (18 years and older for RRFSS)}}{\text{Weighted total number of people aged 12 years and older (18 years and older for RRFSS)}} \times 100$$

Basic Categories

- Sex: male, female
- Ethnicity: Indigenous peoples living off reserve (CCHS)/Indigenous peoples (RRFSS)
- Geographic areas:
    - CCHS: PHU and Local Health Integration Network (LHIN)
    - RRFSS: PHU and municipality

Data Sources

Numerator & Denominator: Canadian Community Health Survey (CCHS)

Original source: Statistics Canada

Distributed by: Ontario MOHLTC

Suggested citation (see Data Citation Notes):

Canadian Community Health Survey [year], Statistics Canada, Share File, Ontario MOHLTC

Numerator & Denominator: Rapid Risk Factor Surveillance System (RRFSS)

Original source: Public Health Unit

Distributed by: Public Health Unit

Suggested citation (see Data Citation Notes):

RRFSS [month, year – month, year], Extracted: [month,year]

Survey Questions

Canadian Community Health Survey 2015-2016 Questions:

FLU_Q005: Have you ever had a seasonal flu shot, excluding the H1N1 flu shot?

FLU_Q010: When did you have your last seasonal flu shot?

FLU_Q015: In which month did you have your last seasonal flu shot?

FLU_Q020: Was that this year or last year?

CCC_Q015: Do you have asthma?

CCC_Q030: Do you have chronic bronchitis, emphysema or chronic obstructive pulmonary disease or COPD?

CCC_Q085: Do you have heart disease?

CCC_Q090: Do you suffer from the effects of a stroke?

CCC_Q095: Do you have diabetes?

CCC_Q130: Do you have cancer?

CCC_Q145: Do you have Alzheimer's Disease or any other dementia?

MAC_Q025: Are you pregnant?

HWTDVISW: Derived variable: BMI classification for adults aged 18 and over (self-reported) – international standard

Alternative Data Sources

Rapid Risk Factor Surveillance System (RRFSS)

RRFSS Questions (Immunization I – Flu module) as of October 5, 2015:

i1a: The next questions refer to adult vaccinations. Since September 20XX, have you had a flu shot? (this includes “Flu-Mist” or the nasal-spray vaccine)

i1b: In what month was that?

RRFSS Questions (Priority Groups for Influenza Vaccination module) as of October 16, 2015:

Have you ever been told by a doctor or other health care professional that you have any of the following disorders:

cd1b: First, asthma?

cd1c: Do you still have asthma?

cd1d: …Diabetes? Please remember we’re interested in conditions diagnosed by a health professional.

cd5: Do you have heart disease?

cd6: Do you have lung disease?

cd7: Do you have kidney or liver disease?

cd8: Do you have a blood-related disorder such as anemia or hemoglobinopathy?

cd9: Do you currently have cancer, an immunodeficiency, or immunosuppression due to an underlying disease and/or therapy?

Analysis Check List

- Before releasing and/or publishing these data, users should first determine the number of sampled respondents who contributed to the calculation of the estimate. If this unweighted number is less than 10 for the numerator and 20 for the denominator, the weighted estimate should not be released regardless of the estimate's coefficient of variation (C.V.). For releasable unweighted estimates, users should determine the C.V. of the rounded weighted estimate and follow the guidelines below:
- Acceptable (C.V. of 0.0 - 15.0) Weighted estimates can be considered for general unrestricted release. Requires no special notation.
- Marginal (C.V. of 15.1 - 35.0) Weighted estimates can be considered for general unrestricted release but should be accompanied by a warning cautioning of high sampling variability.
- Unacceptable (C.V. greater than 35.0) Statistics Canada recommends not releasing estimates of unacceptable quality. However, if the user chooses to do so then estimates should be flagged and the following warning should accompany the estimates: "The user is advised that . . .(specify the data) . . . do not meet Statistics Canada's quality standards for this statistical program. Conclusions based on these data will be unreliable and most likely invalid". These data and any consequent findings should not be published. If the user chooses to publish these data or findings, then this disclaimer must be published with the data.
- The CCHS underwent a redesign in 2015 and is planned to undergo another redesign in 2021, which affects comparability to previous years. Statistics Canada does not recommend combining data from 2015 onwards with previous years.
- For RRFSS analysis, questions may be asked seasonally and weights may need to be recalculated to reflect this. The release guidelines for RRFSS differ slightly from the CCHS:
- The unweighted numerator should be greater than 4 and the denominator should be greater than 29. The acceptable CV range is 0.0% - 16.5%. Marginal range is 16.6% - 33.3% and should be released

with a warning cautioning users of the high sampling variability associated with the estimate. Unacceptable CVs are >33.3% and should not be released.

- Refer to the RFFSS analysis orientation manual and the RRFSS manual of operations.

Indicator Comments

- Vaccination against influenza is an annual event.
- In October 2000, the influenza vaccine became publicly funded in Ontario and available free of charge for all residents. In 2012, a policy permitting pharmacists to administer publicly funded influenza vaccine to residents five years of age and older was implemented in Ontario.[1]
- The National Advisory Committee on Immunization (NACI) recommends influenza vaccination for all individuals aged 6 months and older, with a particular focus on people at high risk of influenza-related complications or hospitalization.
- According to NACI, people at high risk include[1]:
    - Pregnant women
    - Adults and children with selected chronic health conditions. These include cardiac or pulmonary disorders (including bronchopulmonary dysplasia, cystic fibrosis and asthma), diabetes mellitus and other metabolic diseases, cancer, immune compromising conditions (due to underlying disease and/or therapy), renal disease, anemia and hemoglobinopathy, neurologic or neurodevelopmental conditions (excluding migraines), body mass index (BMI) of 40 or higher, and people 6 months to 18 years treated for long periods with acetylsalicylic acid.
    - People of any age who are residents of nursing homes and other chronic care facilities
    - People 65 years of age and older
    - All children 6 months to less than 5 years
    - Indigenous peoples
- The CCHS does not include questions about immunodeficiency, immunosuppression, renal disease, cystic fibrosis, blood disorders, and conditions treated with acetylsalicylic acid. RRFSS does not include questions about cystic fibrosis and conditions treated with acetylsalicylic acid. Reporting influenza immunization coverage for persons with high risk chronic conditions is limited only to those chronic conditions included in the CCHS or RRFSS Chronic Diseases Priority Groups for Influenza Vaccination module.
- The CCHS and RRFSS do not include information for residents of nursing homes and other chronic care facilities, children 6 months to less than 5 years and Indigenous peoples living on reserve.

Corresponding Health Indicator(s) from Statistics Canada

- Influenza immunization: Population aged 12 and over who reported when they had their last influenza immunization (flu shot). The 2009 data on flu shots may include H1N1 vaccines received in the Fall of 2009. In 2010, the word "seasonal" was added to the questions in order to collect the two types of vaccines separately.
  http://www5.statcan.gc.ca/bsolc/olc-cel/olc-cel?catno=82-221-X&lang=eng
    - Click on "More info" beside the most recent release date
    - Click “View” under the Formats header
    - Click “Table of contents”
    - Click on “Health system performance”
    - Scroll down to “Influenza immunization” to find related data tables

Cross-References to Other Sections

- None

Ontario Public Health Standards (OPHS): Requirements for programs, services and accountability

The role of boards of health is to support and protect the physical and mental health and well-being, resiliency and social connectedness of the health unit population, with a focus on promoting the protective factors and addressing the risk factors associated with health outcomes. The Ontario Public Health Standards (OPHS) define the responsibilities of boards of health in an integrated health system and are informed by the core public health functions, which include assessment and surveillance, health promotion and policy development, health protection, disease prevention and emergency management. The boards of health are responsible for programs and services in all core functional areas as well as demonstrating accountability to the ministry, and monitoring and measuring effectiveness, impact and the success of their programs and services.[2]

This indicator relates to the following Ontario public health standards:

- Immunization
- Infectious and Communicable Diseases Prevention and Control
- School health

health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/protocols_guidelines/Ontario_Public_Health_Standards_2018_en.pdf

References

1. National Advisory Committee on Immunization. Canadian Immunization Guide Chapter on Influenza and Statement on Seasonal Influenza Vaccine for 2017-2018. Ottawa, ON: Public Health Agency of Canada, 2017. Available from: https://www.canada.ca/content/dam/phac-aspc/documents/services/publications/healthy-living/canadian-immunization-guide-statement-seasonal-influenza-vaccine/naci-stmt-2017-2018-eng.pdf

2. Minister of Health and Long-Term Care. Ontario Public Health Standards 2018. Toronto, ON: Queen's Printer for Ontario, 2018. Available at: http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/default.aspx

Acknowledgements

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Changes Made

Date	Type of Review (Formal or Adhoc)	Changes made by	Changes
June 13, 2008	Formal	Infectious Disease subgroup	● Added related outcomes from draft Ontario Public Health Standards ● Updated indicator comments including adding more details on definition of chronic conditions ● Updated references
January 2009	Formal	Infectious Disease subgroup	● Incorporated reviewer comments.
January 31, 2012	Ad hoc	Sherri Deamond on behalf of CIWG	● Added "Acknowledgements" and "Changes Made" sections
May 24, 2018	Formal	Core Indicators Immunization Workgroup	● Changed name to Influenza Immunization to match Statistics Canada indicator ● Updated background information based on new Ontario Public Health Standards ● Removed reference to 1996/97 Ontario Health Survey (OHS) ● Updated CCHS variables and questions ● Updated CCHS release guidelines ● Added CCHS redesign information to analysis checklist ● Updated method of calculation ● Updated basic categories ● Added information about pharmacist administered influenza vaccine ● Updated information from National Advisory Committee on Immunization (NACI) ● Updated references