

The epidemiology of hepatitis C in Canada

This fact sheet provides a snapshot of the hepatitis C epidemic in Canada. It is one of a series of fact sheets on the epidemiology of HIV and hepatitis C in Canada.

All epidemiological information is approximate, based on the best available data. Most of the data in this fact sheet comes from national hepatitis C estimates, population-specific surveillance studies or national hepatitis C surveillance data published by the Public Health Agency of Canada (PHAC). More information can be found in the section “Where do these numbers come from?” at the end of the fact sheet.

What is hepatitis C?

Hepatitis C is a liver infection caused by the hepatitis C virus. About one in four people clear hepatitis C on their own (spontaneous clearance), and the others go on to develop chronic hepatitis C. Over time, the virus causes inflammation, destroying healthy liver cells and causing the liver to replace them with scar tissue. This happens in a process called fibrosis. If the virus is left untreated, more of the liver gets replaced with scar tissue until nearly all of the liver is scarred; this is called cirrhosis. There is no vaccination available against hepatitis C and there is no immunity to hepatitis C.

How is hepatitis C spread?

Hepatitis C is spread when the blood of a person with hepatitis C comes in contact with the blood of someone else. In Canada, the activities with the highest chance of passing hepatitis C include sharing equipment for using street drugs and tattoo or body-piercing equipment. Hepatitis C infection through blood transfusions or transfusion of blood products no longer occurs because of thorough screening of the blood supply in Canada. Hepatitis C can also be spread through the use of unsterilized medical equipment. Hepatitis C can be passed through sharing personal care items (such as toothbrushes, nail clippers and razors) and condomless sex but no risk is associated with hugging and kissing.

FACT SHEET

Published
2019

CONTACT US

by telephone
1-800-263-1638
416-203-7122

by fax
416-203-8284

by e-mail
info@catie.ca

by mail
555 Richmond Street West
Suite 505, Box 1104
Toronto ON M5V 3B1

At the end of 2011, an estimated six to seven in every 1,000 Canadians were living with chronic hepatitis C (prevalence).¹

Based on national 2011 hepatitis C estimates:

- An estimated 220,697 to 245,987 Canadians were living with chronic hepatitis C. That is the equivalent of six to seven people out of every 1,000 Canadians (or 0.6% to 0.7% of the total Canadian population).
- An estimated 44% of people living with chronic hepatitis C infection were unaware of their status (97,107 to 108,234 Canadians).
- Chronic hepatitis C was most prevalent among people born in 1955 to 1959 (1.5%), followed by those born in 1950 to 1954 (1.25%); 1960 to 1964 (1.2%); 1965 to 1969 (1.1%); and 1970 to 1974 (0.8%).

At the end of 2011, an estimated one out of every 100 Canadians were antibody positive for hepatitis C, indicating either a current or past infection.¹

Based on national 2011 hepatitis C estimates:

- An estimated 332,414 people were antibody positive for hepatitis C. This indicates either a current or past infection with hepatitis C. This is the equivalent of one person out of every 100 Canadians (or 1.0% of the total Canadian population).
- People who inject drugs (both current and former) comprised 42.6% of all antibody-positive cases.
- People born in a country outside of Canada comprised an additional 35.0% of all antibody-positive cases.

Hepatitis C is more prevalent among people who inject drugs than in any other group.^{1,2,3}

Based on national hepatitis C estimates and a few Canadian surveillance systems:

- 66.0% of people who inject drugs and 28.5% of people who formerly injected drugs were antibody positive for hepatitis C (2011).¹
- 24.0% of federal prisoners and 23.3% of provincial prisons were antibody positive for hepatitis C (2011).¹
- 3.0% of people living in nursing homes and long-term care hospitals were antibody positive for hepatitis C (2011).¹
- 1.9% of people born in a country outside of Canada were antibody positive for hepatitis C (2011).¹ Data on prevalence rates among specific immigrant populations is not available; however, immigrants from countries where hepatitis C is more prevalent may have higher hepatitis C rates upon entry to Canada. Since hepatitis C testing is not done upon entry to Canada, there may be immigrants living with hepatitis C who are not aware of their infection.
- 5% of gay men and other men who have sex with men were antibody positive for hepatitis C (2005–2007).²
- 5% of street-involved youth were antibody positive for hepatitis C (2005–2006)³ and 2.3% of people who are homeless (who do not inject drugs) were antibody positive for hepatitis C (2011).¹

The annual reported rates for hepatitis C infections are declining.⁴

Based on 2017 national surveillance data, 11,592 hepatitis C diagnoses were reported to the Public Health Agency of Canada. This is equal to 31.7 cases of hepatitis C per 100,000 Canadians. The rate of reported hepatitis C diagnoses has declined steadily since 2008 when the rate was 35.7 per 100,000.

Two-thirds of diagnoses are among males.⁴

Based on 2017 national surveillance data:

- 61% of hepatitis C diagnoses were among males and 39% were among females.
- Among men, those aged 25 to 29 had the highest rate of hepatitis C diagnoses at 66.3 cases per 100,000.
- Among women, those aged 25 to 29 had the highest rate of hepatitis C diagnoses at 56.7 per 100,000.

Key definitions

Prevalence—the total number of people who are living with a condition at a point in time. In the case of hepatitis C, the prevalence rate tells us how many people have hepatitis C in a defined population.

Incidence—the number of new infections in a defined period of time (usually one year). In the case of hepatitis C, the incidence rate tells us how many people are getting hepatitis C in a particular year.

Where do these numbers come from?

All epidemiological information is approximate, based on the best available data. Most of the data in this fact sheet come from national hepatitis C surveillance data, population-specific surveillance studies or national hepatitis C estimates produced in a modelling exercise.

Routine hepatitis C case reporting (surveillance)

Healthcare providers are required to report hepatitis C diagnoses to their local public health authorities. Each province/territory then compiles this information and provides it to the Public Health Agency of Canada (PHAC). Sometimes additional information is collected and sent to PHAC, such as information about age, gender and the way the person may have acquired hepatitis C. At the time

this fact sheet was published, the most recent data available are for 2017.

Limitations—These data represent the number of cases reported to PHAC by each province/territory. Reported cases do not truly represent the prevalence or incidence of hepatitis C because these statistics represent only those cases that have been diagnosed (excluding those who have yet to be diagnosed). Furthermore, these numbers do not distinguish between acute (new) infections, chronic (more long-term) infections, and infections that have been resolved (when a person has cleared the virus from their body). Therefore, it is impossible to know who is recently infected, who has a chronic infection and who no longer has the disease. Other limitations to these data include reporting delays (the time between the diagnosis of hepatitis C and when it is reported to PHAC) and underreporting (largely due to the asymptomatic nature of hepatitis C virus infection).

Use of mathematical modelling in producing estimates of hepatitis C prevalence and incidence

Mathematical modelling techniques were used to provide an overall picture of the hepatitis C epidemic in Canada in 2011 using a combination of back-calculation and workbook methods.

Limitation—Mathematical models use a combination of available data and assumptions. They help us to understand the state of the epidemic; however, the findings are only as good as the data and assumptions the mathematical models are based on.

Population-specific surveillance

The Public Health Agency of Canada (PHAC) monitors trends in the spread of a number of infectious diseases, including measures of hepatitis C and associated risk behaviour indicators among key vulnerable populations identified in Canada through population-specific surveillance systems. These surveillance systems, also known as “Track” systems, are comprised of periodic cross-sectional surveys, which, in addition to collecting information on biological specimens to be tested for

HIV and hepatitis C virus, also collect information on behavioural risks at selected sites in Canada. The blood test used does not distinguish between past or present hepatitis C infection.

M-track is the national surveillance system for gay men and other men who have sex with men. The statistics provided in this fact sheet are for the years 2005 to 2007 from participating phase-1 M-Track sites. Because the system only recruits voluntary participants from selected urban sites, the results do not represent all men who have sex with men in Canada.

Enhanced Street Youth Surveillance (E-SYS) is the national surveillance system for street-involved youth. The statistics provided in this fact sheet are for the years 1999 to 2005 from participating E-SYS sites. Because the system only recruits voluntary participants from selected urban sites, the results do not represent all street-involved youth in Canada.

4. a. b. Public Health Agency of Canada. *Report on Hepatitis B and C in Canada: 2017*. Centre for Communicable Disease and Infection Control, Infectious Disease Prevention and Control Branch, Public Health Agency of Canada; 2019. Available from: <https://www.canada.ca/en/services/health/publications/diseases-conditions/report-hepatitis-b-c-canada-2017.html> [accessed June 19, 2019].

Author(s): Challacombe L

Acknowledgements

We would like to thank the Centre for Communicable Diseases and Infection Control, Public Health Agency of Canada for their helpful comments and expert review of our epidemiology fact sheets.

References

1. a. b. c. d. e. f. g. h. Trubnikov M, Yan P, Archibald C. Estimated Prevalence of Hepatitis C Virus infection in Canada, 2011. *Canada Communicable Disease Report: Volume 40-19*, December 18, 2014. Available at: <http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/14vol40/dr-rm40-19/surveillance-b-eng.php>
2. a. b. Public Health Agency of Canada. *M-Track: Enhanced Surveillance of HIV, Sexually Transmitted and Blood-Borne Infections, and Associated Risk Behaviours among Men Who Have Sex with Men in Canada*. Phase 1 report. Centre for Communicable Diseases and Infection Control, Infectious Disease and Prevention and Control Branch, Public Health Agency of Canada, 2011.
3. a. b. Community Acquired Infections Division, Public Health Agency of Canada. *Enhanced Surveillance of Canadian Street Youth. Epi-Update: Hepatitis C virus Infection in Canadian Street Youth (1999–2005)*. 2008.

Disclaimer

Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner knowledgeable about HIV- and hepatitis C-related illness and the treatments in question.

CATIE provides information resources to help people living with HIV and/or hepatitis C who wish to manage their own health care in partnership with their care providers. Information accessed through or published or provided by CATIE, however, is not to be considered medical advice. We do not recommend or advocate particular treatments and we urge users to consult as broad a range of sources as possible. We strongly urge users to consult with a qualified medical practitioner prior to undertaking any decision, use or action of a medical nature.

CATIE endeavours to provide the most up-to-date and accurate information at the time of publication. However, information changes and users are encouraged to consult as broad a range of sources as possible. Users relying on this information do so entirely at their own risk. Neither CATIE, nor any of its partners, funders, employees, directors, officers or volunteers may be held liable for damages of any kind that may result from the use or misuse of any such information. The views expressed herein or in any article or publication accessed or published or provided by CATIE do not necessarily reflect the policies or opinions of CATIE nor the views of its partners and funders.

Permission to reproduce

This document is copyrighted. It may be reprinted and distributed in its entirety for non-commercial purposes without prior permission, but permission must be obtained to edit its content. The following credit must appear on any reprint: *This information was provided by the Canadian AIDS Treatment Information Exchange (CATIE). For more information, contact CATIE at 1-800-263-1638.*

Production of this document has been made possible through a financial contribution from the Public Health Agency of Canada. The views expressed herein do not necessarily represent the views of the Public Health Agency of Canada.

CATIE Ordering Centre No: ATI-50233
(aussi disponible en français, ATI-50234)

CATIE fact sheets are available for free at www.catie.ca

CONTACT US

by telephone

1-800-263-1638
416-203-7122

by fax

416-203-8284

by e-mail

info@catie.ca

by mail

555 Richmond Street West
Suite 505, Box 1104
Toronto ON M5V 3B1

