



The Ontario Hepatitis C Elimination Roadmap



For more information on hepatitis C elimination in Ontario and the most upto-date version of this report, please visit <u>on.endhepc.ca</u>. This report is also available in French.

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Background:

Charting a path to eliminate hepatitis C in Ontario by 2030

Eliminating hepatitis C is within our reach! More than 110,000 Ontarians are living with hepatitis C virus (HCV)¹ which is a leading cause of deaths and illness from an infectious disease in Canada.^{2,3,4} With widespread testing, an effective cure and proven prevention strategies, eliminating HCV as a public health threat is within our grasp.

HCV is the first curable chronic viral infection ⁵, and reaching elimination is possible, but only through collective action from the health sector. The World Health Organization (WHO) has <u>set bold targets</u> to eliminate HCV as a public health threat by 2030 and Canada has endorsed this goal.⁶

Alongside other specific targets, Canada aims to:7

Our <u>multidisciplinary team of experts</u> have worked across the HCV, community health and public health sectors to chart a path to expand and implement evidence-informed actions in Ontario to end HCV as a public health threat. The *Roadmap* was developed through a health equity lens to ensure we are addressing issues for populations and communities that are disproportionally impacted by HCV.







Begin treatment for **80%** of people living with hepatitis C

A HEALTH EQUITY AND POPULATION HEALTH APPROACH TO HEPATITIS C

populations, so we have grounded our recommendations in principles of health equity, population health and social justice. We must acknowledge the intersectional impact of historical and ongoing colonialism, criminalization, stigma, racism and other injustices that continue to marginalize those who are at the highest risk of HCV and resulting complications, including death. We are committed to embedding these principles in every aspect of the *Roadmap*.

What is in the Ontario Hepatitis C Elimination Roadmap?

The *Roadmap* brings together advice and insights from over 130 individuals collected over dozens of consultation sessions to generate specific recommendations to achieve HCV elimination in Ontario. The recommendations are separated into three parts:

PART 1: ENABLING POLICY AND HEALTH SYSTEM CHANGE

This section outlines how Ontario can set the stage to implement recommendations from this *Roadmap*. This includes foundational changes from policy and data sharing to the mobilization of new partners and an implementation committee.

PART 2: SEVEN PRIORITIES TO PUT ONTARIO ON THE ROAD TO ELIMINATION

This section highlights seven high-impact strategies that Ontario must adopt to achieve elimination. Prioritizing these areas can allow us to concentrate our efforts to make the greatest progress toward elimination.

PART 3: POPULATION-SPECIFIC RECOMMENDATIONS

Elimination can only be reached through a health equity and population health approach. This section outlines specific recommendations in addition to those in part 2 based on the needs of five priority populations who experience the greatest burden of HCV in the province.

Developing the Roadmap

The <u>Blueprint to Inform Hepatitis C Elimination Strategies in Canada</u> was launched in 2019 by the <u>Canadian Network on Hepatitis C</u> (CanHepC), a national research network. This document was developed to guide HCV elimination in Canada by outlining specific targets, metrics and recommendations for prevention, testing and treatment practices. This document aligned with a <u>framework</u> and <u>five-year action plan</u> on sexually transmitted and blood-borne infections from the Public Health Agency of Canada. However, the <u>Blueprint</u> is a national document and healthcare is primarily delivered at the provincial and territorial level. In light of this, CanHepC launched regional processes across the country to guide implementation of specific recommendations with regional context and leadership.

Despite the global COVID-19 pandemic, we embarked on a journey in 2020 to convene, consult and collaborate with a variety of stakeholders across Ontario's health sector and groups representing communities most affected by HCV. A core planning group led the process, with oversight and expertise from a multidisciplinary advisory committee. Smaller groups, including an Indigenous working group, were created to address specific topics and bring in additional voices to the process. See the full list of contributors in Appendix A.

Over several months through 2021 and 2022, we engaged with over 130 key stakeholders across a number of consultations, focus groups, presentations and meetings. These included clinicians, service providers, researchers, policy-makers, community members and people with lived and living experience from across Ontario. Our goal was to unearth issues, generate ideas and gather feedback on how we can move forward on eliminating HCV as a public health threat in Ontario. This process also allowed us to build connections and momentum within the sector and create a coalition of support in Ontario.

We worked closely with our advisory committee in an iterative process to explore, understand and organize feedback from the consultations to develop the recommendations, this final report and supplementary materials. This report provides the framework for an implementation committee to move this work forward and to continue making progress towards HCV elimination in Ontario.

A priority populations approach to hepatitis C elimination

The elimination of HCV in Ontario can only be realized through a population health and health equity approach.⁸ The national *Blueprint* identified five priority populations that experience a disproportionate burden of HCV in Canada. These groups are marginalized by social and structural factors, including discrimination, criminalization and stigma that increase their risk for acquiring HCV infection and create barriers to accessing care.

Population-based interventions offer the greatest opportunities for change when it comes to reducing the risk of HCV transmission, reaching the undiagnosed and connecting people to care and treatment. However, this work must be done through meaningful engagement with people from these communities. Interventions and services must be tailored to be relevant and responsive to their needs and delivered in a way that recognizes culture, language, identity and past experience.

The recommendations in this *Roadmap* were developed through consultation and guidance from experts who are part of, or work with, priority populations. Specifically, <u>Part 3 of this report</u> focuses on recommendations for each priority population.

Although we discuss each priority population individually, we recognize that many people may identify with more than one group, and factors such as gender, age, ability, race and geography also impact one's health journey. For many of these groups, a lack of data or research may limit our understanding of population-level trends in Ontario; however, guidance from experts and community members has informed our process.

HEPATITIS C AMONG PRIORITY POPULATIONS IN CANADA9*

FIRST NATIONS, INUIT AND MÉTIS PEOPLE



One in 14 have ever had an HCV infection.

PEOPLE WITH PRISON EXPERIENCE



One in nine have ever had an HCV infection.

PEOPLE WHO USE DRUGS



One in two have ever had an HCV infection.

IMMIGRANTS AND NEWCOMERS



One in 50 have ever had an HCV infection. Rates are much higher in populations from countries where HCV is common.

GAY, BISEXUAL AND OTHER MEN WHO HAVE SEX WITH MEN



One in 25 have ever had an HCV infection.

*Based on most recent available data from 2019

Part 1:

Enabling policy and health system change

Implementing the recommendations from this *Roadmap* requires collective action from policy-makers, service providers, researchers and community leaders. Leaders from the provincial health system have a central role to play in supporting policy and system changes and prioritizing investment and resourcing to help people connect to care. HCV elimination is within reach and would be a historic public health achievement. Ontario is one of the few Canadian provinces not on track to eliminate hepatitis C by 2030. Accelerating elimination efforts to meet this target would save up to \$114.5 million in health care savings by preventing long-term liver disease, including cirrhosis and liver cancer. To reach this significant milestone, we need significant commitment and prioritization from provincial health leaders.

To reach elimination at the provincial level, we must commit to:

- elevating HCV as a provincial priority
- building and maintaining an implementation coalition
- improving capacity for data collection and monitoring

Although there is significant work still to be done, there have been recent advances in Ontario that lay a foundation for achieving HCV elimination.

Advances in prevention

Ontario has made investments in substance use and harm reduction programs. This includes publicly funded harm reduction worker positions, supervised consumption services (also known as consumption and treatment services in Ontario), rapid access addiction medicine clinics, and provincial training and education. The province also has robust and centralized access to drug-use equipment and supplies.

Advances in testing and diagnosis

In Ontario there is widespread access to HCV testing, including expanded legislation for nurses to perform

point-of-care testing and, with proper supports and policies, for it to be performed by non-healthcare providers. Ontario's public health laboratory system is also the first in Canada to routinely accept dried blood spot samples, creating opportunities for testing in remote areas or for individuals with difficult venous access due to injection drug use.¹¹

A TWO-STEP PROCESS TO DIAGNOSE HEPATITIS C

HCV testing in Ontario requires two tests done in separate steps, each requiring a new blood sample. The tests are analyzed at a centralized testing laboratory, meaning diagnosis requires multiple appointments, often weeks apart.

- Antibody test: The first test is a screening test that detects antibodies in the blood to determine if a person has ever had an HCV infection.
- RNA test: The second test detects the genetic material of the virus to determine if a person has a current HCV infection.

Advances in treatment

Ontario has made progress in expanding access to publicly covered HCV treatment, including an expedited process for reimbursement as part of Ontario's drug benefit program through a limited use code. The province has also relaxed requirements around demonstrating chronic HCV infection for publicly covered treatment, which previously required individuals to wait six months for a second diagnostic test.

In addition, any prescribers in Ontario (including non-specialists) can now deliver HCV treatment. The provincially funded Liver ECHO training program (see page 14) offers education to new HCV prescribers to build their knowledge and provide them with access to a network of clinical expertise to support their practice. Ontario also funds the Ontario Hepatitis C Teams

Network (see page 22), which provides wraparound, low-barrier care for marginalized populations.

DIRECT-ACTING ANTIVIRALS: A CURE FOR HCV

There has been a treatment revolution in HCV: safe and highly effective direct-acting antiviral (DAA) treatment can now cure HCV in as little as eight to 12 weeks, with minimal side effects. Cure rates are 95% or greater, including for people actively using drugs.¹² Cure prevents liver injury and advanced liver disease, and it reduces the risk of liver failure and liver cancer. Cure for HCV can also improve a person's overall health and quality of life.¹³

Treatments with the previous generation of interferon-based medications were lengthy, had severe side effects and were significantly less effective in curing HCV. Today, wide access to these new treatments means cure is possible for everyone living with HCV and that HCV elimination as a public health threat is within reach.

Elevating hepatitis C as a provincial priority

To reach elimination, the province's health system must take a coordinated approach to HCV elimination. This includes buy-in and action from provincial health agencies, and leadership from key government actors.

Additional support from health care system leaders, local governments (including Indigenous governments), as well as community organizations is also critical.

RECOMMENDATIONS

- Provide provincial endorsement and support for HCV elimination by the Ministry of Health, the Ministry of the Solicitor General, Public Health Ontario and Ontario Health.
- 2. Endorse HCV elimination goals as part of the provincial cancer prevention strategy, including exploration of one-time screening and testing.
- Prioritize HCV elimination in performance and accountability measures for relevant healthcare organizations, including as part of funding agreements.
- **4.** Seek buy-in from public health units, local governments and Indigenous communities to prioritize HCV prevention, testing and treatment within their regions.
- 5. Support publicly funded healthcare organizations, including Ontario Health Teams, to prioritize HCV elimination, including identifying HCV champions among healthcare leadership.

Key government and provincial agencies in HCV elimination:

- **The Ontario Ministry of Health** provides health system oversight, provides program funding, dictates health policy and more.
- The Ministry of the Solicitor General provides healthcare within provincial correctional facilities and is a key stakeholder in advancing HCV elimination efforts in correctional settings.
- Ontario Health oversees planning and administration of Ontario's health system. It can prioritize HCV through various performance mechanisms, including programs previously overseen by Cancer Care Ontario and Health Quality Ontario. In particular, they can play a key role in promoting HCV elimination as a cancer prevention strategy and raising awareness among providers about testing and treatment. Liver cancer is on the rise in Ontario, with a third of cases attributed to viral hepatitis.¹⁴
- **Public Health Ontario (PHO)** provides infectious disease expertise, oversees public health data and operates the province's public health laboratories. PHO also works closely with local public health units, who are an important source of local data as well as regional leaders in HCV prevention.

Ontario elimination steering committee: Building a coalition to eliminate hepatitis C

The recommendations outlined in this *Roadmap* span multiple systems and touch every sector of healthcare. Reaching elimination by the year 2030 will require long-term commitment and coordination from many partners. As we look ahead to implementation, we need to build a coalition to lead action across policy and practice and sustain this effort over the next several years.

An **HCV Elimination Steering Committee** is proposed to lead implementation and coordination of HCV elimination activities in Ontario. The committee will be supported by a core project team, but will also include participation from government, clinicians, service providers, researchers, public health professionals and community members with lived and living

experience. They will leverage their collective expertise to spearhead change and ensure implementation addresses the full diversity of those affected by HCV.

A core project team is proposed to oversee day-to-day operations and administration. This should include dedicated staff who will work full time to coordinate HCV elimination activities. Time-limited task groups may be convened to invite new voices or focus on specific implementation goals.

RECOMMENDATIONS

6. Establish a committee to advance elimination goals and provide overall oversight for implementation of recommendations and monitoring progress toward HCV elimination goals.

Improving data and building monitoring and surveillance capacity

Available data on HCV in Ontario are fragmented.

To achieve HCV elimination, Ontario needs a comprehensive, integrated surveillance and data framework that achieves two objectives:

- **1.** To support health system planning and the delivery of programs and services
- 2. To help monitor our progress toward 2030 elimination goals

Available Ontario data for HCV are currently housed across several provincial bodies. A centralized source for information would be a valuable step forward to help inform healthy policy, program planning and research. This would require a concerted effort to link existing databases, share data and measure new indicators that can help inform our progress toward HCV elimination. Based on available data, baseline metrics need to be set, including for specific populations.

Remarkable achievements in data sharing and access were realized during the COVID-19 pandemic, with major health benefits. Extending the policies and replicating the data systems used to address COVID-19 to HCV will be critical to eliminate HCV in the province.

RECOMMENDATIONS

- 7. Develop evidence-based indicators and identify baseline data and analysis to inform specific targets and milestones based on the goals outlined in the national Blueprint.
- **8.** Create a centralized data source accessible through a dashboard to facilitate access to HCV information and to guide decision-making.
- 9. Create a collaborative HCV data group across the Ministry of Health (including the Office of the Chief Medical Officer of Health), Public Health Ontario, ICES (a research institute for Ontario health data) and other partners, including datasharing agreements.
- 10. Improve demographic and community-level data collection to understand HCV among populations at highest risk and inform local strategies, while respecting principles of data ownership and meaningful community involvement.

Part 2:

Seven priorities to put Ontario on the road to hepatitis C elimination

The following seven priorities outline key areas for action on HCV elimination in Ontario. These were developed through extensive consultation with over 130 stakeholders representing diverse voices in the HCV sector and the health system. These priorities build upon recommendations from the 2019 *Blueprint* to put us on the path to elimination.

- 1 Use new testing approaches to eliminate delays in HCV diagnosis
- 2 Expand HCV testing beyond risk-based screening
- 3 Streamline HCV testing and treatment for new care settings
- 4 Bolster harm reduction services to reduce new HCV cases

- 5 Increase the role of primary care in HCV
- 6 Provide universal HCV testing and linkage to care in prisons
- Raise awareness and link people and providers to HCV information

Use new testing approaches to eliminate delays in hepatitis C diagnosis

To achieve HCV elimination goals, Ontario needs to make screening and diagnosis quick and easy for people who are not aware of their status. Many advances have been made over the past few years, and more tools are available than ever to test people for HCV, particularly outside of clinical settings. By ramping up testing, we can help link people to care faster, thereby preventing long-term health impacts and transmission of new cases. Data suggest that HCV testing rates have not yet recovered from their decrease during the COVID-19 pandemic, ¹⁵ further highlighting the need to both simplify testing and increase access.

One example of streamlining testing is through reflex testing, which has been implemented by most other Canadian provinces and many other countries. In reflex testing, a laboratory automatically tests a sample that is HCV antibody positive for HCV RNA. 16 This can

dramatically reduce the time to diagnosis by removing the wait time for the first test result and eliminating the need for an additional appointment to collect and submit a second blood sample. As of 2023, reflex testing is currently being assessed as a solution in Ontario but has yet to be implemented.

Other new testing methods can improve the efficiency of HCV testing and expand its availability in many community settings. For example, use of point-of-care (POC) tests, including POC RNA platforms, can improve diagnosis in prisons and harm reduction services, where loss to follow-up can be an issue. Although POC RNA platforms are not currently approved for use in Canada, they remain a promising avenue for the future. Currently, neither POC antibody nor POC RNA testing is publicly funded in Ontario.

.NEW ADVANCES IN HCV TESTING AND DIAGNOSIS .

New testing methods are removing barriers to access, streamlining the time to diagnosis and keeping people engaged in care.

Point-of-care antibody testing is a rapid, finger-prick blood test that screens for HCV antibodies. The test is portable and easy to administer, and it returns results in 20 minutes or less.¹⁷ This test can also be used outside of a clinical setting and can be performed by non-clinical providers with proper supports. Additional laboratory testing is still required to confirm current HCV infection and for treatment to be publicly covered.

Dried blood spot (DBS) testing is a method of blood collection where finger-prick droplets of blood are collected and dried on a specialized card and sent to a laboratory for testing. Unlike typical blood samples, the DBS sample remains stable for several days, so samples can be collected in remote or rural settings. It also has advantages for people who use drugs who have difficult venous access.

Rapid HCV RNA testing is a rapid finger-prick blood test for diagnosing HCV where a sample is loaded into an on-site analyzer and returns results in about one hour.¹⁵ This method can enable people to be diagnosed in a single appointment and can be delivered in non-clinical and mobile settings. However, this test is not currently available in Canada.

RECOMMENDATIONS

POLICY AND SYSTEM LEVEL

- 11. Accelerate implementation of reflex testing in Ontario so that HCV RNA tests are automatically conducted on a blood sample when an HCV antibody test result is positive.
- **12.** Remove confirmatory (supplementary) antibody testing, where a positive antibody serology sample is retested before RNA testing.
- **13.** Enable POC antibody tests to be used as a valid screening test before laboratory RNA testing with incorporation of POC antibody test results into a shared database.
- 14. Expedite approval of POC RNA testing in Canada and allow acceptance of POC RNA test results for public coverage of HCV treatment and for public health reporting in Ontario.
- **15.** Provide publicly funded POC testing (antibody and RNA) and DBS supplies, especially in high-prevalence settings (e.g., harm reduction sites, community health centres, correctional institutions).

16. Improve clinician access to prior test results via electronic medical records to decrease unnecessary repeat testing among individuals with known HCV status.

PROGRAMMING AND SERVICE DELIVERY

17. Increase uptake of POC antibody testing by various providers in clinical and community settings, including working with professional bodies to address restrictions related to scope of practice for providers such as pharmacists and social workers.

BUILDING CAPACITY AND KNOWLEDGE

18. Train providers in high-prevalence settings such as prisons as well as addiction medicine and harm reduction settings to perform HCV testing and linkage to care.

2 Expand hepatitis C testing beyond risk-based screening

Ontario cannot achieve elimination without a dramatic increase in diagnosis rates. It is estimated that one in three Ontarians living with HCV are unaware of their status.²⁰ For many, HCV transmission may have occurred years or decades ago.

Ontario has historically relied on risk-based screening and testing, resulting in low rates of diagnosis particularly among older age cohorts and among immigrants and newcomers who may have contracted HCV outside of Canada.²¹ People may be reluctant to talk about past risk factors because of stigma and may face systemic barriers to healthcare. Providers may also lack knowledge on risk factors for HCV.

Offering universal or birth cohort testing is increasingly being considered in many jurisdictions. One-time screening offers the best option to reach the 1945–1975 birth cohort and immigrants and newcomers, who make up the vast majority of people living with HCV.^{22,23,24}

Studies show that testing of the 1945–1975 birth cohort is cost-effective because of the burden of long-term health impacts from late or missed diagnoses. Data from the United States have shown that universal testing for all adults over the age of 18 is cost-effective on the basis of the current prevalence of HCV. The U.S. Centers for Disease Control and Prevention and the U.S. Preventive Services Take Force recommend a one-time HCV test for all adults and all pregnant women. British Columbia's provincial guidelines also recommend screening for people born between 1945 and 1965, including immigrants and newcomers.

In addition to being cost-effective, universal screening can normalize HCV testing, simplify the approach to screening for healthcare providers and remove stigma — a key barrier to people engaging in HCV care.

RECOMMENDATIONS

POLICY AND SYSTEM LEVEL

- 19. Develop guidelines for one-time HCV screening and testing as a part of routine primary care for all adults and for people who are pregnant in Ontario on the basis of evidence and best practices.
- 20. Promote routine screening for all clients in key care settings, including in sexual health clinics, hospital emergency rooms, addiction treatment services and mental health settings.

PROGRAMMING AND SERVICE DELIVERY

21. Promote public testing events, including pop-up clinics or testing fairs, and through partnerships with other community organizations and health services.

- **22.** Train additional providers such as pharmacists, primary care providers, emergency department staff and others to perform HCV testing and linkage to care.
- 23. Promote uptake of new HCV testing guidelines through awareness campaigns and education activities for the public, as well as providers working with priority populations.

3 Streamline hepatitis C testing and treatment for new care settings

The increased simplification of HCV testing and treatment has opened the door for participation of more types of providers in both clinical and non-clinical settings. From sexual health clinics, addiction treatment centres and hospital emergency rooms to shelters and harm reduction sites, more organizations can play a role in preventing, testing and curing HCV infection.

Integrating HCV care into non-traditional health and social services can reduce stigma and make HCV care part of people's routine interactions with familiar, trusted providers. But to take on these roles, organizations need support at multiple levels, including staff training, funding, and tools to implement HCV services.

✓ Voices of hepatitis C:

"I knew my status for almost 10 years before I got treatment. I didn't want to face my doctor. I still feel like people look at me differently."

TASK SHIFTING

Task shifting refers to the delivery of aspects of **HCV care by other types of providers.** Common examples include pharmacists or registered nurses overseeing work-up and treatment instead of a physician, or outreach workers performing antibody testing instead of a clinician. Task shifting offers several advantages in terms of expanding the number of available providers, streamlining appointments and situating care with a familiar and trusted provider. Many organizations have medical directives or policies that can enable these providers to take on additional clinical roles.

There is a growing number of successful examples of community-based multidisciplinary HCV models.^{29, 30,31} Broadening the scope of practice for pharmacists, nurses, outreach workers, and workers with lived and living experience is essential to expand services. These providers are often in the best position to offer lowbarrier, integrated, stigma-free care to those who may otherwise not have access to health services. Given the simplification of HCV testing and treatment, with the right policies and supports in place, these service providers can be empowered to oversee care with minimal oversight.

RECOMMENDATIONS

POLICY AND SYSTEM LEVEL

- 24. Facilitate access to POC antibody testing in non-clinical care settings, including training and quality assurance.
- 25. Increase funding for existing HCV testing and treatment programs that can provide low-barrier, wraparound care, with dedicated clinical and nonclinical staff.
- 26. Develop quality assurance measures and communities of practice to ensure high-quality care and adequate support for providers in their roles.
- 27. Expand funded positions for people with lived or living experience, including ensuring adequate training, support and compensation, and organizational policies that support this.
- 28. Identify and implement supports for clinical providers in new care settings, including incorporating HCV tools and prompts into existing electronic medical record systems.
- 29. Simplify requirements to obtain public coverage for treatment, including a simplified process to apply for the Trillium Drug Program.

BUILDING CAPACITY AND KNOWLEDGE

- **30.** Support organizations to change policies to facilitate task shifting and support more diverse roles, including equitable inclusion of people with lived and living experience.
- 31. Support outreach or mobile models of HCV care, including HCV providers visiting high-prevalence sites, such as substance use, harm reduction, sexual health and homelessness services.
- **32.** Expand and fund nurse, pharmacy and peer-led models of care that are based in community settings.

- **33.** Support collaborative, "hub and spoke" models for clinical support or training, particularly for rural, remote and northern communities.
- **34.** Offer toolkits, education and ongoing support for non-clinical organizations to play a role in HCV care including staff training and guidance to adapt workflows and staff roles and update policies or medical directives.

4 Bolster harm reduction services to reduce new HCV cases

It is estimated that 45% of people who use drugs have ever had HCV and that one in four people who use drugs are living with a current chronic infection. While Ontario is a national leader in providing harm reduction equipment, we need to continue expanding low-barrier harm reduction services to prevent transmission. Harm reduction interventions, including provision of new drug equipment, have been shown to be highly cost-effective compared to the long-term health care costs of HCV.32, 33, 34

HCV among people who use drugs must be understood in the context of the growing drug poisoning and overdose crisis. The unregulated drug market is increasingly exposing people to toxic substances and leading to more overdose deaths. Drugs like fentanyl have shorter lasting effects, requiring people to inject more frequently.³⁵ This increases the likelihood of sharing or reusing equipment, thereby increasing the risk of HCV transmission.^{4,36} The use of methamphetamines and other stimulants is also growing in Ontario, which is linked to increased risk of HCV transmission.^{4,37} The COVID-19 pandemic limited access to harm reduction services and increased the likelihood that people shared or reused drug use equipment.^{34,38}

The pandemic and changing drug supply are likely contributing to an increase in new HCV infections. Ontario's elimination efforts will face setbacks as a result. Ontario data suggest that service disruptions and decreased HCV testing due to COVID-19 are still recovering, 15 further highlighting the need to prioritize prevention strategies for people who use drugs.

RECOMMENDATIONS

POLICY AND SYSTEM LEVEL

- **35.** Expand funding and remove limitations for harm reduction services including supervised consumption services, safer supply programs and drug-checking services.
- **36.** Explore provision of proven safer drug use, tattooing and piercing programs in provincial correctional facilities and introduce or expand these programs in the federal corrections system.
- **37.** Expand access to other forms of opioid agonist therapy (OAT) (including injectable and longacting doses) and to safer supply programs.

PROGRAMMING AND SERVICE DELIVERY

- **38.** Promote flexible, innovative harm reduction approaches to meet people where they are at, including take-home carries for OAT, harm reduction supply delivery, longer opening hours and harm reduction supply vending machines.
- 39. Provide equitable access to harm reduction services in rural and remote areas while addressing the need for confidentiality in smaller communities.
- 40. Expand harm reduction programs catering to the needs of diverse populations, including youth, 2SLGTBQ+ and gender-diverse, racialized and Indigenous people.

BUILDING CAPACITY AND KNOWLEDGE

- **41.** Increase training for service providers to support people using methamphetamines and other stimulants.
- **42.** Support community-based research to improve and implement harm reduction programs for specific regions or people who are not well served by existing programs (e.g., gender diverse, Indigenous, ethnically diverse, rural).

Increase the role of primary care in hepatitis C

Primary care is key to expanding the number of providers offering HCV testing and treatment, but it is estimated that fewer than 10% of people treated for HCV in Ontario receive their prescription from a primary care provider.³⁹ Modern HCV treatments are simple and can be delivered by primary care providers with adequate training and support. Barriers include a lack of knowledge about risk factors or new treatment options, a lack of appropriate treatment settings, stigma or reluctance to treat those with current or past drug use.

Priority should be placed on increasing the number of primary care providers delivering high-quality HCV care. This includes ensuring they have the information and support they need to begin offering testing and treatment as part of their routine practice. Additional focus should be placed on providers who are working in high-prevalence settings or with priority populations.

The ECHO model: Hub-and-spoke clinical education

Project ECHO (Extension for Community Healthcare Outcomes) uses a hub-and-spoke model to connect community providers with a team of interdisciplinary clinical experts. In Ontario, the University Health Network hosts ECHO Liver, providing free, interactive, online medical education for community providers to treat HCV and other liver diseases. For non-specialist providers, ECHO Liver provides a structured curriculum to begin learning about liver diseases, as well as ongoing clinical mentoring, including consultations on patient cases. Programs like ECHO Liver create a pathway for primary care providers to build their skills and knowledge and be supported to integrate HCV into their practice. Complimentary trainings are available from CATIE for non-clinical staff.

Interprofessional primary healthcare organizations are well positioned to play a leading role in HCV prevention and care. With adequate support, they can leverage diverse providers to support testing, treatment and follow-up. This includes community health centres, Aboriginal Health Access Centres, Family Health Teams and Nurse Practitioner-Led Clinics. However, HCV elimination efforts also need to prioritize awareness among other physicians, including those working in private practices, walk-in clinics and emergency rooms, and those who serve immigrants and newcomers.

RECOMMENDATIONS

POLICY AND SYSTEM LEVEL

- **43.** Implement incentives to promote uptake of HCV care among primary care providers (e.g., performance metrics, billings codes, practice incentives).
- **44.** Work with primary care provider associations and networks on an awareness campaign and to endorse HCV elimination as a priority.

PROGRAMMING AND SERVICE DELIVERY

- **45.** Incorporate tools into electronic medical record systems and laboratory information systems for providers to prompt testing, and to identify those with previous positive test results.
- **46.** Involve community members and people with lived experience to help plan and deliver services in primary care settings, particularly in larger health centres.

- **47.** Integrate training for anti-stigma, cultural safety and trauma-informed care into HCV education for healthcare providers.
- **48.** Create a centralized source for clinical information on HCV, including clinical consult services, trainings and a program implementation toolkit with operational and workflow guidance.
- **49.** Support primary care providers in rural, remote and Indigenous communities to integrate HCV care into their practice, including linkages to clinical education and supports.
- **50.** Promote and link providers to existing clinical trainings, mentorship programs and clinical consult services, including those with accreditation for continuing education.

6 Universal hepatitis C testing and linkage to care in prisons

The number of people who have ever had HCV and are incarcerated is estimated to be nearly 40 times higher than in the general population in Canada.⁴⁰ HCV elimination cannot be achieved without changes in Ontario's provincial and federal correctional institutions.

Delivery of appropriate HCV care in correctional facilities is complex, particularly in provincial institutions, where length of stay is often very short, with many people either awaiting a trial or in remand. Adding to the complexity, health services in provincial corrections are delivered by the Ministry of the Solicitor General (SOLGEN) as a separate system from public healthcare (delivered by the Ministry of Health), creating challenges in navigating and administering care.

In Canadian federal prisons (where people serve sentences of at least two years) HCV testing is offered on a universal or opt-out basis with participation rates of 80% to 90% and those with a positive diagnosis are eligible for HCV treatment, representing an example of how care can be standardized in prisons.

Ontario is well positioned to advance HCV elimination strategies in provincial prisons. SOLGEN is working closely with the Ministry of Health and other partners to build capacity among prison healthcare staff, strengthen linkages with community providers and expand access to healthcare providers. However, many barriers remain, and work is needed to increase HCV testing rates and standardize practices among institutions.⁴²

RECOMMENDATIONS

POLICY AND SYSTEM LEVEL

51. Standardize policies and practices in all provincial correctional institutions to provide a minimum standard of care and align with best practices in HCV prevention, testing and treatment.

- **52.** Offer universal, opt-out, HCV testing as soon as possible after admission and make testing routinely accessible, with consent, to identify new HCV cases in provincial and federal correctional settings. (This recommendation also appears in the people with prison experience section)
- **53.** Provide publicly funded HCV POC testing (antibody and RNA) and DBS supplies in correctional institutions.
- **54.** Advocate for the strengthening of healthcare governance within the provincial prison system, including greater alignment with Ontario's public healthcare system.

PROGRAMMING AND SERVICE DELIVERY

- who have a positive HCV diagnosis or immediate linkage to a community provider for those who do not begin treatment during their sentence. (This recommendation also appears in the the people with prison experience section)
- 56. Build linkages between prisons and trusted community organizations to improve continuity of care and create opportunities for them to provide on-site services.

- **57.** Increase awareness and reduce stigma of HCV by providing educational resources for people in prison, including prison staff.
- **58.** Provide practical, relevant training for correctional healthcare staff to begin delivering testing, counselling, linkage to care and treatment.

Raise awareness and link people and providers to hepatitis C information

Stigma and misinformation about HCV compromise access to testing and treatment and hinder prevention efforts. Stigma makes people less likely to disclose their HCV status or take steps to reduce risks and makes them more likely to avoid healthcare interactions, including testing or treatment.

Many people may simply not be aware, due to a lack of symptoms and knowledge around risk factors. Even those working in health and social services may not have up-to-date information about HCV, including testing procedures and newer DAA treatment, let alone risk factors and prevention. A centralized source for HCV information can help to create accessible, reliable information with resources for both the public and healthcare providers, including training and clinical support resources.

Policy and health service interventions to eliminate HCV need to be complemented by widespread, public-focused information campaigns to change the narrative on HCV, including targeted messages for priority populations. They must be developed with input from the communities they are trying to reach and communicated through trusted channels where people already go for information. Increased awareness and training are equally important for healthcare providers, who may not know of risk factors or treatment options, and to fight stigma within the health field.

RECOMMENDATIONS

POLICY AND SYSTEM LEVEL

59. Create a website as a single source for information for both the public and providers that allows people to self-refer for testing or treatment and for providers to be linked with clinical support.

- **60.** Raise the profile of HCV elimination goals, including endorsement from key public figures or organizations.
- **61.** Work with associations, regulatory colleges and healthcare organizations to ensure providers have up-to-date information on HCV and encourage delivery of prevention, testing and treatment services.

PROGRAMMING AND SERVICE DELIVERY

- **62.** Integrate HCV messaging into existing community health campaigns or programs (e.g., sexual health, cancer prevention, mental health).
- **63.** Explore industry and for-profit partnerships to provide funding and to extend the reach of public awareness campaigns.
- **64.** Build regional alliances, tables and coalitions that bring together key partners, including people with lived and living experience, to identify gaps and opportunities for HCV care.

- 65. Support community clinical and non-clinical providers (including people with lived and living experience) to play a greater role in HCV education.
- 66. Meaningfully engage community members and people with lived and living experience in the development of information resources and campaign materials to ensure they are tailored to the needs of their communities.
- **67.** Develop toolkits to help community organizations organize HCV campaigns, such as testing events.
- **68.** Integrate HCV education into harm reduction services, with information tailored to specific populations and providers.

Part 3:

Population-specific recommendations

The elimination of HCV as a public health threat in Ontario can only be realized through a priority populations approach. Although we discuss each priority population individually in this section, we recognize that multiple factors intersect to impact an individual's experience with HCV. While other recommendations in the *Roadmap* also apply to these populations, this section provides specific context and recommendations based off our consultations with people from these communities and providers who work with them.

First Nations, Inuit and Métis peoples

The strength and wisdom of Indigenous peoples are key to the elimination of HCV in Ontario. Historical and present-day colonialism and resulting trauma have led to significant health and social inequities including substance use and HCV among First Nations, Inuit and Métis people in Canada. Today, ongoing discrimination, stigma and racism create significant barriers for people to access life-saving health services. Indigenous Peoples' resilience and strength is rooted in culture, community and self-determination, and are key in addressing HCV.

Provincial HCV strategies need to meet the calls to action from Canada's Truth and Reconciliation Commission, including funding and supporting programs that are Indigenous led, and informed by Indigenous knowledge, as well as increasing cultural competency for non-Indigenous providers. Wholistic wellness is important in First Nation, Inuit and Métis

understandings of health, including physical, mental, emotional and spiritual elements, as well as interconnection with family, community and nature. Indigenous healing and wellness strategies can aim to reconnect people to culture and incorporate Indigenous knowledge and practices that extend beyond western concepts of diagnosing and treating disease.

HCV care must also acknowledge the full diversity of Indigenous peoples in Ontario, First Nations, Inuit and Métis, spanning small and large communities, on reserve and off reserve, urban and rural. Each community is distinct and has different strengths, needs and readiness for HCV interventions. Decisions about HCV care should be made by community members, equipping them with the resources and supports to address HCV in their community.

INDIGENOUS HEALTH IN INDIGENOUS HANDS

As a coalition for HCV elimination, we begin this work in the spirit of reconciliation, recognizing the critical importance of cultural safety and acknowledging the harms of colonialism, including from within Ontario's health system. Indigenous-specific recommendations were developed with guidance and wisdom from an Ontario working group, consisting of an Indigenous Elder, healthcare providers and community members, as well as a national, Indigenous-led initiative for HCV elimination being led by *Waniska*, an Indigenous research centre on HCV, HIV and other sexually transmitted and blood-borne infections.

Jurisdictional issues in Indigenous healthcare are complex. Some First Nations and Inuit people receive additional health coverage through a federal health benefits program, including coverage for HCV treatment; however, Métis and others are excluded from this program. There are also a number of Indigenous-led healthcare organizations that support HCV care,

including Aboriginal Health Access Centres, Indigenous Interprofessional Primary Care Teams, Indigenous Community Health Centres and Indigenous Family Health Teams. In addition, there are a range of other Indigenous-led programs in mental health, maternal and child health, youth services and substance use that could also be allies in HCV elimination efforts.

INUIT

Although Inuit are a relatively small population in Ontario, many Inuit people travel from outside Ontario to access healthcare, particularly for specialist services like HCV or liver care. Many of these people travel from Nunavut to Ottawa, often requiring transit through Iqaluit from more remote areas. These individuals travel long distances with extended time away from their communities and family and often face language and cultural barriers from western providers in the south. Supporting providers to deliver culturally safe and relevant care is essential. Pauktuutit Women of Canada have taken steps to address this with <u>Tukisiviit: Do You Understand?</u>, a glossary of sexual health terms in five major dialects of Inuktitut.⁴⁷ Home tattooing and piercing is part of Inuit culture, and this must be considered as part of HCV prevention and education.⁴⁸

Inuit-led community programs can also be supported to include HCV as part of wholistic care. Mamisarvik

Healing Centre is a residential substance use treatment program providing strength-based, trauma-informed
care that emphasizes cultural healing and wellness. 49 Low-barrier, community-led programs such as this can
be supported to expand access to HCV care for Inuit peoples.

MÉTIS

Métis people are a rapidly growing population, with over 120,000 people living in Ontario.⁴⁵ Métis people do not have access to Indigenous health benefit programs in Canada and the vast majority live in urban areas or outside of Indigenous communities. This means they primarily navigate the mainstream provincial health system, which often does not meet specific cultural or geographic health needs. Métis people are also often under-identified or underrepresented in Indigenous health research.⁵⁰

<u>The Métis Nation of Ontario</u> (MNO) offers a range of health and wellness services to fill these gaps. With satellite offices across the province, they offer wholistic services that address physical, mental, emotional, spiritual and cultural aspects of wellness and healing.⁵¹ With a range of community wellness and navigation programs, MNO is well situated to support expansion of HCV services to Métis communities.

MNO is also leading a community-based research project to better understand sexually transmitted and blood-borne infections among Métis people in Ontario, including HCV. This research will help to explore strengths and challenges for MNO citizens and to improve delivery of services.

FIRST NATIONS

DIVERSE AND DISTINCT

Ontario has Canada's largest First Nations population, with over 236,000 people living in the province.⁴⁵ It's estimated that 58,100 people live in First Nations communities in Ontario, which are often located in rural areas, with poor access to health services.⁴⁵ One in four First Nations communities are remote, only accessible by plane year-round.⁴⁵ The Sioux Lookout First Nation Health Authority (SLFNHA) was established in 1990 to meet the needs of 31 remote First Nations communities in Northwestern Ontario. SLFNHA is directed by First Nations leadership and operates a mobile HCV program that brings prevention, testing and treatment services to remote communities. This program works closely with SLFNHA's harm reduction services, including distribution of harm reduction equipment and overdose prevention training.⁵²

However, HCV is also a major issue for people living outside of First Nations communities. Ontario research showed that people living outside First Nations communities (including in urban areas) had higher rates of diagnosed HCV infections. However, this is partially accounted for by higher rates of testing.⁵³ This demonstrates the importance of urban <u>Indigenous primary health care organizations</u> who are supported by the Indigenous Primary Health Care Council.

URBAN INDIGENOUS COMMUNITIES -

Ontario's large urban Indigenous population is one of the fastest growing in the province and has unique considerations when it comes to HCV care.⁵⁴ Approximately 85.5% of Indigenous people live outside of reserves in Ontario, including sizeable Métis communities.⁵⁴ Indigenous people move to and live in urban areas for a variety of reasons; however, colonial policies and inadequate services can make the transition difficult, bringing unique challenges that are not experienced in rural Indigenous communities.⁵⁵ Urban Indigenous people are served by the mainstream health system, but they may face a lack of culturally safe services, compounded further by barriers such as housing and employment. However, Indigenous Primary Health Care Organizations, Friendship Centres, Métis Nation of Ontario chapters and other Indigenous-led organizations offer a wholistic suite of services to support urban Indigenous communities. These services can be allies to help HCV care reach urban Indigenous people.

RECOMMENDATIONS

INDIGENOUS-LED, WHOLE PERSON CARE

- **69.** Fund and support First Nations-, Inuit- and Métisled programs that are designed and delivered by people from their communities and include Indigenous knowledge.
- 70. Create partnerships with existing Indigenous services including family health, mental health, substance use and youth services, as well as communities, to integrate HCV and harm reduction services.
- 71. Prioritize leadership of Indigenous Elders, Knowledge Holders, Healers and people with lived and living experience in the planning and delivery of Indigenous HCV programs.
- 72. Support communities and local leadership to define local HCV needs and strategies to address HCV and share wise practices from other successful Indigenous HCV initiatives.

TRAUMA-INFORMED CARE AND CULTURAL SAFETY IN MAINSTREAM HEALTH SERVICES

- 73. Incorporate First Nations, Inuit and Métis cultural safety and anti-stigma training from credible sources as part of HCV education for healthcare providers.
- 74. Create and expand First Nations, Inuit and Métis health navigator roles to support and advocate for people as they move through HCV diagnosis and treatment.
- 75. Prioritize meaningful engagement with Indigenous people by non-Indigenous organizations offering HCV services, including a non-tokenistic approach to hiring and the meaningful partnerships with communities or Indigenous organizations.

RURAL AND REMOTE COMMUNITIES

- **76.** Support individual communities and local leaders to undertake community consultations to assess and build community readiness and develop local programs that cater to their needs.
- 77. Offer mobile, "pop-up" or virtual care in smaller communities, or supports and a pathway to seek care outside of the community to provide a confidential alternative for those who are reluctant to seek care from their usual providers.

People who use drugs

People who use drugs (PWUD) have the highest rates of new HCV infections but are often overlooked and underserved by the healthcare system.⁵⁶ PWUD are stigmatized and criminalized, creating significant barriers to accessing care. Systemic criminalization and stigma are also fuelling other crises for PWUD, including a toxic drug supply, housing insecurity, mental health challenges and other health issues.

Care providers often lack the knowledge or resources to support PWUD or may be reluctant to treat them in their practice due to stigma and bias. Treatment is highly effective at curing HCV for all people, including people who use drugs. Treatment should be offered regardless of drug use and without stigma, including to cure reinfections.12

Low-barrier models, like the Ontario Hepatitis C Teams, have been successful in providing wraparound supports for HCV care for PWUD, integrating harm reduction, mental health, housing services and social support. People with lived and living experience are also important providers, bringing unique expertise and community connections to HCV programs. Flexible, lowbarrier programs can help to meet people where they are at. This includes flexible appointment scheduling, meeting in the community instead of a clinic, and options for how medication is dispensed.

The Ontario Hepatitis C Teams Network

The Ontario Hepatitis C Teams are funded by the Ontario Ministry of Health to provide HCV services for people who use drugs and other priority populations including people with prison experience and Indigenous peoples. Multidisciplinary teams are embedded in 18 communities across the province, providing HCV prevention, education, testing and treatment. They also provide wraparound supports for harm reduction, social services, primary care and more. The teams are grounded in principles of health equity, harm reduction and involvement of people with lived and living experience.

Between 2013 and 2019, the teams conducted over 65,500 HCV tests and supported nearly 6000 people to complete HCV treatment.⁵⁷ Lowbarrier models like the Ontario Hepatitis C Teams are crucial to reach priority populations and to achieve elimination. Learn more at OntarioHepC.ca.



Voices of hepatitis C:

"People that come to our programs have such complex lives. It's hard to prioritize a disease with no symptoms."



RECOMMENDATIONS

INTEGRATED, MULTIDISCIPLINARY HEPATITIS C CARE

- **78.** Offer treatment to all people who use drugs who want it, without stigma, including for those being treated for reinfections.
- **79.** Expand programs for low-barrier, wraparound HCV care, including culturally safe, multidisciplinary support for harm reduction, substance use, mental health, housing and primary care.
- **80.** Integrate HCV services into services or settings that are already being accessed by PWUD, including harm reduction, housing, mental health or other low-barrier community services.
- **81.** Facilitate task shifting of clinical tasks, to streamline treatment and retain an individual in care.

EXPANDING THE ROLE OF PEOPLE WITH LIVED AND LIVING EXPERIENCE IN HCV CARE

- **82.** Support employment, fair compensation and skill-building for people with lived and living experience to lead and deliver HCV services in the community, including resources for organizations to help them introduce and expand peer roles in their services.
- **83.** Promote regional alliances, tables or coalitions to bring together hospital partners, public health units, community partners and people with lived and living experience to identify local gaps in care for PWUD and opportunities for HCV care.

BRINGING PREVENTION, TESTING AND TREATMENT TO WHERE PEOPLE ARE

- **84.** Engage programs to offer HCV care in community settings, such as shelters, harm reduction sites, drop-in programs, residential buildings and more.
- **85.** Promote and fund mobile and virtual models of care, particularly in rural communities or where services are not readily available.
- **86.** Explore opportunities to ethically incentivize or support people to connect to care and complete treatment, such as cash, gift cards or cellphones.
- 87. Expand community partnerships to provide population-specific prevention resources and care tailored to the needs of women, youth, 2SLGTBQ+ and gender-diverse, racialized and Indigenous people.



People with prison experience

People who are incarcerated have among the most complex health and social service needs in the province. Studies have consistently shown that this population has higher rates of infectious disease, is more likely to have issues with substance use, and have other healthcare and mental health needs. In Ontario, one in five people are experiencing homelessness at the time of incarceration, while one in three have no fixed address when they are released.⁵⁹

Criminalization means people who use drugs are over-represented in prisons and may enter prison with HCV and little to no access to harm reduction equipment inside.⁴² The already high prevalence of HCV among people who use drugs leads to increased risk of transmission inside prisons as well as from other practices including tattooing.

Prison sentences offer an opportunity for marginalized individuals to be engaged in health care, including HCV treatment. There are a growing number of programs across the province to strengthen prison healthcare services, including a commitment to better manage chronic and infectious diseases. The provincial correctional system has hired several primary healthcare nurse practitioners to expand access to healthcare. These nurse practitioners could also play a key role in HCV testing and treatment with appropriate supports. The Ministry of Health and SOLGEN are also enabling HCV care through enhanced training and development for staff. A pilot education program for healthcare staff in provincial correctional institutions aims to increase uptake of testing and diagnosis and support treatment initiation or referral to community providers.

★ Voices of hepatitis C:

"I got an envelope when I left prison that said I tested positive for hepatitis C. What am I supposed to do with that?"

RECOMMENDATIONS

GOOD PRACTICES AND
STANDARDIZED HCV CARE IN
CORRECTIONS



- **52.** Offer universal, opt-out, HCV testing at admission and make testing routinely accessible, with consent, to identify new HCV cases in provincial and federal correctional settings. (*This recommendation also appears in Priority 6*)
- **88.** Standardize policies and practices to create care plans for individuals diagnosed with HCV that follow them between facilities or if they are released.
- **89.** Develop policies around treatment coverage and prescribing in prisons to minimize administrative barriers and delays to starting treatment.
- **90.** Expand and improve access to harm reduction and prevention services in all corrections facilities.
- **91.** Ensure the availability of immediate initiation or continuation of opioid agonist therapy upon admission to prison and in the community after release.

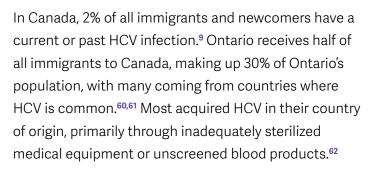
LINKING PEOPLE TO COMMUNITY CARE UPON RELEASE

- **55.** Provide immediate HCV treatment starts for all who test positive or immediate linkage to a community provider for those who do not complete treatment during their sentence. (This recommendation also appears in Priority 6)
- **92.** Improve tracking of individuals receiving HCV care within provincial correctional facilities, including ensuring care is transitioned to other providers if they are transferred or released.
- **93.** Improve HCV data in prisons to identify gaps in accessing testing, treatment and linkage to care upon release.

ACCESS TO CULTURALLY RESPONSIVE INFORMATION AND COUNSELLING

- **94.** Create partnerships to provide populationspecific community supports and prevention resources and care for people in correctional facilities who are Indigenous, racialized, women, youth, 2SLGBTQ+ and gender diverse.
- **95.** Provide additional training in anti-stigma, anti-racism and cultural safety for all corrections staff through credible training programs.
- **95.** Collaborate with community organizations and people with lived experience to deliver HCV education and awareness building for people in prisons.

Immigrants and newcomers



Newcomer and immigrant communities are diverse — culturally, linguistically and in their experiences with health services. However, common barriers include difficulty accessing healthcare, systemic racism, stigma, misinformation around infectious diseases and fear of deportation. People born outside of Canada are not diagnosed until, on average, 10 years after arriving. ⁶³ Compared with people born in Canada, immigrants with HCV are also more likely to be hospitalized with

complications and more likely to die of HCV-related causes.⁶⁴



Newcomers and immigrants have not traditionally been prioritized for HCV screening, and many providers are not aware of the risk for this group. Primary care providers, including walk-in clinics, will be the first interactions with the healthcare system for immigrants and newcomers, and they are important stakeholders in expanding care for these communities. Community health centres are also key stakeholders as many offer specific programs to serve immigrant and newcomer communities.

✓ Voices of hepatitis C:

"I passed my medical when I came to Canada. I assumed I was healthy."

CATIE Ontario Immigrant and Newcomer Hepatitis C Program

This program provides culturally relevant, in-language information for immigrant and newcomer communities in Ontario and service providers working with them. Funded by the Ontario Ministry of Health, this program has helped to increase awareness of HCV among Ontario's largest immigrant communities, including Chinese, Punjabi, Pakistani and Filipino people. The program has developed a number of web and print resources and facilitates a network of community educators. Learn more at: www.hepcinfo.ca.

RECOMMENDATIONS

EDUCATING AND ENGAGING PROVIDERS

- 97. Obtain endorsement and promotion from professional associations and colleges to offer one-time screening for all newcomers and immigrants from countries where HCV is common.
- 98. Engage and fund community health centres to deliver HCV care where immigrant and newcomer programs exist, including endorsement from the Alliance for Healthier Communities.
- 99. Offer tailored training and clinical supports for primary care providers to treat patients who test positive for HCV without referral to a specialist, including mentorship or e-consults.
- 100. Incorporate cultural safety and anti-stigma training as part of HCV education for healthcare providers.

AWARENESS BUILDING AMONG IMMIGRANT AND NEWCOMER COMMUNITIES

- 101. Develop community-based awareness campaigns to destignatize HCV and encourage testing among people from countries where HCV is common.
- **102.** Integrate HCV messaging alongside education for other diseases such as HIV, tuberculosis or hepatitis B.

COMMUNITY-BASED EDUCATION AND TESTING

- **103.** Expand access to services in multiple languages, including use of medical interpretation services.
- **104.** Develop partnerships with local community groups and provide funds to provide outreach testing and linkage to care for HCV, including faith-based or cultural organizations, or local businesses.



Gay, bisexual and other men who have sex with men (gbMSM)

While gay, bisexual and other men who have sex with men (gbMSM) represent a relatively small percentage of people with HCV, rates of infection are on the rise. Nationally, it is estimated that 4% of gbMSM have evidence of current or past HCV infection.^{9,} Transmission can occur through sexual transmission as well as through shared drug equipment. Although historically, HCV rates are higher among HIV-positive gbMSM, new cases have been reported among HIV-negative gbMSM who are using HIV pre-exposure prophylaxis (PrEP) or other medical HIV prevention tools, and rates of reinfection are also increasing.^{67, 68}

HCV efforts need to recognize shifting messaging in HIV-focused prevention with the advent of PrEP and U=U (undetectable equals untransmittable). Canadian guidelines recommend that gbMSM on PrEP be tested annually for HCV as part of routine sexual health testing. ⁶⁹ As "party n' play" (using drugs to facilitate or enhance sexual encounters) grows, new strategies are also needed that promote risk reduction for HCV transmission for both sex and drug use.

Agencies serving gbMSM, including sexual health clinics, HIV services and PrEP/PEP (post-exposure prophylaxis) clinics have a long-standing role in HIV and sexual health. As trusted providers, they can offer confidential, easy-to-access and stigma-free community health promotion for a population that continues to face barriers because of homophobia and discrimination.

RECOMMENDATIONS

PRIORITIZING HCV EDUCATION AND AWARENESS

105. Create sex-positive awareness campaigns developed with community members with messaging, information and resources tailored to their communities.

- 106. Create tools and resources to support AIDS service organizations (ASO), sexual health programs, HIV treatment programs and other providers who work with gbMSM to play a greater role in HCV education and prevention.
- **107.** Expand harm reduction services to cater to gbMSM, including party n' play programming, including in community spaces and from existing community organizations.

TESTING AS PREVENTION

- 108. Standardize routine HCV testing whenever HIV testing is offered, including through use of point-of-care tests facilitated by clinical and nonclinical providers.
- **109.** Offer routine initial and ongoing HCV testing to all people receiving pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP).

CONNECTING TO CARE AND TREATMENT

- 110. Train and support sexual health clinics, ASOs and other community-based organizations to routinely provide HCV counselling, testing and connection to care.
- 111. Equip agencies that serve gbMSM with information and resources to make referrals to HCV testing and treatment services in their community.
- **112.** Increase research and data collection on HCV in gbMSM to better understand prevalence, inform service delivery and monitor progress toward HCV elimination.

Women, youth and children

Women

Women face additional barriers to accessing HCV care and prevention. Emerging evidence has shown that HCV rates are growing, particularly among young women and among women who use drugs.⁷⁰ In prisons, women are twice as likely as men to have evidence of a past or current HCV infection.⁷¹ While they are represented in other priority populations, intersecting identities mean that women, as well as transgender and non-binary people, face additional barriers related to:

- experiences of homelessness and housing insecurity
- stigma and racism against Indigenous women and women of colour
- cultural norms around gender in newcomer communities
- engagement in sex work and risk of criminalization
- gender-based and sexualized violence and exploitation

Women who inject drugs may be reliant on a partner who both supplies drugs and equipment and is likely to assist with injecting. Power imbalances in intimate relationships can lead to more risk taking, and women who inject drugs are more likely than men who inject drugs to be dependent on a sexual partner for help acquiring drugs and injecting. There are also additional considerations around treatment for people who are pregnant.

RECOMMENDATIONS

- **113.** Expand access to programs and interventions tailored to women, including harm reduction programs.
- **114.** Offer prenatal HCV testing and counselling for all pregnant people, particularly for those at high risk for HCV, including infant screening, however without risk of involvement from child welfare services.

- 115. Provide follow-up care and treatment for pregnant people who are diagnosed with chronic HCV to prevent transmission in potential future pregnancies.
- **116.** Prioritize research aimed at understanding the use of HCV treatment in pregnancy.

Youth and children

Youth are an overlooked age group with an increasing burden of HCV. While there are limited data for Ontario, evidence from British Columbia indicates that those under 20 are the fastest growing age category of new HCV infections.⁷²

HCV is more common among children who are immigrants or newcomers (including international adoptees) from countries where HCV is common, among teens who are injecting drugs, among children of parents who use drugs and among street-involved youth.⁷³ However HCV treatment is not routinely available for those under age 12 in Canada, and there is a lack of awareness around testing and care guidelines.

Other intersectional ties also need to be considered, for example among 2SLGTBQ youth who may be more likely to be street involved, and for racialized and Indigenous youth who may face additional barriers to access.

RECOMMENDATIONS

- **117.** Expand HCV treatment eligibility and coverage for children and youth.
- **118.** Update HCV testing and treatment guidelines for youth and improve awareness among providers, particularly in pediatric healthcare.
- **119.** Ensure availability of youth-focused services and resources for HCV and harm reduction, including education and testing campaigns.

- **119.** Improve data collection and analysis to better understand and monitor the prevalence of HCV among youth, including screening and follow-up for vertical transmission.
- **120.** Standardize postnatal testing for those born from mothers living with HCV.



Part 3:
The Ontario Hepatitis C Elimination Roadmap

Appendices

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References

- ¹ Remis R, Liu J. *Epidemiology of hepatitis C infection in Ontario, 2010.* Toronto: AIDS Bureau, Ontario Ministry of Health and Long-Term Care; 2011.
- ² Myers RP, Liu MF, Shaheen AAM. The burden of hepatitis C virus infection is growing: a Canadian population-based study of hospitalizations from 1994 to 2004. *Canadian Journal of Gastroenterology*. 2008;22(4):381-7.
- ³ Myers RP, Krajden M, Bilodeau et al. Burden of disease and cost of chronic hepatitis C infection in Canada. *Canadian Journal of Gastroenterology and Hepatology*. 2014;28(5):243-50.
- ⁴ Lourenço L, Kelly M, Tarasuk J et al. The hepatitis C epidemic in Canada: an overview of recent trends in surveillance, injection drug use, harm reduction and treatment. *Canada Communicable Disease Report*. 2021;47(12):505-14.
- ⁵ Manns MP, Maasoumy B. Breakthroughs in hepatitis C research: from discovery to cure. *Nature Reviews Gastroenterology & Hepatology*. 2022;19:533-50.
- 6 Reducing the health impact of sexually transmitted and blood-borne infections in Canada by 2030: a pan-Canadian STBBI framework for action. Ottawa: Public Health Agency of Canada; 2018. Available from: https://www.canada.ca/en/public-health/services/infectious-diseases/sexual-health-sexually-transmitted-infections/reports-publications/sexually-transmitted-blood-borne-infections-action-framework.html
- ⁷ Canadian Network on Hepatitis C. *Blueprint to inform hepatitis C elimination efforts in Canada*. Montreal: Canadian Network on Hepatitis C; 2019. Available from: https://www.canhepc.ca/en/blueprint/publication

- ⁸ CATIE. Windows of opportunity: integrated hepatitis C programming approaches for priority populations. National Deliberative Dialogue on Integrated Hepatitis C Programming and Services. Meeting report. Toronto: CATIE; 2015. Available from: https://www.catie.ca/sites/default/files/DD-report-2015-en.pdf
- ⁹ Public Health Agency of Canada. *People living with hepatitis C (HCV) in Canada, 2019.* Ottawa: Public Health Agency of Canada; 2022. Available from: https://www.canada.ca/en/public-health/services/publications/diseases-conditions/infographic-people-living-with-hepatitis-c.html
- ¹⁰ Feld J, Klein M, Rahal Y et al. Timing of elimination of hepatitis C virus in Canada's provinces. *Canadian Liver Journal*. 2022;5(4):493-506.
- "Public Health Ontario. Hepatitis C virus (HCV) RNA detection using dried blood spots (DBS) update.

 Toronto: Public Health Ontario; 2020. Available from: https://www.publichealthontario.ca/-/media/Documents/Lab/lab-sd-123-hcv-rna-detection-dbs.pdf?la=en&rev=8a61c8961f604dd3b7f8da3d0986d3fa&sc_lang=en&hash=742AE8A48FCD9850D967C3DE0456CC42
- ¹² CATIE. CATIE statement on hepatitis C treatment efficacy among people who use drugs. Toronto: CATIE; 2021. Available from: https://www.catie.ca/catie-statement-on-hepatitis-c-treatment-efficacy-among-people-who-use-drugs
- ¹³ Shah H, Bilodeau M, Burak KW et al. The management of chronic hepatitis C: 2018 guideline update from the Canadian Association for the Study of the Liver. CMAJ. 2018;190(22):E677-87.

- ¹⁴ Cancer Care Ontario. *Ontario cancer facts*. Toronto: Cancer Care Ontario; 2018. Available from: https://www.cancercareontario.ca/en/cancer-facts/liver-cancer-incidence-rates-have-increased-ontario
- ¹⁵ Mandel E, Peci A, Cronin K et al. The impact of the first, second and third waves of covid-19 on hepatitis B and C testing in Ontario, Canada. *Journal of Viral Hepatitis*. 2021;29:205-8.
- ¹⁶ Elliot S. Simplifying the road to hepatitis C diagnosis: reflex testing in Canada. *Prevention in Focus*. Fall 2021. Available from: https://www.catie.ca/prevention-infocus/simplifying-the-road-to-hepatitis-c-diagnosis-reflex-testing-in-canada
- ¹⁷ Kushner R. Hepatitis C point-of-care testing: What is its impact on testing and linkage to care? *Prevention in Focus*. Fall 2022. Available from: https://www.catie.ca/prevention-in-focus/hepatitis-c-point-of-care-testing-what-is-its-impact-on-testing-and-linkage-0
- ¹⁸ Harrigan M. Dried blood spot collection for hepatitis C and HIV testing in Canada. *Prevention in Focus*. Spring 2021. Available from: https://www.catie.ca/prevention-in-focus/dried-blood-spot-collection-for-hepatitis-c-and-hiv-testing-in-canada
- ¹⁹ CATIE. Reaching the undiagnosed: dried blood spot testing for Hepatitis C and HIV a new approach for the rural and remote communities [webinar]. Toronto: CATIE; 2021.
- ²⁰ Hamadeh A, Haines A, Feng Z et al. Estimating chronic hepatitis C prevalence in British Columbia and Ontario, Canada, using population-based cohort studies. *Journal of Viral Hepatitis*. 2020;27(12):1419-29.
- ²¹ Greenaway C, Wong DKH, Assaway D et al. Screening for hepatitis C infection: evidence review for newly arriving immigrants and refugees. Appendix 7 in: Guidelines for immigrant health. CMAJ 2011. Available from: https://www.cmaj.ca/content/suppl/2010/06/07/cmaj.090313.DC1/imm-hepc-7-at.pdf

- ²² CATIE. Approaches to hepatitis C testing in Canada. Toronto: CATIE; 2021. Available from: https://www.catie.ca/hepatitis-c-an-in-depth-guide/approaches-to-hepatitis-c-testing-in-canada
- ²³ Remis RS. Modelling the incidence and prevalence of hepatitis C virus infection and its sequelae in Canada, 2007. Ottawa: Public Health Agency of Canada; 2009.
- ²⁴ Trubnikov M, Yan P, Archibald C. Estimated prevalence of hepatitis C virus infection in Canada, 2011. *Canada Communicable Disease Report*. 2014;40:429-36.
- ²⁵ Feld JF, Ward JW. Key elements on the pathway to HCV elimination: lessons learned from the AASLD HCV Special Interest Group 2020. *Hepatology Communications*. 2021;5(6):911-22.
- ²⁶ Schillie S, Wester C, Osborne M et al. CDC recommendations for hepatitis C screening among adults United States, 2020. *Morbidity and Mortality Weekly Reports*. 2020;69(2):1-17.
- ²⁷ CDC recommendations for hepatitis C screening among adults [summary of recommendations]. Atlanta: Centers for Disease Control and Prevention; 2020. Available from: https://www.cdc.gov/hepatitis/hcv/pdfs/HepCScreening2020RecsSummary.pdf
- ²⁸ Viral Hepatitis testing. British Columbia: BC Guidelines; 2021. Available from: https://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/hepatitis
- ²⁹ Biondi M, Feld JF. Hepatitis C models of care: approaches to elimination. *Canadian Liver Journal*. 2020;3(2):165-76.
- ³⁰ Hoy C. Integrating hepatitis C testing and treatment into community settings or primary care to reach priority populations. *Prevention in Focus*. Fall 2021. Available from: https://www.catie.ca/prevention-infocus/integrating-hepatitis-c-testing-and-treatment-into-community-settings-or

- ³¹ Broad J, Mason K, Guyton M et al. Peer outreach point-of-care testing as a bridge to hepatitis C care for people who inject drugs in Toronto, Canada. *International Journal of Drug Policy*. 2020;80:102755.
- ³² Sweeney S, Ward Z, Platt L et al. Evaluating the cost-effectiveness of existing needle and syringe programmes in preventing hepatitis C transmission in people who inject drugs. *Addiction*. 2019;114(3);560-570
- ³³ Ijioma S, Pontinha VM, Holdford DA et al. Costeffectiveness of syringe service programs, medications for opioid use disorder, and combination programs in hepatitis C harm reduction among opioid injection drug users: a public payer perspective using a decision tree. *Journal of Managed Care and Specialty Pharmacy*. 2021;27(2);137-146.
- ³⁴ Marquez LK, Fleiz C, Burgos JL et al. Costeffectiveness of hepatitis C virus (HCV) elimination strategies among people who inject drugs (PWID) in Tijuana, Mexico. *Addiction*. 2021;116(10);2734-2745.
- ³⁵ Lambdin BH, Bluthenthal RN, Zibbell JE et al. Associations between perceived illicit fentanyl use and infectious disease risks among people who inject drugs. *International Journal of Drug Policy*. 2019;74:299-304.
- ³⁶ Jacka B, Larney S, Degenhardt L et al. Prevalence of injecting drug use and coverage of interventions to prevent HIV and hepatitis C virus infection among people who inject drugs in Canada. *American Journal of Public Health*. 2020;110(1):45-50.
- ³⁷ Gomes T, Murray R, Kolla G et al. *Changing circumstances surrounding opioid-related deaths in Ontario during the COVID-19 pandemic*. Toronto: Ontario Drug Policy Research Network, Office of the Chief Coroner for Ontario, Ontario Forensic Pathology Service, Public Health Ontario; 2021. Available from: https://odprn.ca/research/publications/opioid-related-deaths-in-ontario-during-covid/

- ³⁸ Public Health Agency of Canada. How has COVID-19 impacted access to STBBI-related health services, including harm reduction services, for people who use drugs or alcohol in Canada? Ottawa: Public Health Agency of Canada; 2021. Available from: https://health-infobase.canada.ca/datalab/covid-19-stbbi-services.html
- ³⁹ Tadrous M, Mason K, Dodd Z et al. Prescribing trends in direct-acting antivirals for the treatment of hepatitis C in Ontario, Canada. *Canadian Liver Journal*. 2021;4(1):51-8.
- ⁴⁰ Kronfli N, Buxton JA, Jennings L et al. Hepatitis C virus (HCV) care in Canadian correctional facilities: Where are we and where do we need to be? *Canadian Liver Journal*. 2020;2(4):171-83.
- ⁴¹ Kronfli N, Dussault C, Bartlett S et al. Disparities in hepatitis C care across Canadian provincial prisons: implications for hepatitis C micro-elimination. *Canadian Liver Journal*. 2021;4(3):292-310.
- Peck K, Li Y, Chan J et al. HCV elimination opportunities in Ontario identified by analysis of screening activity in correctional facilities. Abstract P097. In: Annual meeting of the Canadian Association for the Study of the Liver (CASL), the Canadian Network on Hepatitis C (CANHEPC) and the Canadian Association of Hepatology Nurses (CAHN) 2021 abstracts. Canadian Liver Journal. 2021;4(2):125-524. Available from: https://canlivj.utpjournals.press/action/showPopup?citid=citart1&id=s119&doi=10.3138%
- ⁴³ Indigenous Primary Health Care Council. Model of wholistic health & wellbeing. Toronto: Indigenous Primary Health Care Council. Available from: https://iphcc.ca/about-the-iphcc/
- 44 Rainbow Health Ontario. As an Indigenous person, what health care do I have access to? Available from: https://www.rainbowhealthontario.ca/trans-health-knowledge-base/as-an-indigenous-person-what-health-care-do-i-have-access-to/

- ⁴⁵ Ministry of Indigenous Relations and Reconciliation. Indigenous peoples in Ontario. Available from: https://www.ontario.ca/document/spirit-reconciliation-ministry-indigenous-relations-and-reconciliation-first-10-years/indigenous-peoples-ontario
- ⁴⁶ Inuit Tapirit Kanatami. Social determinants of Inuit health in Canada. Ottawa: Inuit Tapirit Kanatami; 2014. Available from: https://www.itk.ca/wp-content/uploads/2016/07/ITK_Social_Determinants_Report.pdf
- ⁴⁷ Pauktuutit Inuit Women of Canada. *Tukisiviit: Do you understand?* Ottawa: Pauktuutit Inuit Women of Canada; 2016. Available from: https://pauktuutit.ca/ project/tukisiviit-understand-revised-dialect/
- ⁴⁸ Pauktuutit Inuit Women of Canada. *Inuit five-year* strategic plan on hepatitis C –2013–2018. Ottawa: Pauktuutit Inuit Women of Canada; 2013. Available from: https://pauktuutit.ca/project/inuit-five-year-strategic-plan-hepatitis-c-2013-2018/
- ⁴⁹ Tungasuvvingat Inuit. Mamisarvik Healing Centre. Available from: https://tiontario.ca/programs/mamisarvik-healing-centre
- ⁵⁰ Métis Nation of Ontario. New report finds increased risks for Cancer in the Ontario Métis population. Ottawa: Métis Nation of Ontario; 2015. Available from: https://www.metisnation.org/news/new-report-finds-increased-risks-for-cancer-in-the-ontario-metis-population/
- ⁵¹ Métis Nation of Ontario. Healing & wellness. Available from: https://www.metisnation.org/programs-and-services/healing-wellness/
- ⁵² Sioux Lookout First Nations Health Authority.
 Preventing infectious diseases. Available from: https://www.slfnha.com/health-services/approaches-to-community-wellbeing-acw/healthy-living/preventing-infectious-diseases/

- ⁵³ Mendlowitz A, Brenner KE, Walker JD et al. Hepatitis C virus infection in First Nations populations in Ontario from 2006 to 2014: a population-based retrospective cohort analysis. *CMAJ Open* 2021;9(3):E886-96.
- Ministry of Health and Long-Term Care. Relationship with Indigenous communities guideline, 2018.
 Toronto: Ministry of Health and Long-Term Care; 2018.
 Available from: https://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/protocols_guidelines/Relationship_with_Indigenous_Communities_Guideline_en.pdf
- ⁵⁵ Indigenous Services Canada. Summary of what we heart in Urban Aboriginal Strategy Engagement 2016. Available from: https://www.isc-sac.gc.ca/eng/1490291019414/1583690920335
- ⁵⁶ Giacomazzo A, Challacombe L. Hepatitis C treatment in harm reduction programs for people who use drugs. *Prevention in Focus*. Spring 2020. Available from: https://www.catie.ca/prevention-in-focus/hepatitis-c-treatment-in-harm-reduction-programs-for-people-who-use-drugs
- 57 Ontario Community HIV/AIDS Reporting Tool. 2018–19 snapshot: impact of Ontario's community-based HIV, hepatitis C and harm reduction services. Available from: https://ochart.ca/sites/default/files/doc/vff/FactSheet1_2019_EN.pdf
- ontario HIV Treatment Network. Inside and out: changing the course of the HIV prevention, engagement and care cascade for current and former prisoners.

 Toronto: Ontario HIV Treatment Network. Available from: https://www.ohtn.on.ca/insideandout/assets/docs/inside-and-out-conference-backgrounder.pdf
- ⁵⁹ John Howard Society of Ontario. *No Fixed Address: The Intersections of Justice Involvement and Homelessness*. 2022. Available from: https://johnhoward.on.ca/wp-content/uploads/2022/05/No-Fixed-Address-Final-Report.pdf

- ⁶⁰ Ontario Minister of Finance Tax Office. *Ontario*Demographic Quarterly: highlights of fourth quarter.

 Oshawa (ON): Minister of Finance Tax Office; 2022.

 Available from: https://www.ontario.ca/page/ontario-demographic-quarterly-highlights-fourth-quarter
- ⁶¹ Ontario Ministry of Finance. 2016 Census Highlights: Immigration. Office of Economic Policy Labour Economics Branch; 2017. Available from: https://www.ontario.ca/document/2016-census-highlights/fact-sheet-8-immigration
- 62 Tanveer F. Hepatitis C in Canadian immigrants and newcomers: Why are hepatitis C rates higher in these populations? Prevention in Focus. Spring 2017. Available from: https://www.catie.ca/prevention-in-focus/hepatitis-c-in-canadian-immigrants-and-newcomers-why-are-hepatitis-c-rates
- ⁶³ Greenaway C, Azoulay L, Allard R et al. A population-based study of chronic hepatitis C in immigrants and non-immigrants in Quebec, Canada. *BMC Infectious Diseases*. 2017;17:140.
- ⁶⁴ Greenaway C, Makarenko J, Tanveer F et al. Addressing hepatitis C in the foreign-born population: a key to hepatitis C virus elimination in Canada. *Canadian Liver Journal*. 2018:1(2):34-50.
- ⁶⁵ Jordan AE, Perlman DC, Neurer J et al. Prevalence of hepatitis C virus infection among HIV+ men who have sex with men: a systematic review and meta-analysis. *International Journal of STD and AIDS*. 2017;28(2):145-59.
- ⁶⁶ Public Health Agency of Canada. *M-Track enhanced* surveillance of HIV, sexually transmitted and bloodborne infections, and associated risk behaviours among men who have sex with men in Canada. Ottawa: Public Health Agency of Canada; 2011. Available from: http://librarypdf.catie.ca/ATI-20000s/26403.pdf

- ⁶⁷ Lockart I, Matthews GV, Danta M. Sexually transmitted hepatitis C infection: the evolving epidemic in HIV-positive and HIV-negative MSM. *Current Opinion in Infectious Diseases*. 2019;32(1):31-7.
- ⁶⁸ van de Laar T, Pybus O, Bruisten S et al. Evidence of a large, international network of HCV transmission in HIV-positive men who have sex with men. *Gastroenterology*. 2009;136(5):1609-17.
- ⁶⁹ Tan DHS, Hull MW, Yoong D et al. Canadian guideline on HIV pre-exposure prophylaxis and nonoccupational postexposure prophylaxis. *Canadian Medical Association Journal*. 2017;189(47):1448-1458.
- ⁷⁰ Public Health Agency of Canada; Rates of hepatitis C infection by age group and sex. Section 4.1.2 in: *Report on hepatitis B and C in Canada*: 2018. Ottawa: Public Health Agency of Canada; 2021. Available from: https://www.canada.ca/en/public-health/services/publications/diseases-conditions/report-hepatitis-b-c-canada-2018.html#section412
- ⁷¹ Ha S, Totten S, Pogany L et al. Hepatitis C in Canada and the importance of risk-based screening. *Canada Communicable Disease Report*. 2016;42(3):57-62.
- ⁷² BC Centre for Disease Control. *HCV annual report*, 2000-2019. Vancouver: BC Centre for Disease Control; 2021. p. 17. Available from: http://www.bccdc.ca/resource-gallery/Documents/Statistics%20and%20 Research/Statistics%20and%20Reports/STI/HCV%20 in%20BC%2c%202000-2019.pdf
- ⁷³ Canadian Paediatric Society. The management of infants, children, and youth at risk for hepatitis C virus (HCV) infection. Available from: https://cps.ca/en/documents/position/the-management-of-hepatitis-c-virus#ref9