

Should we screen people at increased risk of hepatitis C virus infection?

Case scenario

A 53-year-old woman who emigrated from Pakistan a few years ago sees you for fatigue. She has many reasons to be fatigued. She is married with 2 teenage children and works full time but lives close to the poverty line. Her physical examination findings are unremarkable. You show compassion, review sleep hygiene practices, and encourage physical activity. You order a complete blood count to rule out anemia, consider a thyroid test, and then think: "What about hepatitis C?"

Evidence

Hepatitis C virus (HCV) infection is a worldwide problem. It can be acute or chronic, and is often asymptomatic until liver damage is extensive. In Canada, about 1% of the population has been exposed to HCV (Figure 1).^{1,2} About 30% of them spontaneously clear the infection; for the rest, varying degrees of progression might follow. In Canada, it has been estimated that 44% of those with HCV are unaware they are infected,¹ and could inadvertently pass it on.

The Canadian Task Force on Preventive Health Care recommended against screening for HCV in adults who are not at elevated risk.³ This is consistent with the World Health Organization (WHO),⁴ the College of Family Physicians of Canada and the Public Health Agency of Canada,^{5,6} and a 2018 guideline from the Canadian Association for the Study of the Liver,⁷ which all recommend screening for people who are at increased risk of HCV infection (Box 1).⁴ In addition to the WHO risk groups, Canadian recommendations include screening for individuals who were born in, have traveled to, or have lived in a country where HCV is endemic.⁵⁻⁷ The US Centers for Disease Control and Prevention and the 2018 guideline also include people born between 1945 and 1965 (baby boomers) as a high-risk group.^{7,8}

Hepatitis C virus infection is now treatable with second-generation direct-acting antiviral medications that are well tolerated and highly effective. This has led the WHO to set an ambitious strategy to eliminate HCV as a public health threat. There is evidence that screening, early detection, and treatment are making a difference. A recent Canadian study showed hospital admissions for HCV and liver-related complications have decreased since the introduction of the new antiviral medications in 2014.⁹

Box 1. Populations at increased risk of HCV infection

The following populations are at increased risk:

- people who inject drugs;
- people who use intranasal drugs;
- recipients of infected blood products or invasive procedures with inadequate infection control practices;
- children born to mothers infected with HCV;
- people with sexual partners who are infected with HCV;
- people with HIV infection;
- prisoners or previously incarcerated persons; and
- people who have had tattoos or piercings

HCV—hepatitis C virus.

Data from the World Health Organization.⁴

Bottom line

Pakistan has one of the highest rates of HCV infection in the world, so you ordered a screening test for anti-HCV antibodies. The results were positive so you ordered a confirmatory nucleic acid test for HCV RNA. These results were also positive. You arranged to see the patient to discuss the results and emphasized that highly effective treatment was available. You then prepared her for a pre-treatment assessment that would include bloodwork and noninvasive tests to assess the liver.⁸ You invited her husband and other family members with the same risk from country of origin to be tested. As your patient left, you felt good knowing that not only have you helped this woman, you have also helped stop the spread of HCV in Canada and joined the global effort to eliminate this disease. 🌱

References

1. Trubnikov M, Yan P, Archibald C. Estimated prevalence of hepatitis C virus infection in Canada, 2011. *Can Commun Dis Rep* 2014;40(19):429-36.
2. Public Health Agency of Canada. Hepatitis C in Canada infographic. *Can Commun Dis Rep* 2018;44(7-8):189.
3. Canadian Task Force on Preventive Health Care. Recommendations on hepatitis C screening for adults. *CMAJ* 2017;189(16):E594-604.
4. World Health Organization. *Hepatitis C. Key facts*. Geneva, Switz: World Health Organization; 2017. Available from: www.who.int/news-room/fact-sheets/detail/hepatitis-c. Accessed 2018 Jun 25.
5. CFPC, Public Health Agency of Canada. *Primary care management of chronic hepatitis C: professional desk reference*. Mississauga, ON: CFPC; 2009. Available from: www.cfpc.ca/projectassets/templates/resource.aspx?id=1147&langType=4105. Accessed 2018 Jun 25.
6. Ha S, Totten S, Pogany L, Wu J, Gale-Rowe M. Hepatitis C in Canada and the importance of risk-based screening. *Can Commun Dis Rep* 2016;42(3):57-62.
7. Shah H, Bilodeau M, Burak KW, Cooper C, Klein M, Ramji A, 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.
8. Centers for Disease Control and Prevention. *CDC recommendation: adults born from 1945-1965 (baby boomers) get tested for hepatitis C*. Atlanta, GA: Centers for Disease Control and Prevention; 2017. Available from: www.cdc.gov/hepatitis/populations/1945-1965.htm. Accessed 2018 Jun 25.
9. Schanzer D, Pogany L, Aho J, Tomas K, Gale-Rowe M, Kwong J, et al. Impact of availability of direct-acting antivirals for hepatitis C on Canadian hospitalization rates, 2012-2016. *Can Commun Dis Rep* 2018;44(7-8):150-6.

La traduction en français de cet article se trouve à www.cfp.ca dans la table des matières du numéro de mars 2019 à la page e110.



CCDR Highlights summarize the latest evidence on infectious diseases from recent articles in the *Canada Communicable Disease Report*, a peer-reviewed online journal published by the Public Health Agency of Canada. This highlight was prepared by Dr Patricia Huston, a family physician, public health physician, and Editor-in-Chief of the *Canada Communicable Disease Report*.

Figure 1. Infographic on hepatitis C virus infection in Canada

