

# **A Renewed Public Health Response to Address Hepatitis C**

***A Summary Report of the  
Priority-setting Process***

***and***

***A Strategic Framework for Action***

**June 2009**



Public Health  
Agency of Canada

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**Public Health Agency of Canada**

Published by the authority of the Minister of Health.

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This publication can be made available in alternative formats upon request.

Ce document est également disponible en français sous le titre :  
Une intervention renouvelée en santé publique pour lutter contre l'hépatite C  
Rapport sommaire du processus d'établissement des priorités et cadre stratégique  
pour l'action

© HER MAJESTY THE QUEEN IN RIGHT OF CANADA (2009)  
Catalogue number: HP40-44/2009E-PDF  
ISBN: 978-1-100-13366-9

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## Table of Contents

<b>1. Hepatitis C – An Overview</b> .....	1
a. Background .....	1
b. How the Virus Works .....	3
c. Risk Factors.....	5
d. Global Prevalence .....	5
e. Surveillance in Canada.....	6
Routine (Basic) Surveillance .....	7
Enhanced Surveillance .....	7
Population-based Surveys .....	8
f. Canadian Estimates .....	8
<b>2. The Hepatitis C Prevention, Support &amp; Research Program</b> .....	9
a. 1999 to 2007 .....	9
b. Formal (summative) Evaluation.....	9
Operational Review.....	10
Results/Achievements.....	10
Strategic Alignment.....	10
<b>3. The Renewed Public Health Response to Address Hepatitis C</b> .....	12
a. The Priority-setting Process .....	13
<b>4. The Strategic Framework for Action</b> .....	16
a. Research and Surveillance Component .....	17
b. Care and Awareness Component .....	20
c. Prevention and Community-based Support Component.....	22
<b>Conclusion</b> .....	25
<b>Acknowledgements</b> .....	26

## List of Tables and Figures

<b>Table 1:</b> Global HCV Prevalence .....	5
<b>Table 2:</b> P/T Recommendations for Hepatitis C Program Future Directions/Priorities..	15
<b>Table 3:</b> Research and Surveillance Investment Priorities.....	19
<b>Table 4:</b> Care and Awareness Investment Priorities.....	21
<b>Table 5:</b> Prevention and Community-based Support Investment Priorities.....	24
<b>Figure 1:</b> Natural History of HCV .....	1

## Appendices

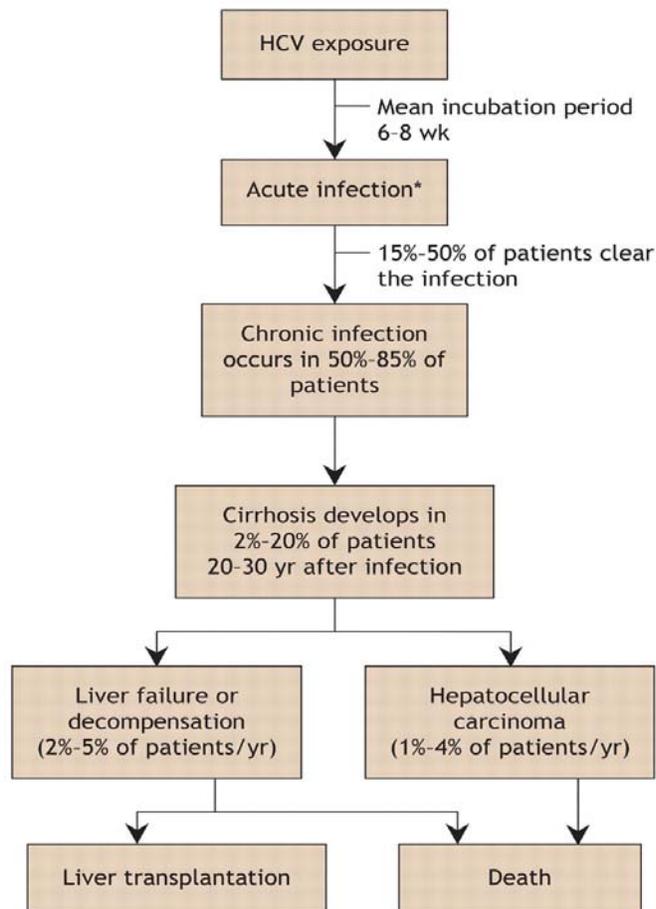
- Appendix A:** Hepatitis C National Case Reports and Corresponding Rates  
*Table A:* Reported Cases of hepatitis C from January 1, 2007 to June 30, 2007 and January 1, 2008 to June 30, 2008 and corresponding rates for January 1 to December 31, 2007 (actual) and January 1 to December 31, 2008 (projected)  
*Table B:* Reported Cases and Rates of hepatitis C by province/territory and sex, 2005 to 2007
- Appendix B:** *Epidemiology of Acute Hepatitis C Infection in Canada: Results from the Enhanced Hepatitis Strain Surveillance System (EHSSS)*
- Appendix C:** *Modeling the Incidence and Prevalence of Hepatitis C Infection and its Sequelae in Canada, 2007 (Final Report)*
- Appendix D:** *Summative Evaluation of the Hepatitis C Prevention, Support and Research Program (1999/2000 – 2005/2006)*
- Appendix E:** *Turning Research into Action, A Review of the Public Health Agency of Canada (PHAC) and the Canadian Institutes of Health Research (CIHR) Research Initiative on Hepatitis C*
- Appendix F:** Hepatitis C Prevention, Support and Research Program Logic Model
- Appendix G:** An Overview of the Priority-setting Process
- Appendix H:** Priority-setting Process (consultations) – List of Participants
- Appendix I:** Trends and Challenges in Canada – What We Heard
- Appendix J:** *Management of Chronic Hepatitis C: Consensus Guidelines (2007)*
- Appendix K:** Hepatitis C Prevention, Support and Research Program Performance Monitoring Framework and Program Evaluation Strategy

# 1. Hepatitis C – An Overview

## a. Background

Hepatitis C is a chronic liver disease caused by the hepatitis C virus (HCV), an enveloped, single-stranded linear RNA virus belonging to the *Flaviviridae* family. Six genotypes<sup>1</sup> of the virus have been identified.

**Figure 1: Natural History of HCV**



**Source:** Wong, T, Lee, SS. *CMAJ* 2006; 174:649-659.

\*Note that 60%–75% of patients are asymptomatic at this stage.

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<sup>1</sup> The predominant genotype in Canada is genotype 1.

It is a fact that generally, people with acute HCV infection show no symptoms; less than 25 percent of infected people show some symptoms such as jaundice (yellowing of the skin and/or eyes) or fatigue. Approximately 21 percent of those infected with HCV are unaware of their infection. Some individuals will recover from their infection, but 50 to 85 percent of those infected will progress to chronic infection and will be asymptomatic for decades. Eventually, chronic HCV infection can lead to liver damage, liver cancer and the need for liver transplantation. In the year 2000, it was estimated that the annual cost of HCV, in terms of medical treatment and lost productivity, in Canada was \$500 million; that estimate is expected to reach \$1 billion by 2010.

**Common misperceptions about HCV include:**

- |   |
|---|
| <ul style="list-style-type: none"><li>• <b>HCV cannot be treated.</b> In fact, there is treatment and it can be highly effective for many.</li><li>• <b>HCV is not really very serious.</b> In fact, it can lead to serious complications and death if not managed or treated.</li><li>• <b>HCV is preventable through vaccination.</b> In fact, a vaccine for HCV has yet to be developed.</li></ul> |
|---|

There are antiviral medications available today to treat people infected with HCV which can protect them from serious liver damage. Early diagnosis and treatment increases the chances of reducing damage to the liver, helps to prevent individuals from transmitting the virus to others unknowingly and could, for many, help clear the virus.

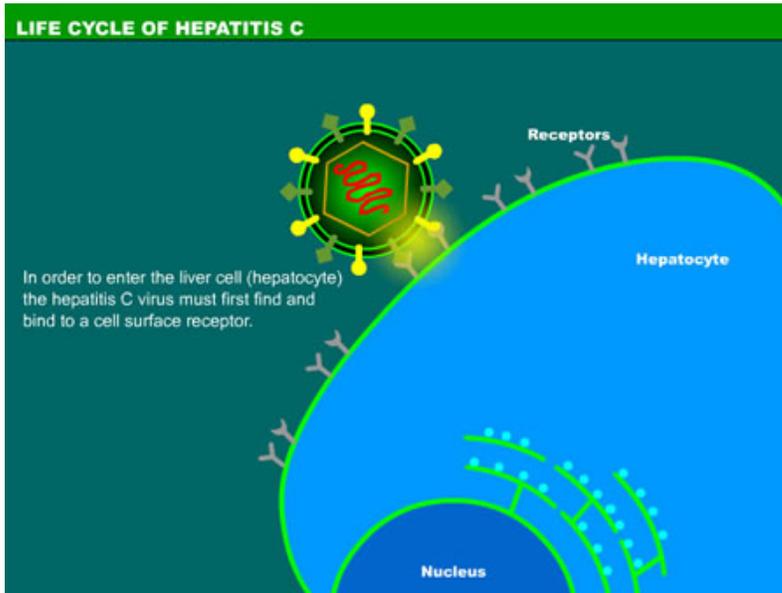
HCV is highly transmissible. It is spread through contact with infected blood. While many people were infected through blood or blood products in the past, between 70 and 80 percent of HCV transmission in Canada today is due to injection drug use and the sharing of drug preparation and injection materials (e.g., syringe/needle, spoon/cooker, water, filter, straw, pipe, the drug itself, etc.).

**In summary:**

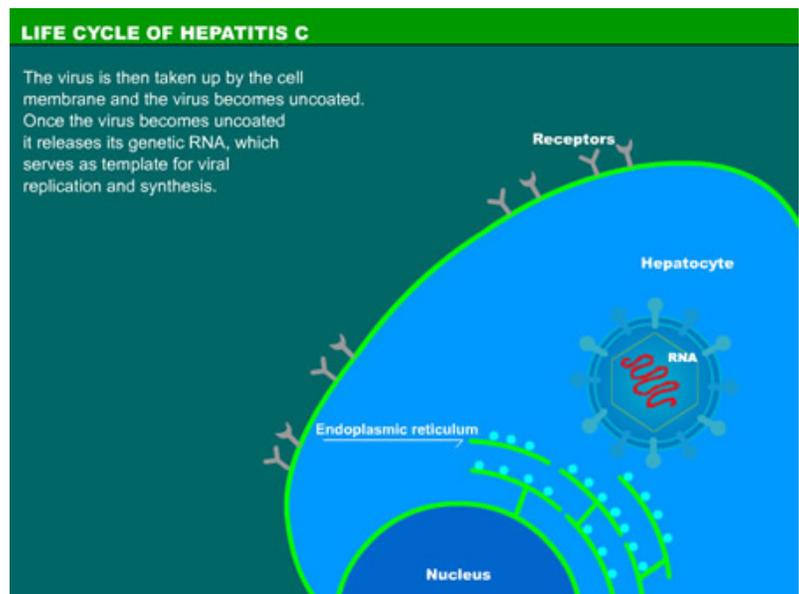
- **Hepatitis C is a chronic liver disease caused by HCV.**
- **An estimated 242,500 people in Canada were infected with HCV as of December 2007.**
- **In 2007, approximately 7,900 people in Canada were estimated to be newly infected with HCV.**

## b. How the Virus Works

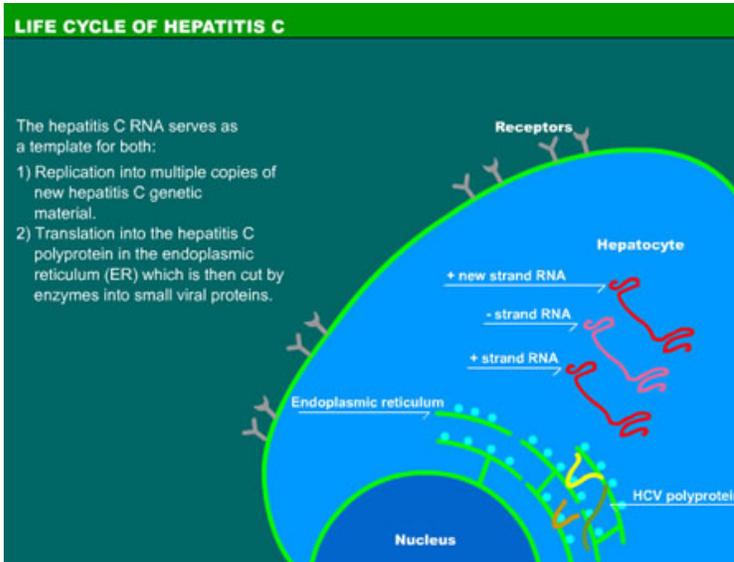
(Source: Public Health Agency of Canada, 2002-05-17, <http://www.phac-aspc.gc.ca/hepc/virus/virus1-eng.php>)



The virus makes contact with the surface of the liver cell (hepatocyte). The virus is hexagonal, and contains an RNA strand. It is encircled by a coating which binds to the liver cell's receptors.

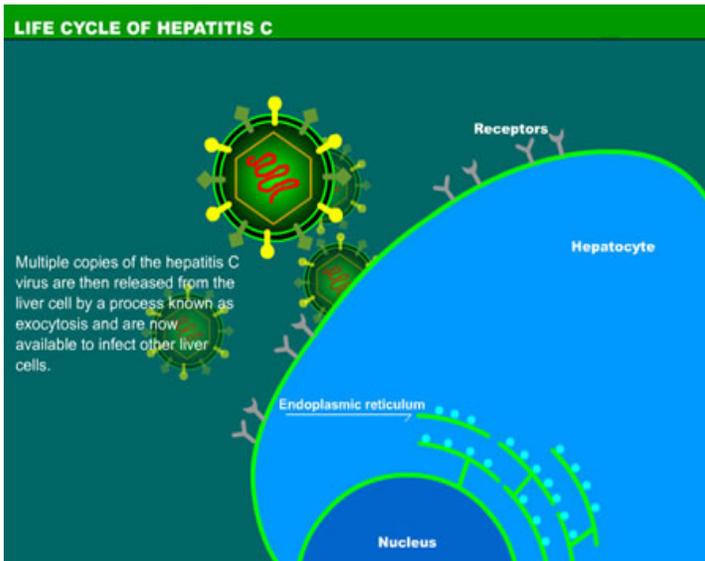
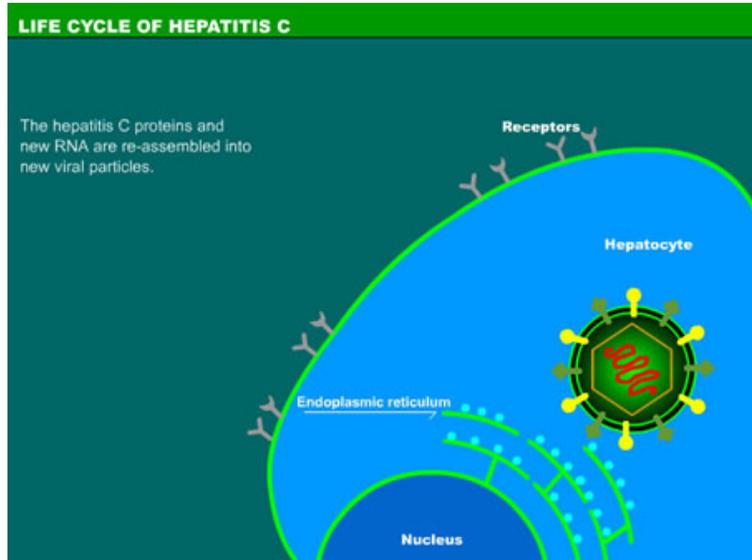


The virus is now situated in the liver cell (hepatocyte) and the coating has been shed. The liver cell also houses a nucleus and the endoplasmic reticulum, which branches out from the nucleus.



The hepatocyte now contains the original hepatitis C RNA, along with new replicate negative and positive RNA strands. Hepatitis C polyprotein pieces are attached to the branches of the endoplasmic reticulum.

The newly-formed virus sits in the hepatocyte, ready to exit the liver cell.



Four copies of the virus emerge and drift out of the hepatocyte..

## **c. Risk Factors**

Hepatitis C is spread through contact with infected blood. The most common risk factors for HCV infection include:

- Injection drug use (past and/or present) and intranasal drug-use (“snorting”) when sharing contaminated drug use and drug preparation materials (e.g., syringe/needle, spoon/cooker, water, filter, straw, pipe, the drug itself, etc.);
- Tattooing, body piercing or acupuncture when unsterile equipment or techniques are used;
- Exposure in the workplace (e.g., getting pricked by a needle or sharp equipment that has infected blood on it);
- Exposure when universal infection control precautions are not observed (e.g., during medical or dental procedures that involve the use of contaminated equipment) which can happen in Canada or elsewhere;
- Sharing personal articles such as razors, scissors, nail clippers or toothbrushes with an infected person;
- Engaging in unprotected sexual activity that includes contact with blood or an exchange of blood with an infected person; and
- Being born to a mother with HCV.

Persons who were exposed to contaminated blood, blood products or organ transplantation prior to 1992 in Canada may also be at risk.

## **d. Global Prevalence**

The World Health Organization (WHO) has deemed HCV a “viral time bomb” given that two to three percent of the world’s population (an estimated 123 to 170 million people) are infected.

It is estimated that there are three to four million new cases of HCV diagnosed in the world each year.

**Table 1: Global HCV Prevalence**

Source: Weekly Epidemiological Record. N° 49, 10 December 1999, WHO

WHO Region	Total Population (Millions)	Hepatitis C prevalence Rate %	Infected Population (Millions)	Number-of countries by WHO Region where data are not available
Africa	602	5.3	31.9	12
Americas	785	1.7	13.1	7
Eastern Mediterranean	466	4.6	21.3	7
Europe	858	1.03	8.9	19
South-East Asia	1 500	2.15	32.3	3
Western Pacific	1 600	3.9	62.2	11
Total	5 811	3.1	169.7	57

*Int J Med Sci.* 2006; 3(2): 41–46. Published online 2006 April 1. © Ivyspring International Publisher.

## e. Surveillance in Canada

The Public Health Agency of Canada (PHAC) monitors HCV and other viruses like the hepatitis B virus (HBV) in Canada through three inter-related approaches: routine (basic) surveillance, enhanced surveillance, and population-based surveys. The data collected through these surveillance systems helps to inform public health interventions and public health policy.

Certain groups within Canada are considered to be at increased risk of infection from community acquired infections like HCV, HBV, and co-infection with other sexually transmitted or blood-borne infections (STBBI; e.g., human immuno-deficiency virus (HIV), syphilis, chlamydia, etc.). These at-risk population groups (e.g., people who use injection drugs, street-involved youth, etc.) are engaged more often than the general public in risk-taking behaviours that can increase their chances of becoming infected (e.g., sharing drug-use materials or working in the sex trade). It is important for PHAC to collect enhanced data about these populations to establish the evidence base that supports effective and efficient interventions that address these risk-taking behaviours.

### ***Routine (Basic) Surveillance***

Through ongoing routine surveillance,<sup>2</sup> provincial/territorial (P/T) ministries of health voluntarily submit diagnosed and reported cases of HCV and HBV to the Public Health Agency of Canada via the Canadian Notifiable Disease Surveillance System (CNDSS). Routine surveillance data provides a nationally representative picture of the distribution of newly diagnosed and reported HCV and HBV infections with respect to person, place, and time. For the number of hepatitis C case reports and corresponding rates reported in Canada by province and territory with age and sex distributions, refer to the tables on *Hepatitis C National Case Reports and Corresponding Rates* available in Appendix A. These data can also be found at: <http://www.phac-aspc.gc.ca/sti-its-surv-epi/surveillance-eng.php>

### ***Enhanced Surveillance***

In partnership with local and P/T public health departments, PHAC coordinates ongoing enhanced surveillance of HCV and HBV in an effort to facilitate a better understanding of risk factors for infection with HCV, HBV and related STBBI, including HIV.

The Enhanced Hepatitis Strain Surveillance System (EHSSS) is a sentinel surveillance<sup>3</sup> initiative that expands upon the information available through routine surveillance (CNDSS) by gathering data on infection status (i.e., acute vs. chronic infection) and risk factors for newly diagnosed cases of HCV and HBV. Currently, eleven sites across Canada participate in EHSSS, covering approximately 41.8 percent of the Canadian population, or 13.2 million people. For data on acute HCV infection in Canada and corresponding trends based on data collected through EHSSS, refer to the EpiUpdate on the *Epidemiology of Acute Hepatitis C Infection in Canada: Results from the Enhanced Hepatitis Strain Surveillance System (EHSSS)* available in Appendix B. This EpiUpdate can also be found at: <http://www.phac-aspc.gc.ca/sti-its-surv-epi/pdf/hcv-epi-eng.pdf>

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<sup>2</sup> "...the ongoing, systematic **collection**, collation, **analysis** and **interpretation** of health-related event data and the **dissemination** of resulting information to those who need to know so that **action** can be taken." (Source: Public Health Agency of Canada, Community Acquired Infections Division, Hepatitis C and STI Surveillance and Epidemiology Section, June 2008 <http://www.phac-aspc.gc.ca/sti-its-surv-epi/about-eng.php>)

<sup>3</sup> Sentinel surveillance systems involve a limited number of selected reporting sites (communities), from which the information collected may be extended to the general population. A concentration of resources in the defined sites produces a rich source of information, producing more accurate final estimates than those normally available from broader national surveillance programs. (Source: Public Health Agency of Canada, *The necessity of sentinel sites*, 2007-04-02) <http://www.phac-aspc.gc.ca/c-enternet/necessity-importance-eng.php?option=email>.

PHAC also coordinates enhanced surveillance relevant to certain at-risk population groups, including people who use injection drugs<sup>4</sup> and street-involved youth<sup>5</sup>. These populations may engage more frequently than the general population in behaviours like sharing drug-use and preparation equipment that can put them at increased risk for infection with HCV, HBV and co-infection with other STBBI.

### ***Population-based Surveys***

In partnership with Health Canada and Statistics Canada, PHAC is currently implementing the Canadian Health Measures Survey (CHMS). The results of this survey will provide a population-based estimate of the prevalence of HCV and HBV in Canada. Data collection is underway and results from Cycle 1 of CHMS are anticipated in early 2010.

## **f. Canadian Estimates**

As of December 2007, approximately 242,500 persons in Canada were infected with HCV and an estimated 7,900 persons were newly infected in 2007, mostly through injection drug use. The estimates suggest that persons who inject drugs accounted for 58% of prevalent HCV infections in Canada, blood transfusion 11%, hemophilia 0.4% and other modes of transmission 31%. Overall, it was estimated that about 192,000 (79%) of HCV-infected persons living in Canada as of December 2007 have been diagnosed implying that approximately 21% of infected individuals were unaware of their infection. For more information, "*Modeling the Incidence and Prevalence of Hepatitis C Infection and its Sequelae in Canada, 2007*" (Final Report) is attached as Appendix C.

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<sup>4</sup> I-Track, a multicentre, enhanced surveillance system led by PHAC that describes changing patterns in drug injecting practices, sexual risk behaviours, HIV and HCV prevalence and testing behaviours among IDU in Canada. Further information on I-track can be found at <http://www.phac-aspc.gc.ca/i-track/sr-re-1/index-eng.php>.

<sup>5</sup> The Enhanced Street Youth Surveillance program (E-SYS) is a PHAC-led national, multicentre sentinel surveillance system that monitors rates of sexually transmitted infections and blood-borne infections, behaviours and risk determinants in Canada's street youth population. Further information on E-SYS can be found at <http://www.phac-aspc.gc.ca/sti-its-surv-epi/youth-jeunes-eng.php>

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## 2. The Hepatitis C Prevention, Support & Research Program

### a. 1999 to 2007

The Hepatitis C Prevention, Support and Research Program (the Hepatitis C Program) was introduced in June 1999 in response to the report of the Commission of Inquiry on the Blood System in Canada (*Krever Commission*). It was a five-year, time-limited initiative spanning fiscal years 1999/2000 to 2003/2004, with annual funding of \$10.648 million. The Hepatitis C Program's four components included: a) research and surveillance; b) prevention and community-based support; c) care and awareness; and d) management, policy, evaluation and public involvement.

Originally scheduled to “sunset” on March 31, 2004, the Hepatitis C Program received three separate one-year extensions, each with funding of \$10.648 million: the first, to March 31, 2005 to allow continuation of the Hepatitis C Program's work while PHAC was established; the second and third, to March 31, 2006 and March 31, 2007 to enable ongoing operations while PHAC considered an integrated framework to address infectious diseases.

### b. Formal (summative) Evaluation

A formal (summative) evaluation of the Hepatitis C Program (1999 to 2006) was undertaken to assess and demonstrate the progress made toward its goals and stated outcomes, and to identify priorities for future work. Key evaluation findings provided an understanding of the accomplishments of the Hepatitis C Program as well as its contribution to PHAC's overall mission, mandate and goals.

The Hepatitis C Program was national in scope and shared responsibility in its delivery with PHAC's six regional offices,<sup>6</sup> and with Health Canada's northern regional office.<sup>7</sup> Its four goals were to: contribute to the prevention of HCV infection; support persons infected with/affected by HCV; provide a stronger evidence base for policy and programming decisions; and strengthen partners' capacity to address HCV in Canada.

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<sup>6</sup> PHAC's six regions are: British Columbia, Alberta, Prairies (Saskatchewan and Manitoba), Ontario, Quebec, Atlantic Canada (New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador).

<sup>7</sup> Health Canada's northern regional office is responsible for the Yukon Territory, the Northwest Territories and Nunavut.

The Hepatitis C Program's summative evaluation (see Appendix D) covered three key issue areas and tested results and achievements against a range of questions:

### ***Operational Review***

- How did the system (bureaucracy), structure (Hepatitis C Program, resources and managed practices), processes and support mechanisms contribute to the achievement of the Hepatitis C Program's activities and outputs?
- What challenges were faced and what were the systemic barriers to success?
- How could these challenges be addressed?
- How was accountability and transparency incorporated?

### ***Results/Achievements***

- How did the Hepatitis C Program contribute to enhancing information and the body of evidence across Canada?
- How did the Hepatitis C Program facilitate stakeholder engagement and support?
- How broad was the Hepatitis C Program's reach?
- What partnerships were developed?
- What new and/or innovative prevention and support projects were implemented?
- What results were achieved towards the Hepatitis C Program's goals?

### ***Strategic Alignment***

- What was the relevance of the Hepatitis C Program to federal government priorities?
- What was the relevance of the Hepatitis C Program to PHAC's priorities?
- To what extent did the Hepatitis C Program implement a health promotion and population health approach?

The Hepatitis C Program's summative evaluation activities included a document review of 276 nationally and regionally-funded project files, publications and documents and an analysis of each to determine how well the four main components of the Hepatitis C Program were reflected. A comprehensive stakeholder survey was conducted and key informant interviews contributed to the aggregate data analyzed to present a clear and consistent narrative. This information was compared to relevant epidemiological/surveillance data and HCV research (see Appendix E) that contributed to an evidence base for the Hepatitis C Program's planning and decision-making processes.

Evaluation findings demonstrated that the Hepatitis C Program made significant strides in its efforts to address the hepatitis C epidemic in Canada, with a notable record of achievements, including:

- Extensive capacity building;
- Increased research capacity;
- Significant efforts toward prevention; and
- Establishment of key partnerships/collaborations.

Evaluation findings also revealed that the Hepatitis C Program faced many challenges which often impeded or slowed down progress in making further gains at both national and regional levels, including:

- Systemic challenges that impeded "smooth" funding cycles (especially during extension years) and created significant time-lags and breaks in funding momentum (grants and/or contributions);
- Difficulties balancing prevention priorities and care (health care and social services) for individuals already infected;
- Predominant reliance on sentinel surveillance given the absence of a national surveillance system;
- Difficulties improving behavioural and social science research; and
- Difficulties defining and "operationalizing" a more integrated approach to HCV with related STBBI, including HIV, and tuberculosis (TB).

### 3. The Renewed Public Health Response to Address Hepatitis C

On May 14, 2008, the Honourable Tony Clement, federal Minister of Health, announced the Government of Canada's renewed public health response to address hepatitis C (i.e., a renewed Hepatitis C Program), with ongoing annual funding of \$10.648 million. Minister Clement indicated that the renewed Hepatitis C Program will ensure an evidence-based approach to policy and program development, implementation and sustainability. Ongoing policy and programming investment decisions will be based on a population health approach that takes into consideration key health determinants<sup>8</sup> and will focus on:

- Research and surveillance (knowledge development);
- Policy and program development;
- Community capacity-building;
- Public and professional education;
- Intersectoral/multi-disciplinary collaboration; and
- Information synthesis and exchange.

The Minister's announcement paves the way for the Hepatitis C Program to proactively address the needs and priorities of infected and affected populations, and those persons most at risk of infection. It also underscores PHAC's policy and program emphasis on practical and immediate measures that enhance quality of life. The ongoing, coordinated approach to strategic planning and priority-setting will facilitate more effective identification of gaps in service delivery and will further ensure that strategic priorities and long-term national goals and objectives are measurable in terms of impact on the health of Canadians (see Appendix F for an illustration of the renewed Hepatitis C Program's "Logic Model").

The renewed Hepatitis C Program's goal is to **improve population health, decrease health disparities** and **reduce associated burden on the health system** by:

- Contributing to the prevention of HCV infection in Canada and around the world;

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<sup>8</sup> Key health determinants include: income and social status, social support networks, education, employment and working conditions, social environments, physical environments, personal health practices and coping skills, healthy child development, culture, health services, gender and biology and genetic endowment.

- Supporting persons infected with, affected by, at risk of and/or vulnerable to HCV;
- Providing a stronger evidence base for policy and programming decisions; and
- Strengthening partners' capacity to address HCV in Canada.

The Hepatitis C Program also recognizes that:

- Addressing the risks associated with certain behaviours (e.g., sharing contaminated drug-using and drug preparation materials) is paramount in getting ahead of the HCV epidemic. It is part of a concrete, pragmatic approach to health promotion and disease prevention, utilizing a broad range of effective public health measures to reduce the negative consequences of infectious and chronic diseases; and
- Addressing HCV without addressing issues of co-infection with other STBBI and TB, common risk factors and population health approaches to disease prevention and control impedes the Hepatitis C Program's ability to stay ahead of the epidemic.

### **a. The Priority-setting Process**

During the fiscal year 2007-08, Hepatitis C Program officials met with a broad and diverse range of stakeholders in an effort to engage in an interactive dialogue process that would highlight their perspectives of current health, psychosocial and socio-economic trends. Participants were also asked to share their perspectives on specific challenges inherent in policies, program development and/or service delivery at local, regional and national levels (see Appendix G for an overview of the process).

Community-based consultations were held in 11 cities (Halifax, Quebec City, Iqaluit, Ottawa, Winnipeg, Regina, Calgary, Edmonton, Yellowknife, Whitehorse, and Vancouver), with more than 250 individuals (see Appendix H for a list of participants), including:

- Persons infected with HCV and/or living with concurrent disorders (co-infection with other STBBI, addictions, mental health, etc.);
- Representatives from other federal government departments;
- Representatives from P/T jurisdictions;

- Regional health authorities, health and social service providers and public health units and/or community outreach providers; and
- Researchers, academics and scientists.

Feedback was generally consistent across the country, with only minor variations or regionally-specific observations indicated during each meeting (see Appendix I for an elaboration on what was heard).

Subsequent consultation was undertaken with P/T officials in each jurisdiction who represent interests in health, social services, Aboriginal issues, education, justice and/or corrections. Consistently, participants cautioned that specific attention to jurisdictional authority and infrastructure “readiness” will be paramount to the Hepatitis C Program’s success; they confirmed that there is an ongoing leadership role for the federal government in addressing HCV in Canada and internationally.

There was general consensus across P/T jurisdictions that an effective and sustainable (renewed) Hepatitis C Program should focus its efforts and investments in primary care models for vulnerable populations in Canada, and should concentrate its future directions on development and implementation of “upstream” prevention strategies that are population-based (e.g., focused on youth, people who are street-involved, Aboriginal peoples, people who are or have been part of Canada’s correctional system, people who use drugs, etc.).

P/T officials indicated an ongoing need for the federal government to support integrated service-delivery models and encouraged more collaboration between the Hepatitis C Program and the Federal Initiative to Address HIV/AIDS in Canada and other appropriate federal programs which might suggest a way forward within a chronic disease model.

It was emphasized that the Hepatitis C Program must address Aboriginal health in the renewed environment with a much broader perspective than before. Particular attention is required for issues such as alcohol and other drug dependency issues, suicide, the long-lasting effects of residential schools and mental health disorders.

P/T representatives were asked to reflect on the Hepatitis C Program’s future directions and priorities in three principal areas (described in detail in section 4). The following recommendations emerged and are presented in Table 2, found on the next page.

**Table 2: P/T Recommendations for Hepatitis C Program Future Directions/Priorities**

<b>Research and Surveillance</b>	<b>Care and Awareness</b>	<b>Prevention and Community-based Support</b>
<ul style="list-style-type: none"> <li>• Enhance research and surveillance capacity to build an evidence base that supports a population health approach to disease prevention and control, and includes enhanced behavioural, socio-economic, psychosocial research and surveillance activities.</li> <li>• Facilitate processes through which federal and P/T surveillance systems may be standardized and better coordinated to ensure more efficient data collection, analysis and reporting that is accurate, timely and nationally applicable.</li> <li>• Ensure that approaches to research and surveillance activities are interdisciplinary and more consistently inclusive of community-based perspectives and involvement.</li> <li>• Facilitate a collaborative process through which the <i>Management of Chronic Hepatitis C: Consensus Guidelines (2007)</i><sup>9</sup> may be updated and disseminated.</li> </ul>	<ul style="list-style-type: none"> <li>• Endeavour, through various media and utilizing “innovative technologies” (e.g., Facebook, mobile telecommunications, etc.), to raise HCV awareness in Canada and internationally. Ensure that awareness and education initiatives are inclusive of other STBBI and TB, common risk factors and population-based approaches to disease prevention and control.</li> <li>• Facilitate the development and implementation of sustainable, accessible health and social services, and support programs focused on care and quality of life issues for persons infected with HCV and persons co-infected with HCV and other STBBI and TB.</li> <li>• Address the “hidden” epidemic in Canada and around the world to raise awareness and encourage testing that would facilitate the identification and subsequent care of persons infected with HCV and persons co-infected with HCV and other STBBI and TB.</li> <li>• Address issues related to medical assessments and diagnostics with particular emphasis on a revised hepatitis C case definition highlighting the importance of RNA (confirmatory) laboratory testing.</li> <li>• Facilitate the development and delivery of education and awareness-raising opportunities for health care providers, with particular focus in general medical practice and primary care specialties.</li> </ul>	<ul style="list-style-type: none"> <li>• Facilitate the development and implementation of sustainable, accessible health and social services, and support programs focused on prevention and social support networks for persons at risk of and/or vulnerable to infection with HCV and co-infection with HCV and other STBBI and TB.</li> <li>• Continue to observe and support “basic harm reduction principles” as the most appropriate prevention and education tools and interventions “on the ground”.</li> <li>• Maintain existing support networks and foster development and implementation of emerging social support mechanisms.</li> <li>• Support and foster front-line outreach services, community-based programming and best practices that focus on hepatitis C and other STBBI and TB through a “social determinants lens” with particular attention paid to health and social vulnerabilities.</li> </ul>

<sup>9</sup> The 2007 *Consensus Guidelines* are attached as Appendix J.

## 4. The Strategic Framework for Action

Stakeholders from numerous public health sectors and disciplines in Canada have called for an evidence-based, ongoing Hepatitis C Program. In addition, they agree that efforts must contribute to and/or support the sustainable development of effective prevention and control policies, programs and strategies that assist in meeting the health care and related social needs of those infected with, affected by, at risk of and/or vulnerable to HCV and co-infection with other STBBI and TB. The stakeholders want a long-term public health response that maximizes the effectiveness of program investments by improving policy and program coherence and information-sharing; and by facilitating ongoing consensus-building initiatives that focus on the establishment of a national approach to enable a multi-jurisdictional assessment of progress.

When the Minister of Health announced the Government of Canada's renewed public health response to address hepatitis C with an ongoing commitment of \$10.648 million annually, he said: "These funding investments demonstrate the Government of Canada's determination to work with our partners within all levels of government to address the devastating impacts on our communities that can result from the transmission of hepatitis C."

Based on the input and advice received during the consultative priority-setting process, and in an effort to sustain and foster its achievements to date, the Hepatitis C Program's *Strategic Framework for Action* will strive to strengthen federal leadership in broad areas, including:

- Facilitating capacity-building opportunities for health and social services professionals, researchers, and community-based organizations;
- Increasing focus, in Canada and internationally, on research, surveillance, evaluation, strategic planning, and ongoing consultation with stakeholders, federal government partners, P/T governments, and government and non-government agencies from the global community;
- Ensuring an effective and efficient response to address populations most at risk (including Aboriginal peoples, street youth, inmates and persons with substance dependency issues and who use drugs); and
- Addressing the "hidden" epidemic to identify those persons who are infected with HCV or are co-infected with HCV and other STBBI and TB but are unaware, and to facilitate their access to appropriate health care and social support services.

The Hepatitis C Program will remain national in scope and will realize its comprehensive application through its shared responsibility for key initiatives with PHAC's regional offices and Health Canada's northern regional office. With these

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partners, the Hepatitis C Program will focus its efforts and investments in initiatives that contribute to the following.

- Development and implementation of citizen engagement strategies that are responsive to the evolving nature of the HCV epidemic in Canada;
- Identification and engagement of new research partners in an effort to better gather, analyze and interpret research and surveillance data;
- Provision of strategic policy analysis and advice to ensure uniform use of appropriate performance measures and evaluation findings that respond to and shift program and policy directions (see Appendix K: Performance Monitoring Framework and Hepatitis C Program Evaluation Strategy);
- Development and implementation of strategies, resources and networks to build an expansive knowledge-base that is better informed; and
- Development of implementation principles (promising practices), delivery mechanisms and guidelines that further develop capacity-building, professional development activities, enhanced partnerships and collaboration opportunities for internal, community-based and public health systems.

The Hepatitis C Program's financial resources will be concentrated in three principal areas: a) **research and surveillance**; b) **care and awareness**; and c) **prevention and community-based support**.

Throughout the priority-setting process, input and advice ultimately focused on the Hepatitis C Program's future directions and priorities for each of these components. Discussions underscored where the Hepatitis C Program's fiscal investments are most needed and would be considered most effective by stakeholders who live with the issues and/or provide services "on the ground."

### **a. Research and Surveillance Component**

Research, surveillance and epidemiology activities are critical to understanding HCV and its association with other STBBI and TB, and to developing new evidence-based policies, programs and interventions. The activities also lead to: better treatments, therapies and vaccines; innovative technologies; more effective public health responses; and promising practices, guidelines and quality assurance mechanisms (e.g., in laboratory settings).

While Canada has a reasonably efficient reporting structure for routine surveillance, there are limitations to the quality, amount and timeliness of the data collected and reported federally, which impedes an effective response to HCV. The Hepatitis C Program will endeavour to further enhance surveillance and epidemiology data collection and analysis tools,

mechanisms and processes to improve how HCV prevalence and incidence reporting is undertaken, and to ensure a more comprehensive understanding of the economic burden represented by HCV and co-infection with other STBBI and TB in Canada.

A renewed Hepatitis C Program that includes enhanced national and international surveillance will facilitate and/or support standardized and coordinated processes through which more detailed data collection and analysis is feasible, timely and efficient. The result will be better-informed programs, policies and interventions at local levels. At the same time, enhanced epidemiological reporting will support Canada's international contributions to knowledge development and dissemination and to the body of evidence that monitors and controls the spread of HCV and co-infection with other STBBI and TB, domestically and globally.

Through the Research and Surveillance component, the Hepatitis C Program will continue its partnership with the Canadian Institutes of Health Research (CIHR) for ongoing epidemiological, clinical and biomedical research initiatives and to promote, support and enhance focus on psychosocial and behavioural research. The Hepatitis C Program will also, through its partnership with CIHR, continue its support of national research training programs in an effort to build capacity of researchers, scientists and health care professionals. Activities will bridge the gap nationally and internationally between what is currently known about HCV, about co-infection with other STBBI and TB, about common risk factors, and about what has yet to be discovered with respect to effective infectious disease prevention and control, care and treatment.

Research findings will be better utilized in policy-making processes and used to inform program development ensuring that the Hepatitis C Program's ongoing directions are evidence-based.

The Hepatitis C Program will facilitate more effective knowledge transfer and exchange (KTE) activities that use the evidence garnered through its research and surveillance initiatives to ensure policies and programmatic interventions cut across the continuum of prevention, care and treatment. The Hepatitis C Program will explore and/or support successful and/or promising community-based knowledge transfer and exchange models. Activities and investments in this area will ensure that the evidence is presented in user-friendly formats and is more broadly disseminated. Messaging, programming, promotion, and networking between communities and academia will be inclusive of people infected with HCV and/or co-infection with other STBBI and TB.

The Hepatitis C Program will support and enhance inter-disciplinary and community-based research and surveillance capacity to build an evidence base that supports a population health approach to disease prevention and

control, with emphasis on behavioural, socio-economic, and psychosocial determinants of health.

The Hepatitis C Program will undertake a comprehensive approach to basic, psychosocial, and interdisciplinary research and surveillance. The specific **research and surveillance** investments and activities and their intent, based on the priorities identified throughout the priority-setting process are presented in Table 3, found on the next page.

**Table 3: Research and Surveillance Investment Priorities**

<p><b>Knowledge development, transfer and exchange (KTE)</b></p> <ul style="list-style-type: none"><li>• Focus on behavioural and social sciences research related to risks.</li><li>• Focus on the health and economic burden of disease, HCV's "hidden epidemic," prevention research, surveillance, treatments, vaccines, and clinical trials.</li><li>• Focus KTE activities across the prevention, care and treatment continuum.</li><li>• Support existing and emerging training programs.</li><li>• Support development of promising practices, and research that examines health care and social services delivery models.</li></ul> <p><b>Behavioural and social science research and surveillance</b></p> <ul style="list-style-type: none"><li>• Explore the correlation between prevention and behavioural, psychosocial and socio-economic determinants of health and HCV infection (and/or co-infection with HCV and other STBBI and TB, and common risk factors).</li></ul> <p><b>Clinical and biomedical research</b></p> <ul style="list-style-type: none"><li>• Enhance existing research efforts and launch new research initiatives that focus on clinical trials and vaccine development, drug and poly-drug use, drug interactions, and drug rehabilitation programs.</li></ul> <p><b>Surveillance systems</b></p> <ul style="list-style-type: none"><li>• Coordinate expertise and increase capacity to estimate, track and report on frequency and nature of high-risk behaviours and their association with HCV and HCV co-infection with other STBBI and TB.</li><li>• Improve modelling and projection capacity with respect to incidence, prevalence and risk activities in targeted populations, specific to HCV and HCV co-infection with other STBBI and TB.</li></ul>
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## **b. Care and Awareness Component**

While care and treatment of illness are primarily P/T responsibilities, there is an integral role for the federal government to play in terms of leadership, development of national standards and guidelines, encouraging equity of access to care, and international collaboration. The Hepatitis C Program will endeavour to further define and enhance its federal role and will collaborate closely with its P/T counterparts and international partners to sustain a role that is responsive, appropriate and effective.

To facilitate increased and improved capacity of health and social services providers, and to strengthen models of care and treatment for marginalized and under-served populations, this component will assess, enhance and strive to improve knowledge, attitudes and behaviours. Activities will engage health and social service providers/professionals to create broader understanding and awareness of their roles and responsibilities and to develop and implement guidelines and best and/or promising practice models. The Hepatitis C Program will provide support to ensure that resource materials are current and accurate and will facilitate the development of new materials as needs are identified and articulated by its stakeholders.

The Hepatitis C Program will adopt a more holistic approach. It will strive to effectively encourage and/or support more equitable access to care, treatment and health/social support services for persons infected with, affected by, at risk of and/or vulnerable to HCV infection and co-infection with other STBBI and TB. The Hepatitis C Program will encourage and collaborate in the development/implementation of sustainable, accessible health and social services and will support programs focused on care/quality of life issues for persons infected with HCV and those who may be co-infected with HCV and other STBBI and TB.

The Hepatitis C Program will focus on education and awareness activities targeted to a broad range of health and social service providers/professionals, schools and school systems, vulnerable or marginalized populations (e.g., women, senior citizens, youth, Aboriginal Peoples, inmates, etc.), and ethnocultural populations. Emphasis will also be placed on general awareness and education geared toward the general public, together with targeted anti-discrimination and anti-stigma initiatives relevant to HCV and co-infection with other STBBI and TB, and to members of vulnerable and often marginalized at-risk population groups (e.g., people who use drugs).

The Hepatitis C Program will endeavour, through various media and utilizing “innovative technologies” (e.g., Internet-based social networks such as Facebook, etc.) to raise HCV awareness in Canada and internationally and will ensure that awareness and education initiatives are inclusive of

other STBBI and TB, common risk factors and population-based approaches. It will also utilize innovative technologies with other awareness-raising media to address the “hidden” epidemic in Canada and around the world to encourage testing and to facilitate the identification and subsequent care of persons who are infected with HCV and co-infected with HCV and related STBBI and TB.

Through its strategic framework for action, in the **care and awareness** component, the Hepatitis C Program will undertake and/or provide support for the activities presented in Table 4, below.

**Table 4: Care and Awareness Investment Priorities**

**Education and awareness activities (domestic and international)**

- Develop and deliver promising-practice guidelines relevant to health and social service providers.
- Facilitate knowledge development, transfer and dissemination, as well as training and awareness-raising relevant to health and social service providers (e.g., sensitivity training for general medical practitioners in the provision of appropriate health care services to people who use drugs) through local, regional, national and international HCV conferences.
- Support nurses, social workers and other health care professionals to improve curricula and training for their professions to increase awareness and knowledge of HCV prevention and care.
- Develop general public awareness to assist in addressing the “hidden” epidemic.
- Encourage testing and treatment with the goal to improve quality of life.
- Slow disease progression for persons infected with HCV (who may also be co-infected with other STBBI and TB) through the provision of information on treatment options and beneficial lifestyle changes.
- Reduce disease transmission through the provision of disease prevention information.

**Care and treatment activities**

- Develop Canadian standards for care and treatment through consensus conferences for health care professionals.
- Establish training opportunities for nurses and family physicians focussing on HCV and other liver diseases.

**Knowledge development, transfer and exchange**

- Facilitate publication of user-friendly manuals, pamphlets, brochures and utilize “innovative technologies” and/or web-based tools to raise awareness, to educate and to facilitate support networks.
- Provide concrete advice for people living with HCV and their caregivers to support health promotion and slow the costly progression of disease (e.g., reduction or cessation of alcohol use and maintenance of healthy weight can significantly slow the progression of liver damage).

### **c. Prevention and Community-based Support Component**

Prevention strategies create, enhance and sustain linkages relevant to HCV and HCV co-infection with other STBBI and TB, common risk factors, and population health approaches to infectious disease prevention and control. They also increase community-based capacity to ensure relevant program responses to localized prevention needs and/or priorities. Most of the Hepatitis C Program's prevention and community-based support activities will continue to be facilitated and/or delivered through PHAC's regional offices and Health Canada's northern regional office to ensure an effective and appropriate "on the ground" response to local-level needs.

Through a collaborative Prevention and Community-based Support component, the Hepatitis C Program will contribute to measures that prevent the transmission of HCV and/or HCV co-infection with other STBBI and TB, with particular emphasis on those at greatest risk. It will lead and/or support KTE activities that are relevant to primary, secondary and tertiary prevention (and care) of HCV and co-infection with other STBBI and TB, with particular attention and support to initiatives that are focused on "first-time" risk-taking behaviours (e.g., youth and drug-use initiation or initiation in prisons), and on reducing harms associated with first-time and/or ongoing risky behaviours. Effective interventions in these areas will include support for ongoing development and implementation of peer-based approaches, promising practices and prevention guidelines. Particular emphasis will be placed on support for skills and capacity development.

The Hepatitis C Program will strengthen and continue to support partnerships and networks focused on service-delivery mechanisms, collaboration, and multi-disciplinary approaches to program development and service-delivery. For example, it will address new health issues such as those associated with people involved in job boom environments such as resource extraction — an increase in risk-taking behaviour is being seen in these groups, due to a number of social factors. Collaboration with private industry and with other government departments will be important to achieving goals for prevention and management. Activities under this component will also address prevention and support priorities, if appropriate and deemed necessary by community-based stakeholders through social marketing campaigns, media productions and peer education.

The Hepatitis C Program will endeavour to facilitate and/or support the active engagement of various media to ensure greater public awareness of HCV and co-infection with other STBBI and TB, particularly within marginalized communities and among vulnerable populations. It will also explore the potential of innovative communications vehicles (e.g., Facebook, mobile telecommunications, etc.), to educate and to raise HCV

prevention awareness in Canada and internationally and to ensure that prevention and education initiatives are inclusive of other STBBI and TB, common risk factors and population-based approaches.

The Hepatitis C Program will lead and/or facilitate initiatives that are culturally sensitive and appropriate, recognizing that “one size does not necessarily fit all” and as well, that the migratory nature of certain populations (e.g., immigrants to Canada, people with varying ethnocultural backgrounds, street-involved youth, people who use drugs) appears to be increasing.

The Hepatitis C Program will continue to facilitate and/or support further development and implementation of sustainable, accessible health and social services, including those focused on mental health. Activities will also support programs focused on prevention and social support networks for persons who are at risk for and vulnerable to infection with HCV, and for co-infection with other STBBI and TB.

The Hepatitis C Program will endeavour to support initiatives whose focus is to educate and prevent the acquisition and transmission of infections as well as interventions “on the ground” by maintaining existing support networks and fostering development and implementation of emerging social support mechanisms. It will strive to ensure that comprehensive counselling support, testing and referral services are part of the service continuum.

Hepatitis C Program officials know that stable operational funding would enable community-based organizations to provide continuous prevention and community-based support services to, with and for members of marginalized communities and/or vulnerable population groups. The Hepatitis C Program is committed to providing stable sustainable funding in an effort to realize its renewed goal and objectives. It will collaborate closely with PHAC’s regional offices and Health Canada’s northern regional office to consider, develop and implement appropriate mechanisms and processes that would enable community-based organizations to apply for and access operational funding in future years.

Through its strategic framework for action, the Hepatitis C Program’s **prevention and community-based support** component will include the activities/initiatives presented in Table 5, found on the next page.

**Table 5: Prevention and Community-based Support Investment Priorities**

**Domestic and international population-based interventions**

- Contribute to the development and delivery of effective prevention education “messaging” strategies, promising practice models, peer education and training, and prevention guidelines.
- Facilitate “front-line” peer support projects for “mainstream” persons infected with and affected by HCV, as well as those persons from marginalized, vulnerable, and/or discrete populations, including youth, Aboriginal peoples, offenders (both during incarceration and post-release), people who use drugs, sex trade workers, and people living in Canada who have come from countries where HCV is endemic.
- Strengthen and support partnerships across systems and sectors focused on service delivery mechanisms for vulnerable populations.
- Strengthen and support existing collaborative models and support networks.

**Knowledge development, transfer and exchange**

- Effectively address emerging health and social issues, including prevention information focused on risk-taking behaviours.
- Develop and deliver education modules, continuing education credits, and other training strategies to build prevention-based capacity among the general public and within primary health care and social services settings.
- Facilitate development and understanding of domestic and international information linking prevention of HCV acquisition and transmission with issues of addiction, mental health, stigma and discrimination, co-infection with other STBBI and TB, and common risk factors.

**“Prevention on the ground” (local level prevention with people at-risk)**

- Continue to support community-based projects, street outreach interventions, and front-line support services.
- Facilitate development and delivery of prevention information sessions and public service announcements.
- Support prevention-based case and cohort studies, and pilot programs focused on HCV and co-infection with other STBBI and TB, common risk factors, behaviours, population health approaches to prevention and control, and risk reduction strategies.

## Conclusion

As indicated throughout this document, the process of priority-setting that led to this *Strategic Framework for Action* included extensive national consultations with a diverse range of stakeholders, including persons living with HCV, other federal government departments, the provinces and territories, regional health authorities, medical professionals, social service providers and researchers.

The priorities identified for action are a reflection of what was heard from all of the participants in these national meetings.

As we move forward as an ongoing Hepatitis C Program, these priorities will inform our strategic directions, and guide our future actions. Measurable and demonstrable results of the Hepatitis C Program over the next few years will be based on these priorities, and as the Hepatitis C Program evolves, consultation with all our stakeholders will continue to guide our strategy as we address hepatitis C infection in Canada.

## Acknowledgements

This document, with the priorities and future directions of the renewed public health response to address hepatitis C in Canada that are represented in the *Strategic Framework for Action*, is made possible by the invaluable efforts of many individuals from PHAC and Health Canada offices across the country. A very special thank you to:

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