

HEPATITIS C IN CANADA: CONNECTING THE DOTS

Using the most recent publicly-available statistics
as of May 1, 2015



Committed to preventing the spread of hepatitis C virus (HCV)
and to providing support and education to HCV+ people

These slides will show you why Canada needs...

- To release new hepatitis C **Screening Guidelines** and
- To design a new Canadian Hepatitis C **Strategic Action Plan**
- And at the end we'll ask you and your colleagues to **do something unusual and brave**, to show leadership in the fight against this silent killer.

A Rapidly-Shifting Hepatitis C Landscape in Canada:

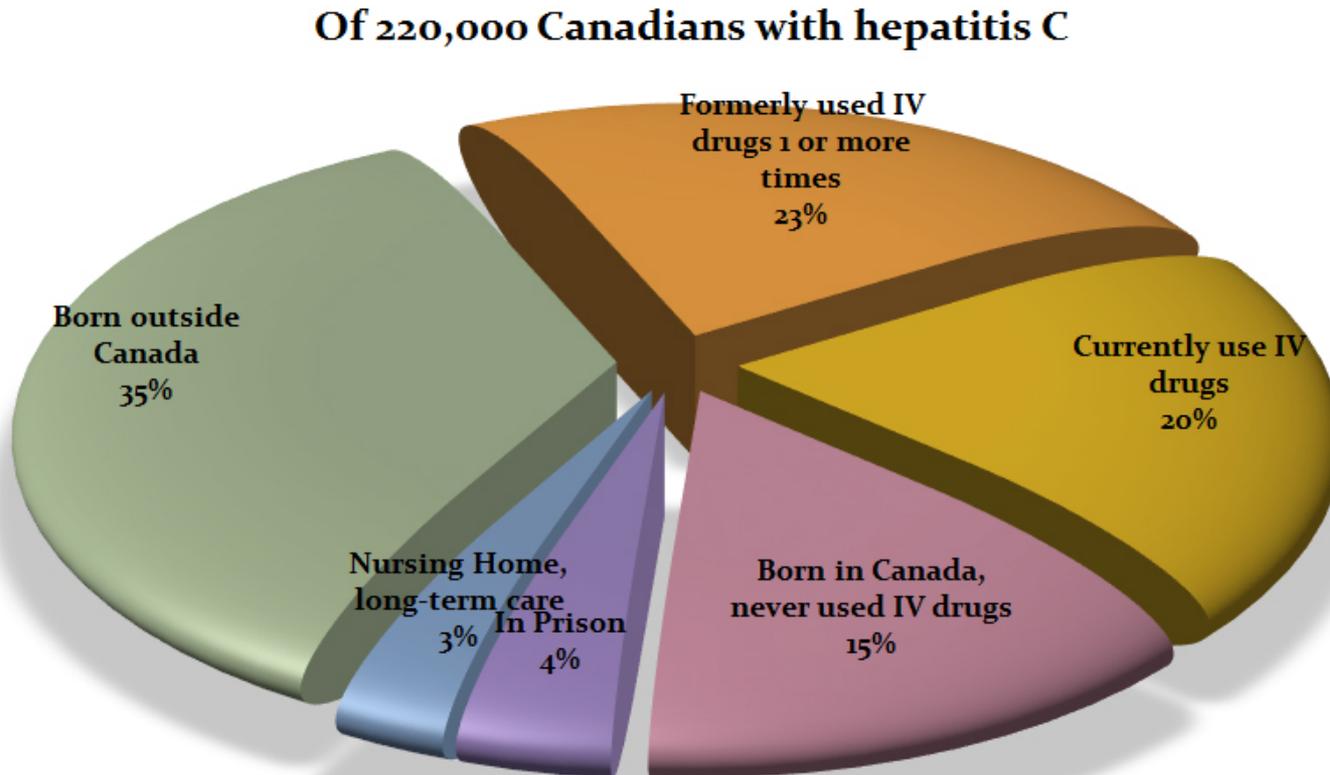
Hepatitis C Virus (HCV) is now CURABLE

- It is the **only virus-caused chronic disease** that we **know how to cure!**
- Every year **Canada treats approximately 1.4%** of its HCV+ population
- This is approximately the **same as the number of new cases** each year.
- In order **to eliminate the disease** from Canada, we'd need to **increase the number of people treated by several times**

Hepatitis C in Canada – The Stats

- **At least 220,000** Canadians live with chronic hepatitis C
- **Just under 1%** of general population
- **About 75%** of affected people are **Baby Boomers** (born between 1945 and 1975)
- People can have this ‘silent killer’ and **not know it for 3 to 4 decades after infection.**
- At least **44%** of these don’t know they have it, **while it silently destroys their liver**

Who has hepatitis C in Canada?



- Approximately **75%** of these 220,000 people are **Baby Boomers**.
- Data Source: Cdn Communicable Disease Report
CCDR: Volume 40-19, December 18, 2014

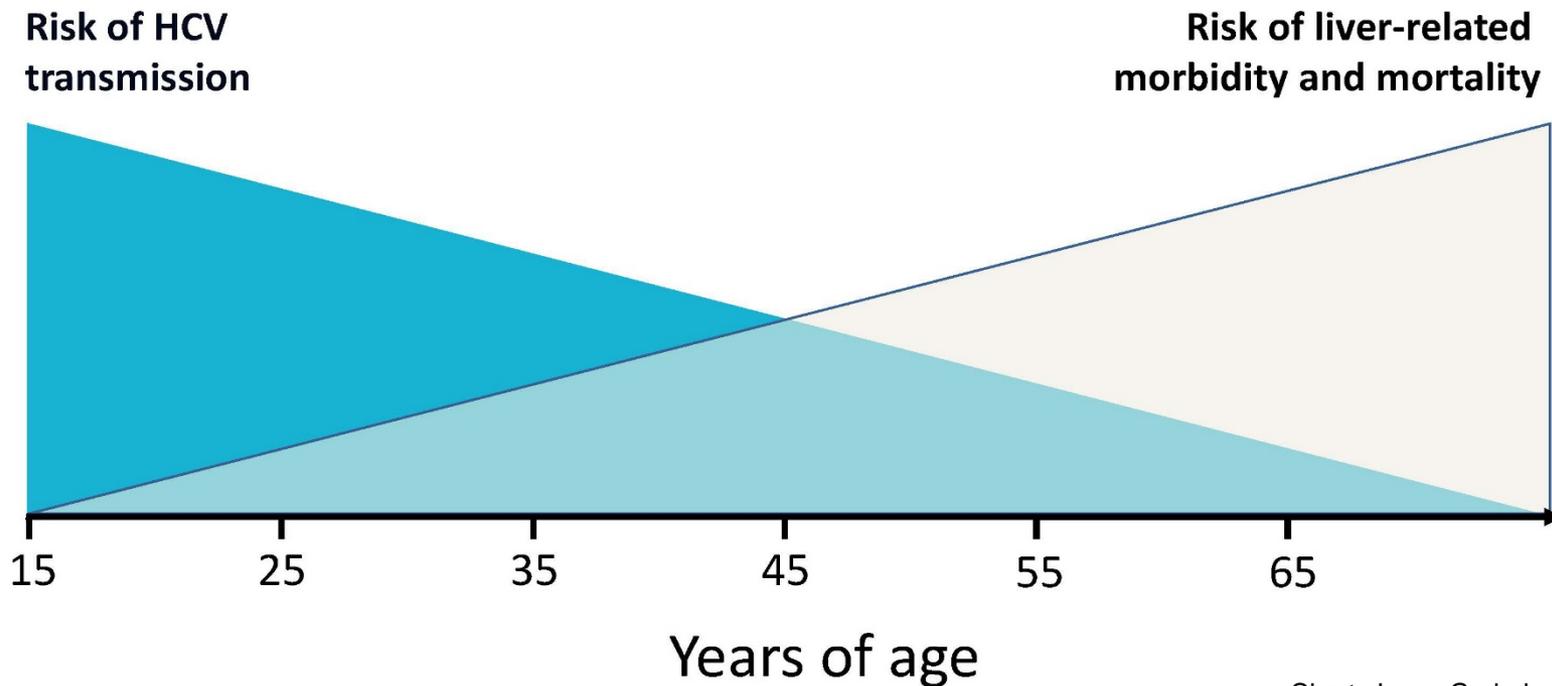
Two main populations of patients in Canada

- 1) **Most in danger of infecting others**, primarily in **early stages of the disease**
 - Injection drug users
 - Users of inhaled drugs (cocaine, meth)
 - MSM (men who have sex with men)
 - Users of injected anabolic steroids
 - Those who have had unsterile tattoos or piercings, particularly common among prisoners
- 2) **No longer in danger of infecting others**, in late stages of the disease, but **most in danger of morbidities and mortality**
 - Some paying for excesses of their youth
 - Others victims of tainted blood tragedy
 - Canada's blood supply not screened until 1992

Risk of Transmission vs. Risk of Dying

Young people are at greater risk of contracting or transmitting HCV (hep c virus) and generally need **PREVENTION** programs.

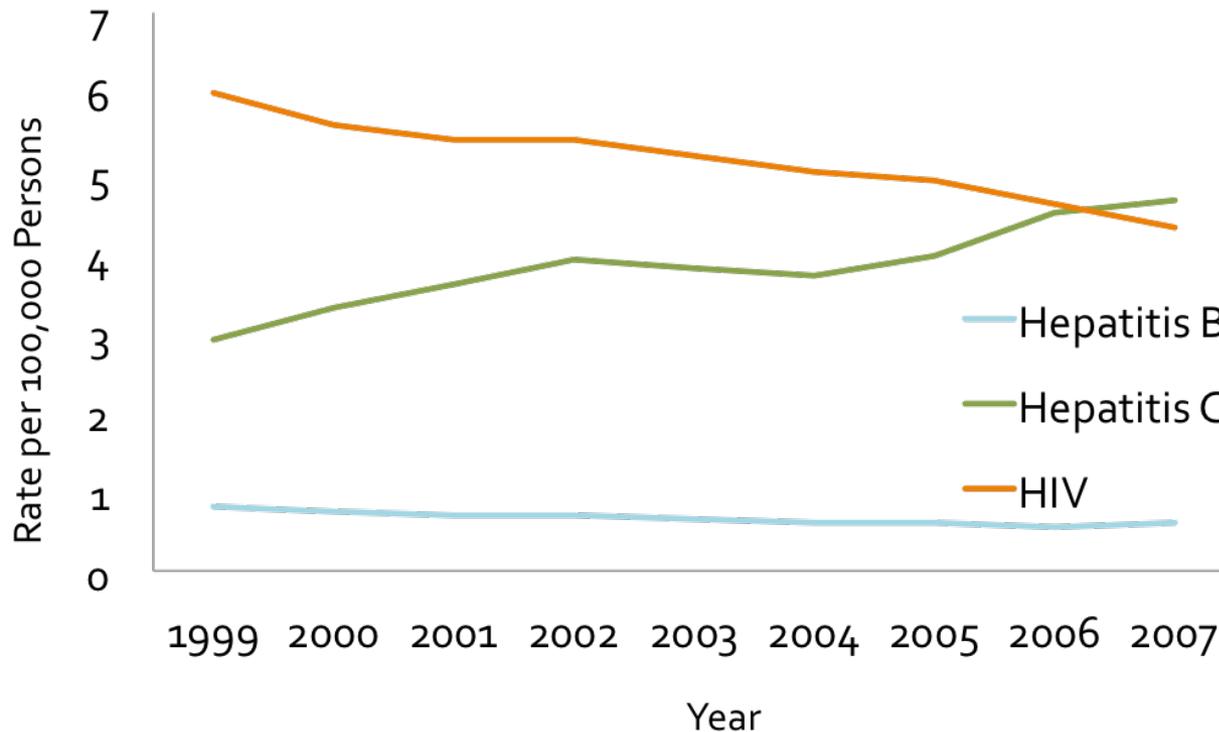
Older people (who may have used drugs at one time) are at far greater risk of HCV-related morbidity and mortality, and generally need a **SCREEN & TREAT** program.



Why should we treat Hepatitis C Virus (HCV)?

HCV is NOW CURABLE, yet...

Since 2006, **more people have died of hepatitis C than of either HIV/AIDS or of hepatitis B.**



HCV: Increased Cirrhosis, Liver Failure, and demand for Liver Transplant.

- HCV can cause cirrhosis, which destroys the liver, but HCV can also affect **other systems** such as the **circulatory system, digestive system, blood, nervous system** and **brain, urinary tract, and skin.**



Healthy



Cirrhosis

LiverSupport.co.uk

Liver Cancer: a Major Canadian Health Challenge

Since the 1970s LIVER CANCER rates in Canada have:

- **Tripled in men (3X)**
- **Doubled in women (2X)**
- *“The **main reason** for the increase in liver cancer is **undiagnosed hepatitis C.**” – Dr. Jordan Feld in 2014 movie ‘Deal with It: Untold Stories of Hepatitis C in Canada’.*

HCV: Increased Risk of all Cancers

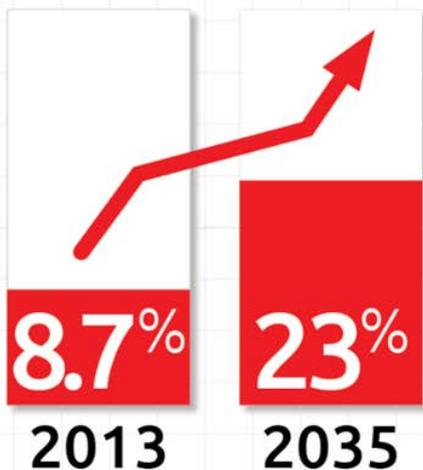
Researchers say people with hepatitis C have

- **Double (2 X) normal risk of all cancers**, particularly non-Hodgkin's lymphoma, kidney and prostate cancers
- These **risks slowly decrease, once a person is cured** of Hep C.
- The **earlier a person is cured, the less likely they will develop cancer.**

Source of statistics: <http://www.sciencedaily.com/releases/2015/04/150424085700.htm>, Study from Kaiser Permanente presented at The International Liver Congress™ 2015.

Burden of Hepatitis C

The Future Toll of Illness



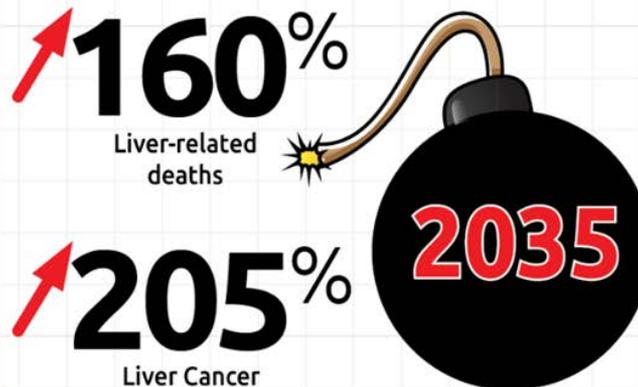
The number of Canadians with chronic hepatitis C with cirrhosis and more advanced liver disease is on the rise.

75%

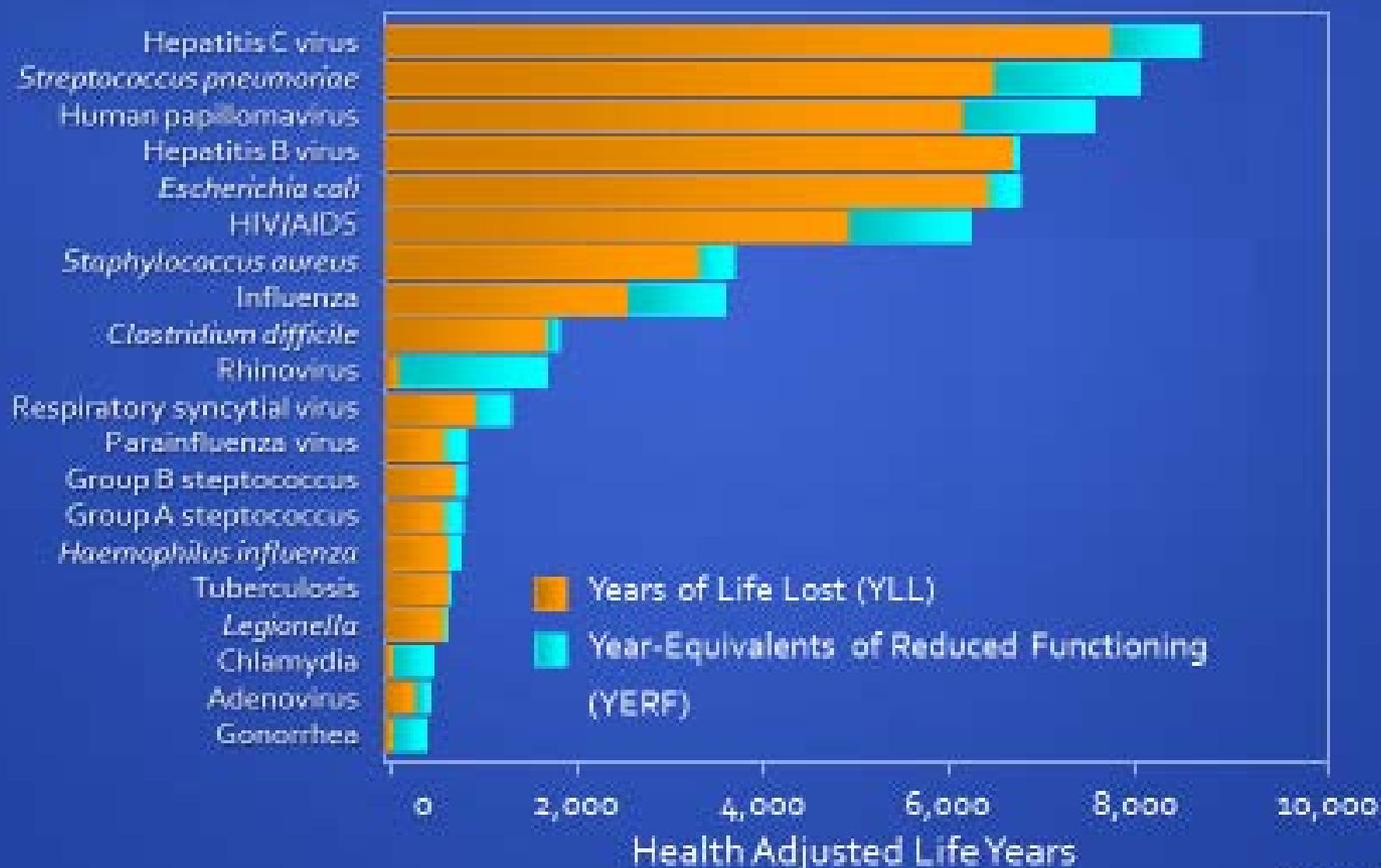
of hepatitis C patients have early-stage disease at any given time - an ideal opportunity to intervene with new antiviral therapy to avoid the future toll

Hepatitis C - The Ticking Time Bomb

By 2035, the most common health complications associated with chronic hepatitis C will increase by:



Morbidity and Mortality for the top 20 pathogens in ON, ranked by disease burden



OnBOIDS, Dec 2010

Hepatitis C in BC (one of Canada's top provinces for high HCV prevalence)

- The BC Centre for Disease Control estimates that approximately **80,000** British Columbians are living with chronic hepatitis C.
- Leading cause of **cirrhosis of the liver** and **liver cancer** in BC
- Top reason for **liver transplants**; demand soaring
- Estimate of future lifetime costs range from **\$52,000 for patient with no fibrosis** to **\$328,000 for patient requiring liver transplant**

Constituencies Most at Risk – Part 1

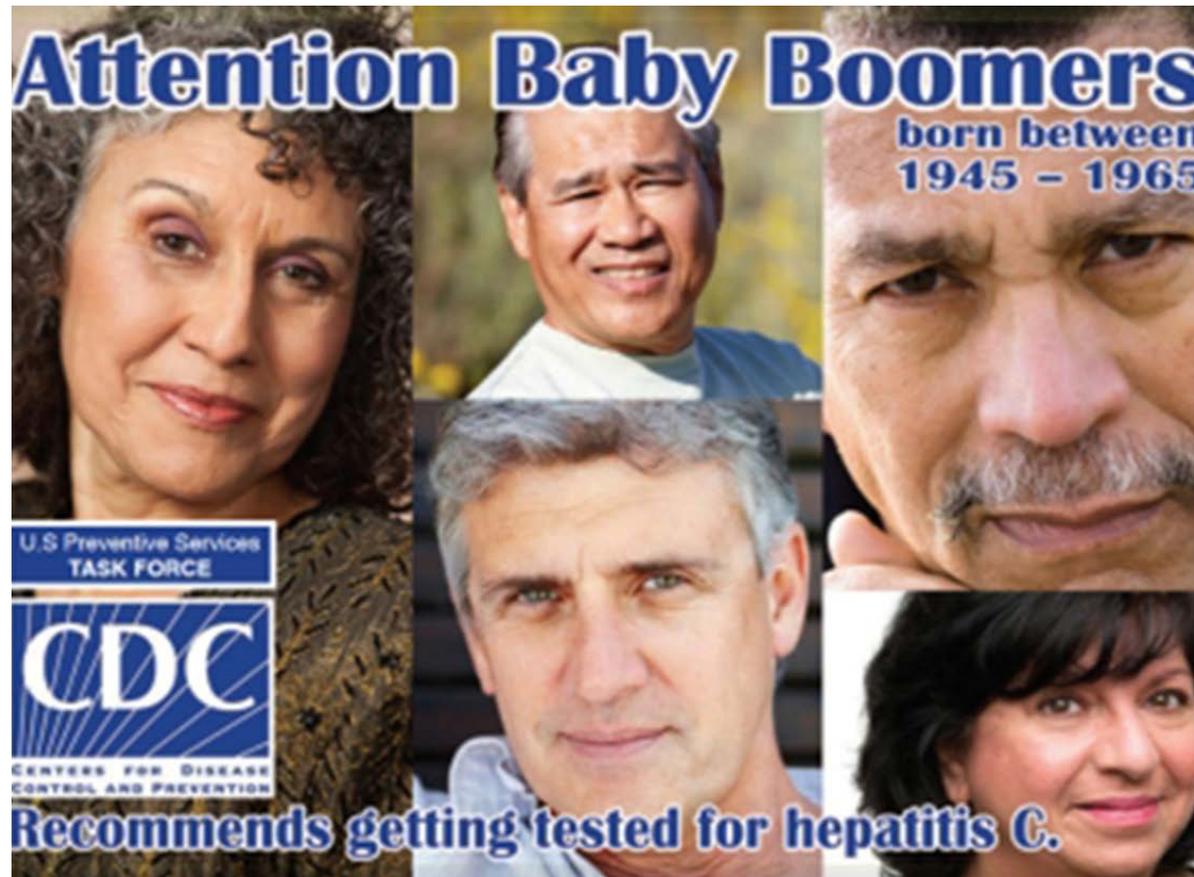
Baby boomers (Born 1945-1965) account for approximately 75% of HCV+ cases. They are at particularly high risk due to:

- **Contaminated blood** & blood products that went unscreened prior to 1992.
- **Drug experimentation of 1960s** (high risk for even one-time-only use).
- **Veterans** in US have high prevalence; we don't yet have statistics for this population in Canada (we need this study!).

HCV+ “Baby Boomers” from Vancouver Island: together we represent over 150 years of HCV!



Center for Disease Control in US knows what to do. Why can't Canada test its Baby Boomers (just once in their lives)?



Constituencies Most at Risk – Part 2

- **Northern, remote, and First Nations communities.** Limited access to testing, treatment, and support.
- **Lack of confidentiality** and HCV **stigma** especially unfortunate in remote areas.
- Estimates of HCV rates within Inuit and First Nations communities **several times higher** than that of other Canadians.
- **Patterns of infection** also unique, requiring a distinctive and community-based response.

HCV Pamphlets delivered to Friendship Centre in Terrace during 2014 Outreach Trip

- **Prevalence** of hepatitis C is exceptionally high (estimated at **3%-6%**) in BC's Aboriginal communities.
- Communities are **starting to confront** this problem.
- **Support and consultation at local levels** is critical.



Aboriginal Hepatitis C Awareness Month is MAY in Canada (since 2014).



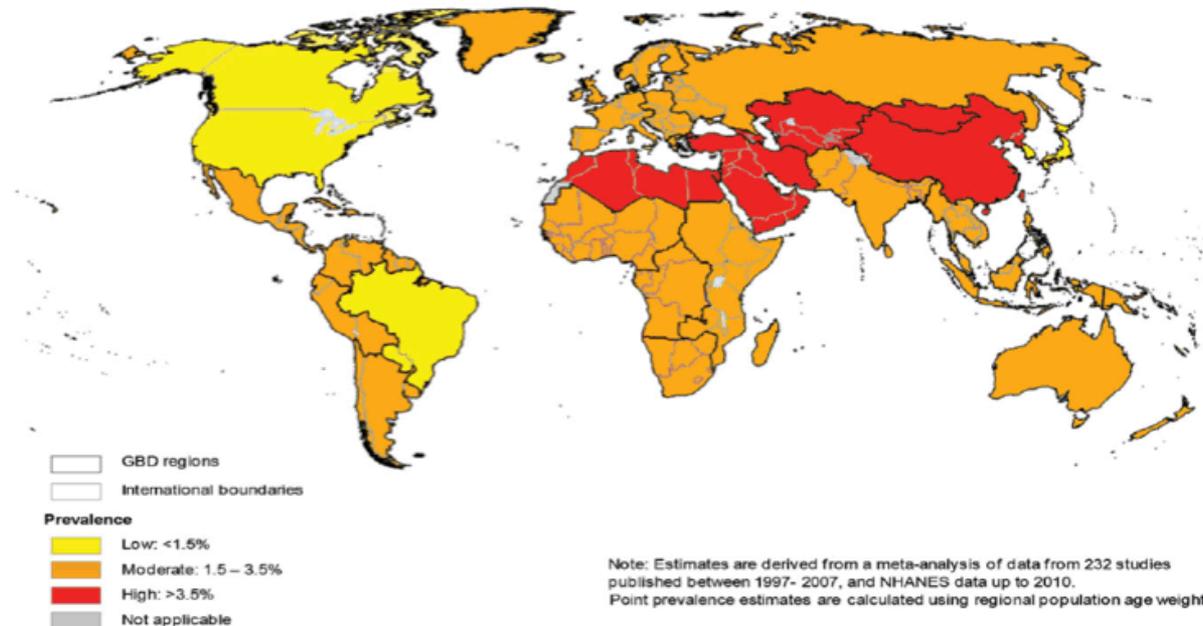
Source: Canadian Aboriginal AIDS Network, <http://www.caan.ca/>

Constituencies Most at Risk – Part 3

- **Newcomers to Canada (and long-time immigrants)** often contracted hepatitis C through:
- **Common medical practices** in their home country including: Re-use of vaccination needles, improper sterilization techniques for medical and dental equipment, no testing of transfused blood.
- **Traditional cultural practices** such as acupuncture, phlebotomy, tattooing and circumcision (male and female) may have contributed to spreading the disease once it emerged.

Global epidemiology of HCV infection by Global Burden of Disease (GBD) region

Anti-HCV seroprevalence by GBD region, 2005



Note: Estimates are derived from a meta-analysis of data from 232 studies published between 1997- 2007, and NHANES data up to 2010. Point prevalence estimates are calculated using regional population age weights.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the authors concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Fig. 3. Map of estimated anti-HCV seroprevalence by GBD region, 2005. Note: Includes data published up to 2007 in peer review and U.S. NHANES data up to 2010.

HCV Cases among Immigrants BC & Canada

Country of Birth	Pop Canada	BC	HCV %	N HCV Canada	N HCV BC
Eastern Asia	1038605	363300			
China [19]	585555	178435	3.2	18738	5710
Hong Kong	209775	76300	0.5	1049	382
Japan	33330	15715	1	333	157
Korea, South [21]	132940	46625	1.7	2260	793
Taiwan	69550	43515	4.4	3060	1915
Southeast Asia	787600	160435			
Philippines	502295	104460	3.6	18083	3761
Viet Nam [23]	168420	26355	6.1	10274	1608
Southern Asia	927775	163065			
Bangladesh	47180	1685	2.4	1132	40
India	572435	146910	2.75	15742	4,040
Nepal	9050	960	0.6	54	6
Pakistan	161380	8835	4.8	7746	424
Sri Lanka	135400	4610	1.06	1435	49
Total cases				79,906	18,883
Prevalence	2627310	654405		3%	3%



Immigrants: Baby boomers and youth

- Don't forget that many **immigrants** with hepatitis C are also **Baby boomers!**
- **Immigrant youth** should also be targeted because they may have contracted HCV **through childbirth (vertically)**.
- Outreach to immigrant youth is also **a way of reaching their parents** and other relatives with limited English language skills.



Burden of Hepatitis C

The Future Costs of *Not* Treating

Health care costs will increase by 60% due to complications of advanced hepatitis C (not including antiviral therapy, virology testing and indirect medical costs).

\$161.4M
2013

\$258.4M
2032

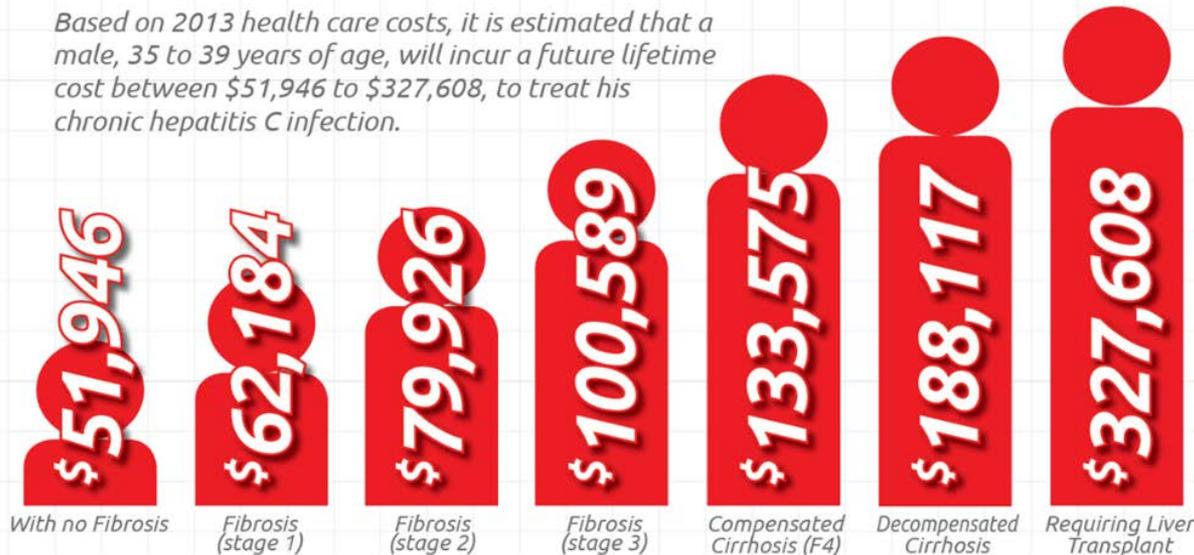
60%

In 2032,

81%

of the total health care costs of hepatitis C will be attributable to more advanced liver disease, up from 56% in 2013.

Based on 2013 health care costs, it is estimated that a male, 35 to 39 years of age, will incur a future lifetime cost between \$51,946 to \$327,608, to treat his chronic hepatitis C infection.



What Can We Do to Eliminate HCV in Canada?

(A) Continue to promote prevention measures such as needle exchanges, free condoms, and safe injection sites which lower the incidence of new cases of HCV.

(B) Support further research into a safe, effective HCV vaccine. No disease has ever been completely eradicated without a vaccine.

(C) Release Updated
Federal Hepatitis C
Screening Guidelines which
include Age-Cohort Based
Testing

One-Time-Only Screening of those born between 1945 and 1965

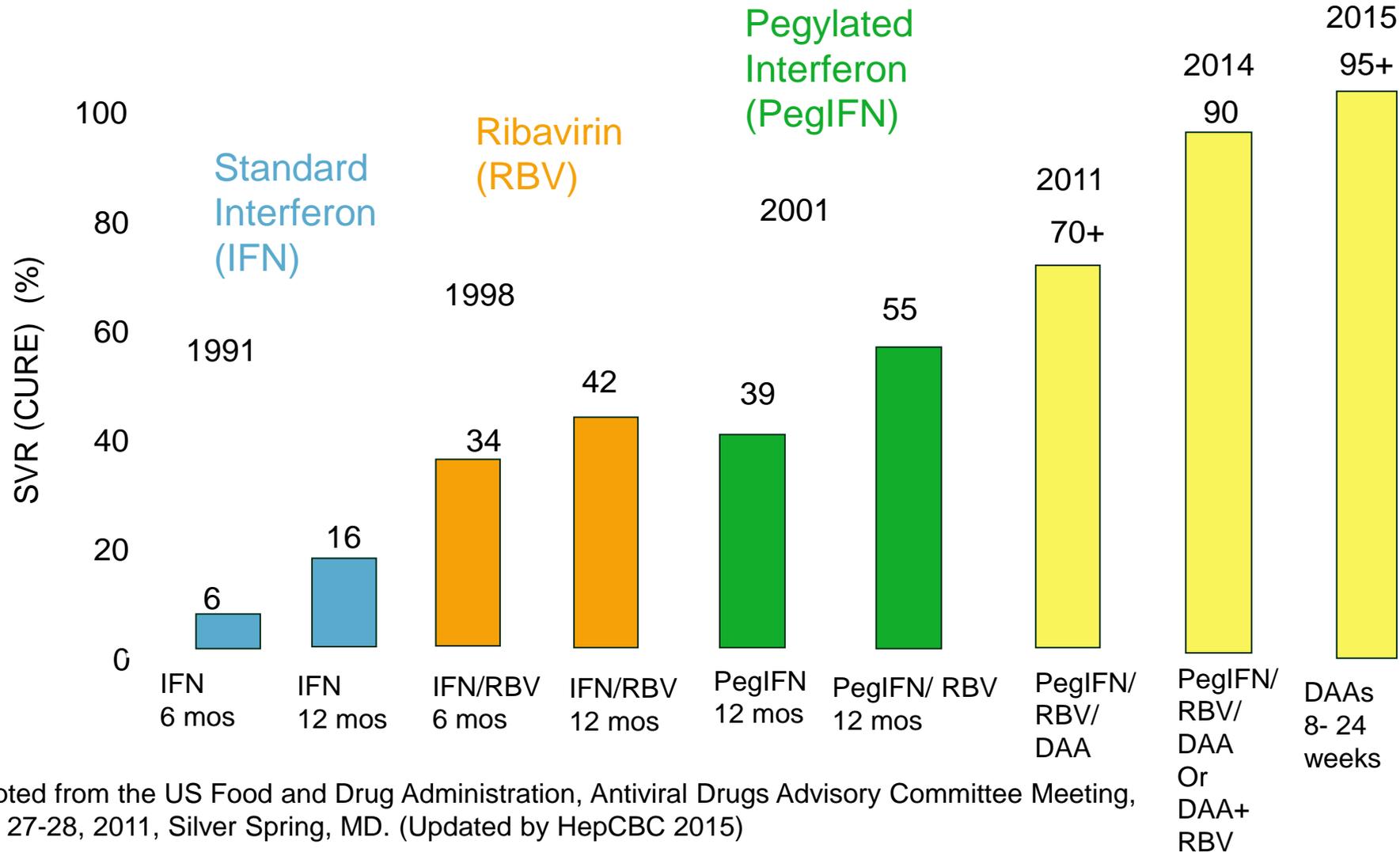
- In Canada, both the Canadian Liver Foundation and Canadian gastroenterologists suggest 1945-**1975!**
- **One-time-only** testing during a yearly checkup or as a part of insurance blood work. A **simple blood test** is only needed once; in general, this cohort no longer transmits nor contracts HCV. **HCV tests are not regularly given.** A patient must generally request this test specifically.
- In the US, **>75% of adults with chronic hepatitis C are baby boomers.**
- **>73% of HCV-related deaths** were in persons 45-64 years of age. Many of these premature deaths could be prevented by finding and treating hepatitis C

Widespread Baby-Boomer Screening Would **De-Stigmatize** HCV Testing

- A one-time-only test for **all of those born 1945 – 1975** (the most commonly recommended cohort for Canada) would identify most HCV+ people in Canada, including
- Members of **ethnic** and **Aboriginal communities**
- **Veterans** and **former/present prisoners**
- Former users of IV or intranasal drugs
- ***Without singling out or stigmatizing any group, it could save thousands of lives.***

(D) Increase Treatment of
HCV+ People with New,
Effective Medications which
actually CURE HCV

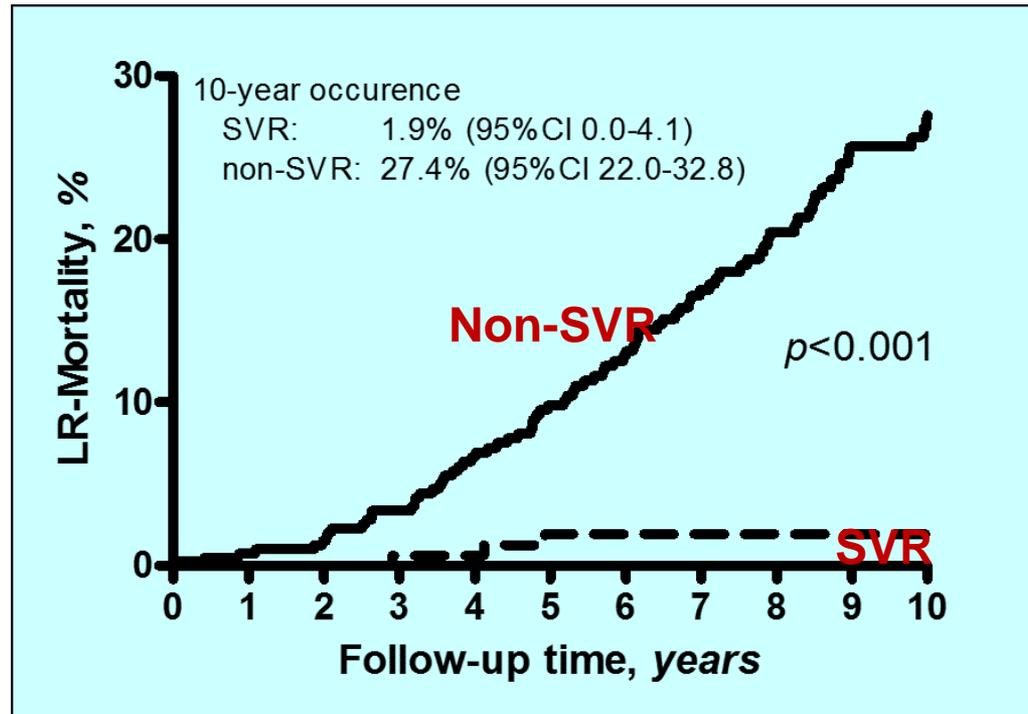
The Evolution of HCV Therapies



Adapted from the US Food and Drug Administration, Antiviral Drugs Advisory Committee Meeting, April 27-28, 2011, Silver Spring, MD. (Updated by HepCBC 2015)

Eradicating HCV Saves Lives

Long-term follow-up of patients with extensive fibrosis after therapy



SVR (“Sustained Viral Response” – also known as a CURE) eliminates liver failure & liver-related death

HCV Treatments PRIOR to 2015 (before new “DAA” drugs covered in most of Canada)

- Weekly **injection** for **24-48 weeks**
- Most patients suffered **severe side-effects**.
- Only **50%-70%** of patients **completed** treatment.
- Only **30%-50%** of patients who completed treatment were **cured**.
- **\$35K to \$65K treatment cost** incurred regardless of treatment outcome.

Direct-Acting Antivirals (DAAs) Covered by most Canadian Pharmacares in 2015

- Treatment terms down to **8-24 weeks**
- 97%+ patient completion rates and **90% to 97% patient cure rates. DAAs are a true CURE.**
- **Minimal/no side effects** and no parallel treatment for anemia required; **less stress** on medical personnel and **medical systems**
- Patients can generally **continue work** while undergoing treatment; **less stigma** and stress

Economic Benefits of New Treatments

- New drug therapy **costs are comparable to former treatment – while much more effective.**
- Reimbursement for new treatments will yield **more cured patients per dollar** spent.
- New treatments will provide individual patient benefits as well as systemic benefits to funding: **46% decrease in HCV mortality, 50% decrease in liver cancer** related to HCV, **46% decrease in HCV-related liver transplants**, and **38% reduction in new infections.**

BUT many patients are left behind...

Those who cannot prove severe liver damage must postpone treatment.

- There are four stages of liver disease (F0 is normal), **F1 > F4**, of which F4 is most advanced stage (cirrhosis).
- Proof of “**F2 or greater**” **damage is generally required** in order to treat a patient. Criteria are inconsistent, varying from province to province.
- **What other disease requires patients to wait until an organ is severely damaged** before they can be treated? This is an untold human and financial loss.
- 2015 PHAC pamphlet says “...**the sooner treatment is started, the better the chance that it may help clear the virus...**”

Those with HCV variants other than “genotype 1” may have to wait longer for new treatments.

- There are over **6 variants (genotypes)** of HCV.
- The **most common in Canada is genotype 1**. Genotypes 2-6 are more common in other parts of the world (and **among immigrants from these countries**).
- In Canada, the **new treatments** are generally studied and made **available first to those with genotype 1**.

Those with too advanced disease to treat safely

- Those with **“de-compensated” liver disease** are often considered too ill for treatment.
- Instead, the “lucky” ones are put on the transplant waiting list, where **one in four will die** before receiving an organ.
- Cost of organ transplant is over **\$300,000.**
- **It is far more cost effective to SCREEN-TREAT-CURE before patients reach this stage.**

Those living in remote communities without local access to testing, treatment, and care

- Our medical system has **forgotten and ignored** these patients and their caregivers.
- It is **now possible to treat most of these patients with the new DAAs** and monitor their condition remotely.
- Use **telehealth** and other new technologies plus fully and creatively **utilize local resources** such as **GPs**, trained **peer health navigators** and Community Health Representatives (**CHRs**).

OTHERS who are left behind...

- Those whose caregivers (or GPs) are **unaware a CURE for HCV is now available;**
- Those who **fear disclosure** of their condition will negatively impact relationships with family or friends, job, or immigration status;
- **The un-diagnosed** (at least 44% of our HCV+ population);
- **Canada's un-diagnosed desperately need a SCREEN-TREAT-CURE strategy.**

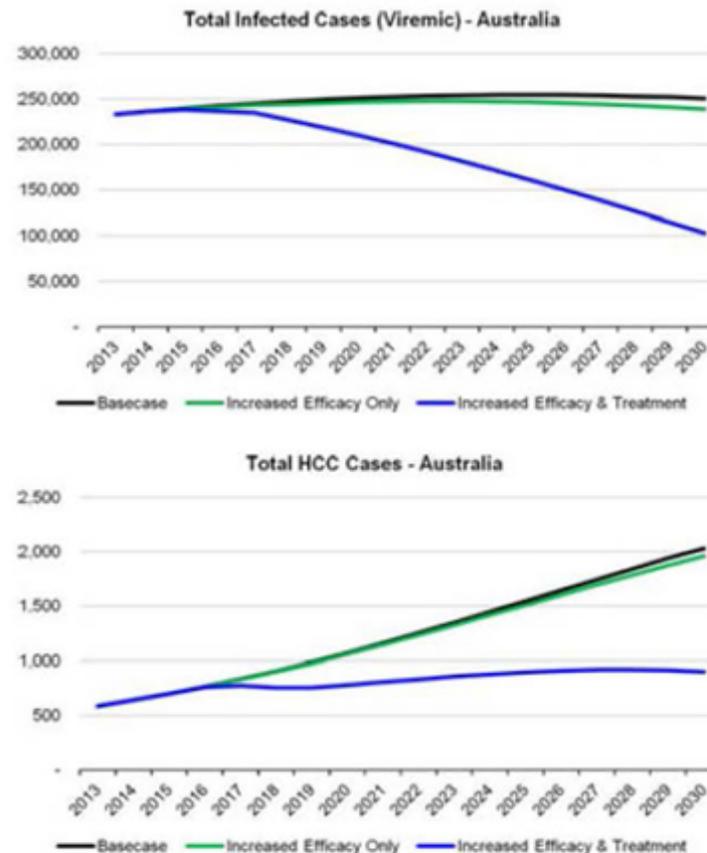
Treatment at Current Levels Won't Help

Reducing burden

We need more treatment:

It's projected we need to **increase our annual treatment rate to 6.3% from 1.4%** to make an impact on hepatitis C.

This won't happen without **federal public health leadership** guiding implementation of a treatment-to-cure model in the interest of public health and long-term health system savings.



References: Wedemeyer et al. 2014; Australian data presented here due to similar prevalence (approximately 240 000 cases) and similar treatment rate (1.1 vs. Canada's 1.4%)

How Can We Afford This?

Look at the Benefits of ‘Screen & Treat’

- **A 1-time hepatitis C screen & treat program in Canada for individuals aged 45-64 years would prevent at least **21,000 HCV-related deaths** if infected individuals were offered the most recent “Direct-Acting Antiviral” treatments**
- This sort of screen-treat approach “is likely to be cost-effective, at **\$34,359 to \$44,034 per QALY (Quality-Adjusted Year of Life)** gained...”
- “The conventional upper limit of applied cost-effectiveness thresholds varies...from \$50,000 to \$120,000 per QALY.”

(E) Develop a New or Updated
“Canadian Hepatitis C Strategic
Action Plan”

Canada's current "Hepatitis C Plan"

- A 27-page document by PHAC full of **out-of-date data** with **no clear goals or strategies**, entitled:
- **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**
- Of 209 individuals who served on the committee which formulated this document, only 2 were from British Columbia.
- Very little involvement by HCV+ individuals or organizations
- Urgent need for update, preferably a complete re-do

Look to Egypt for an HCV Plan Template!

- Egypt, with **15% HCV prevalence** due to re-using needles during vaccinations, has developed a true **“SCREEN & TREAT” action plan** using the **new DAAs**. Most of their cases are **genotype 4**...
- “...we have been overwhelmed during the last couple of months with **more than 800,000 patients registered so far** to receive treatment for HCV. Patients are registered on the web for appointments at one of our 26 treatment centers (currently expanding the numbers of centers to accommodate the increasing numbers of patients), they complete their requested investigations and then **data are uploaded on the database, patients are prioritised accordingly to receive treatment** or deferred and their papers once approved centrally are sent for endorsement by the Ministry of Health and treatment is then dispensed. So **far in two months treatment was dispensed to more than 12,000 patients** but the numbers are increasing and we expect to start treating ten to twelve thousand more on monthly basis, **expecting to treat 150,000 in 2015.**”

Our 3 Urgent “Asks” for Canadian Leaders and Decision-Makers

- PHAC: please release the updated Federal Hepatitis C Screening Guidelines which include Age-Cohort Based Testing
- Canada: please release a new or updated “Canadian Hepatitis C Strategic Action Plan”
- Have you been tested for hepatitis C? If not, are you willing to do so publicly?

MANY THANKS from HepCBC!!!

Just a little about HepCBC:

HepCBC (no relation to CBC!):

- Founded in 1996
- Registered Canadian charity, registered BC Society
- Run by and for people infected and affected by HCV
- Fights the stigma associated with HCV
- Seeks to eradicate HCV from the earth - starting with BC
- Seeks equitable access to affordable care and treatment
- **www.hepcbc.ca**

Mission: *to provide education, prevention and support for those living with HCV*

Founders of HepCBC, one of Canada's few HCV-only organizations, in front of BC Legislature, ca. 1996



Victoria, BC, end of 2011 Victoria Day parade route (won 1st place in category!)



HepCBC Liver Warriors Half Marathon team: Fighting stigma, Educating the public



Thank-you letter from inmate to HepCBC

Your newsletters has been very informative for me as well as many other inmates. It's concise, updated and factual—night and day compared to the dated, embarrassingly thin pamphlets the federal governments reluctantly supplies. With your newsletter we can demand new treatments and talk informatively. Thank you for that. Sincerely, [REDACTED]

Outreach to Newcomers: Newspaper ads

Why Should We Get Tested for Hepatitis ?

肝炎 التهاب الكبد *viêm gan hépatite* हेपेटाइटिस



Newcomers to Canada often got hepatitis B or C through common medical practices in their home country, or even from their mother during birth. Immigrants of any age should consider testing for hepatitis B and C, and getting a hepatitis B vaccination.



"Baby-Boomers" (born 1945-1965) represent 75% of hepatitis C cases, but many don't know they have it. There may be no symptoms for many decades until suddenly the person is diagnosed with severe liver disease, or told a liver transplant is necessary.



In Northern, remote, and First Nations communities, it is important everyone works together to remove barriers to accessing hepatitis C testing and treatment, and to combat stigma. The first step is to begin talking about hepatitis C.

Get more information at a World Hepatitis Day event!

ABBOTSFORD

Friday, July 26, 2013
11:00am - 3:00pm
Jubilee Park (McCallum Ave. & 5 Corners)

SMITHERS

Thursday, July 25, 2013
11:00 am - 1:00 pm
Sidewalk, Main St. & 2nd Ave. intersection

CAMPBELL RIVER

Thursday, July 25, 2013
11:30am - 1:30pm
Spirit Square, Shoppers Row

SURREY

Friday, July 26, 2013
12:00 noon to 3:00pm
Housing & Health Solutions, 10697-135A Street

COURTENAY

Friday, July 26, 2013
11:30am - 1:30pm
Courthouse Lawn, 6th & England St.

VANCOUVER

Wednesday, July 24, 2013
11:00am - 3:00pm
John Hendry Park-Trout Lake picnic area

GRAND FORKS

Friday, July 26, 2013
7:00am - 2:00pm
Farmers Market, Gyro Park
REDUN & ANKORS table

VICTORIA

Saturday, July 27, 2013
11:00 am - 2:00 pm
Spirit (Centennial) Square, next to City Hall

NANAIMO

Saturday, July 20, 2013
10:00am - 2:00pm
Bowen Park, upper shelter, 500 Bowen Rd.

WILLIAMS LAKE

Saturday, July 27, 2013
12 noon - 4:00pm
Red Shreds Bike & Board Shed, 95 South 1st Ave.

NELSON

Tuesday, July 23, 2013
12:00 noon - 2:00pm
Rotary Shelter at Lakeside Park

HEPATITIS FACTS

Hepatitis is a major cause of

- CIRRHOSIS and LIVER FAILURE
- LIVER TRANSPLANT and LIVER CANCER

When HEPATITIS is TREATED, these life-threatening complications may be prevented, and transmission to others minimized. Liver damage can be reversed if stopped in time.

Hepatitis is a SILENT KILLER. You can have it many decades and not know it while the virus is silently destroying your liver.

Early hepatitis SYMPTOMS are OFTEN MISTAKEN for other chronic diseases.

TREATMENTS have recently IMPROVED with shorter treatment times, fewer side effects, and greater chance of success.

Now is a great time to ask your doctor about hepatitis B or C testing or treatments.

There is NO VACCINE for Hepatitis C. There is a vaccine for hepatitis B. Get your hepatitis B shot!

Hepatitis B and C are NOT SPREAD by coughing, sneezing, touching or shaking hands, sharing food or utensils, toilet seats, hugging, kissing, or other casual contact. There is no need to avoid people with these diseases.

FURTHER DETAILS: www.whdcanada.org/events | www.liver.ca | www.hepcbc.ca



Bristol-Myers Squibb Canada Co.
La Société Bristol-Myers Squibb Canada



HepCBC Hepatitis C Education & Prevention Society (www.hepcbc.ca) acknowledges the generous funders of this community health initiative:



Contact Information, HepCBC

- **Victoria, BC (Main) Office**
 - #20 – 1139 Yates Street
 - Victoria, BC V8V 3N2
 - 250-595-3892

- **Vancouver, BC (Outreach) Office**
 - #206A – 938 Howe Street
 - Vancouver, BC V6Z 1N9
 - 604-259-0500

- Email: info@hepcbc.ca
- Website: www.hepcbc.ca, FB: [hepcbc](https://www.facebook.com/hepcbc), Twitter: [@hepcbc](https://twitter.com/hepcbc)