“Viral Time Bomb”:

Health and Human Rights Challenges in Addressing Hepatitis C in Canada

Canadian HIV/AIDS Legal Network | Réseau juridique canadien VIH/sida

University of Victoria
Centre for Addictions Research of BC

CARMHA
Centre for Applied Research in Mental Health & Addiction

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The Canadian HIV/AIDS Legal Network (www.aidslaw.ca) promotes the human rights of people living with and vulnerable to HIV/AIDS, in Canada and internationally, through research and analysis, advocacy and litigation, public education and community mobilization. The Legal Network is Canada's leading advocacy organization working on the legal and human rights issues raised by HIV/AIDS.

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Canadian HIV/AIDS Legal Network, Centre for Addictions Research of BC
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Executive summary

The World Health Organization (WHO) characterizes hepatitis C virus (HCV) as a "viral time bomb" because it can spread quickly and quietly for some time before the force of its explosive impact hits health care systems. By conservative estimates, hepatitis C affects some 250,000–300,000 people in Canada. A chronic illness that causes liver failure, liver cancer and other serious health concerns, hepatitis C already weighs heavily on the health care system. Its public health and economic impact is expected to double in only a few years.

The population most affected by HCV is people who inject drugs, including those who inject drugs in prison. In addition to facing social and economic marginalization, people who use drugs face criminal sanctions. This creates further barriers to seeking services — including testing or treatment for HCV or other illnesses such as human immunodeficiency virus (HIV) — that could cause their drug-using status to be known or officially registered, which may lead to criminal prosecution or at least fear of it. They also face stigma and discrimination in society, including in health services. There is reason to believe that because it is people who inject drugs who are most affected by HCV, it has been be politically easy to address the virus with less urgency than it deserves. Another reason for the lack of political attention on hepatitis C may be because it has fallen from public consciousness since the 1990s when HCV contamination of the blood supply was in the headlines.

At the federal level, funding for HCV research and both prevention and support programs has been uncertain since a five-year HCV policy initiative ended in 2004. Organizations providing community-based services for people who use drugs have been forced to shut down their hepatitis C programs, and the future direction of federal strategies and funding to address the disease is unclear. Some provinces have allocated significant resources to HCV funding, but there is an urgent need for programs to be scaled up dramatically to address growing needs.

HCV is much more readily transmitted than HIV through contact with blood. After only a short period of time injecting illicit drugs, a person who uses drugs is at high risk of becoming infected with HCV. In addition, HCV may be transmitted through the sharing of cookers or filters that are used in preparing drugs for injection. Pipes and other types of equipment used to smoke or ingest drugs may also be risky to share, even if those items carry only small amounts of blood. As a result, needle exchange services that have been important for HIV prevention are not likely to be as effective for HCV prevention unless they have extremely high coverage and include provision of a full range of injection and other safer drug use equipment in addition to needles. People who inject opiates may already be HCV-positive by the time they enter methadone therapy, though some methadone programs have been shown to have some HCV prevention impact. Prevention efforts are urgently needed to identify and reach out to people, especially young people, before they begin injecting drugs or very early in their history of injection. In particular, what is needed are programs that seek to prevent or reduce the frequency of injection without insisting on drug abstinence. These programs, however, are likely to be politically unpopular.

Although effective treatment of HCV is available, many people — including the vast majority of HCV-infected drug users — remain untreated. Treatment is long and can have debilitating side effects but has been shown to be effective and well-tolerated among those who inject drugs with appropriate support services. Resources are needed to inform people who use drugs of the importance of treatment, and to provide appropriate services and support to increase treatment coverage and adherence.

Canada's efforts to stem HCV transmission in prison are ineffective, largely because policies continue to ignore evidence of the importance of sterile injection and tattooing equipment in prisons. The special needs of women who inject drugs — whether inside or outside of prison — are rarely accounted for in HCV programs. There is also an urgent need for more and better-funded HCV programs for Aboriginal communities. Young Aboriginal women in particular are vulnerable to drug use, HIV and HCV.

In short, uncertain funding, uncoordinated strategies, and the lack of effective programs (particularly for HCV prevention), which have characterized the HCV policy-making environment for too long in Canada, will only allow the HCV-related disease burden to grow. Canada does not have a clear and well-funded strategy of the kind that will help stop the predicted rapid spread of HCV. There is an urgent need for a substantial scale-up of programs, based on the best practices from Canada and around the world, to reach the marginalized and criminalized people who are most affected by HCV.

Introduction: hepatitis C in Canada

The WHO characterizes HCV as a "viral time bomb" because it can spread quickly and quietly for some time before the force of its explosive impact hits health care systems.[1] It is conservatively estimated that 250,000–300,000 people are infected with HCV in Canada.[2] Of the approximately 6,000 cases of new HCV transmission each year in Canada, about three-quarters are related to drug injection with contaminated equipment.[3] As a result of this mode of transmission, HCV is a co-infection for a significant number of Canadians infected with human immunodeficiency virus (HIV).[4] This is consistent with worldwide data suggesting high global prevalence of HCV and HIV/HCV co-infection among people who inject drugs.[5]

The cost to people and to health systems in Canada of HCV-related disease is very high. A high percentage of people with acute HCV infection go on to suffer long-term consequences of the disease.[6] The Public Health Agency of Canada estimates that about 20% of those with the infection will die of the long-term consequences of HCV, which include liver failure and liver cancer.[7] Currently, the recommended pharmaco-therapy of HCV consists of pegylated interferon in combination with ribavarin. The annual cost of this regimen per person can exceed $25,000. Canada's health system is also greatly challenged by the HCV-related demand for costly liver transplants and associated complications.[8] The annual cost of dealing with all aspects of HCV, including its health and productivity consequences, may be as high as $500 million; that cost is expected to rise above $1 billion annually by 2010 and possibly to over $3 billion by 2021.[9]

People infected with HCV can be asymptomatic over a long period, and some may have symptoms but remain unaware of their HCV infection because of the limited availability of testing. As a result, they may

[1] World Health Organization. Viral cancers: Hepatitis C. Online: www.who.int.
[2] B. Fischer et al. "Hepatitis C, illicit drug use and public health." *Canadian Journal of Public Health* 2006; 97(6): 485–488, p. 485.
[3] Ibid.
[4] Public Health Agency of Canada. *HIV/AIDS Epi Update — August 2006*. Ottawa, August 2006, pp. 75–84.
[5] C. Aceijas and T. Rhodes. Global estimates of prevalence of HCV infection among injecting drug users. *International Journal of Drug Policy* 2007; 18(5): 352–358.
[6] S. Zou, M. Tepper and A. Giulivi. "Current status of hepatitis C in Canada." *Canadian Journal of Public Health* 2000; 91(Supp 1): S10–S15, p. S10.
[7] K. Dinner et al. "Hepatitis C: a public health perspective and related implications for physicians." *Royal College Outlook* 2005; 2(3): 20–22.
[8] Ibid., p. 21–22.
[9] Ibid.; Canadian Hemophilia Society, Canadian Hepatitis C Network et al. *Rationale and recommendations for a Canadian hepatitis C strategy.* Draft report, March 2004, p. 5. Online: www.hemophilia.ca/pdf_bilingue/HepC_StrategyMar23.pdf.

unknowingly spread the virus to other people. A large percentage of people who have contracted HCV in Canada — perhaps even as much as one-third — do not know they are infected.[10] These factors make it difficult to estimate prevalence by the usual means of reporting all detected cases. As a result, the evolution of HCV in a population is sometimes estimated using mathematical projections. One such projection in Canada, prepared in 2000, estimated that HCV prevalence would double from 1998 to 2008, and that the prevalence of both liver failure and liver cancer related to HCV would more than double in the same period.[11] More recent modelling in 2004 projected that, in Ontario, the incidence of outcomes of HCV-related liver failure would rise 40% between 2004 and 2024.[12]

A large percentage of people who have contracted HCV in Canada — perhaps even as much as one-third — do not know they are infected.

While some Canadians living with HCV were infected through blood transfusions before blood was screened for hepatitis C, the vast majority of infections are associated with drug injection. Very high HCV prevalence among people who use drugs, usually in the range of 60–90%, has been consistently reported in Canada and worldwide.[13] Thought incomplete, the case reports from public health authorities indicate that people aged 30–39 years are most affected,[14] although some local studies have shown high prevalence of HCV among young people who inject drugs.[15] The majority of cases in Canada are reported in British Columbia and Ontario.[16] Overall, it is estimated that about 10% of people with HCV are also living with HIV, and about 20–30% of people living with HIV have contracted HCV.[17] In the case of people who use street drugs, given the greater transmissibility of HCV, the vast majority of those who have contracted HIV have also contracted HCV.[18]

HCV is also highly prevalent in Canadian prisons, as it is in other countries. Some studies have estimated the prevalence of HCV among prisoners in Canada to be between 19 and 40%.[19] According to the Correctional Service of Canada (CSC), overall estimates of the prevalence of HCV in provincial and federal correctional facilities have ranged from 25 to 40%, and HCV prevalence among prisoners in Canada is higher than in the general population.[20] CSC has further reported that at the end of 2004, HCV prevalence among women

[10] Ibid., Dinner et al., p. 21.
[11] Zou et al., *supra* note 6, p. S14.
[12] R. Remis. *The Epidemiology of Hepatitis C Infection in Ontario, 2004*. Final Report for Hepatitis C Secretariat, Community Health Division, Ontario Ministry of Health and Long-Term Care. Toronto, 2004, p. 12–13.
[13] D.W. Shepard, L. Finelli and M.R. Alter. "Global epidemiology of hepatitis C virus infection." *Lancet Infectious Diseases* 2005; 5(9): 558–567, p. 559.
[14] Ibid., p. S11.
[15] See, e.g., E. Roy et al. "Risk factors for hepatitis C virus infection among street youths." *Canadian Medical Association Journal* 2001; 165(5): 557–560.
[16] Zou et al., *supra* note 6, p. S11.
[17] Canadian Treatment Action Council. *Roadmap for addressing the epidemic of HIV and hepatitis C co-infection in Canada: Issues, recommendations, priorities and next steps* (report of a national consultation). June 2004, p. 6.
[18] P. Millson et al., *Injection Drug Use, HIV and HCV in Ontario: The Evidence 1992–2004*. Toronto: AIDS Bureau, Ontario Ministry of Health and Long-Term Care, pp. 64ff, online: http://www.ohrdp.ca/Research_Report.pdf.
[19] S. Skoretz et al. "Hepatitis C virus transmission in the prison/inmate population." *Canada Communicable Disease Report* 2004; 30(16): 141–148, specifically p. 142.
[20] Correctional Service of Canada. *Infectious Diseases Prevention and Control in Canadian Federal Penitentiaries 2000–01*. Ottawa: CSC, 2003, pp. 14, 19. Online: www.csc-scc.gc.ca/text/pblct/infectiousdiseases/index_e.shtml#toc.

prisoners in the federal system was estimated at 37.6% and among men 24.8%, compared to about 0.8% in the population outside prison.[21] More recently, researchers reported HCV prevalence of 16.6% among male prisoners and 29.2% among female prisoners in Quebec provincial prisons in 2003.[22] A similar study of those detained in Ontario remand facilities (jails, detention centres and youth centres) in 2003–2004 reported HCV prevalence of 15.9% among men and 30.2% among women.[23] In both studies, HCV prevalence was significantly higher among people who inject drugs, confirming what has already been documented by the CSC.[24] In unpublished data presented at a community consultation in early October 2007, the CSC reported an overall steady increase in annual HCV prevalence between 1999 and 2005. At the end of 2005, the CSC estimated that just under 30% of people in custody in federal prisons (over 3500 prisoners) were HCV-positive.[25]

Policy and programs in Canada

Since 1999, hepatitis C has been a reportable infection in all provinces and territories of Canada. In other words, it is now mandatory for health authorities to be notified of all confirmed cases.

In 1999, the federal government established a $50 million, five-year Hepatitis C Prevention, Support and Research Program. About 28% of this funding was allocated to research, 36% to community-based programs, 17% to improving treatment, 10% for prevention and 9% for program management.[26] Since the program ended in 2004, the Public Health Agency of Canada has twice allocated one-year funding for hepatitis C activities. However, implementing partners have experienced funding delays and uncertainty about whether programs could continue.[27] At the time of this writing, federal funding for hepatitis C was once again in flux as the federal government was reportedly reviewing its hepatitis C strategy.

Many HCV service programs across the country, especially community-based programs, were supported under the federal program. These included information and outreach programs for young people, Aboriginal communities, prisoners, people in the sex trade, and people who inject drugs. It also included support for harm reduction measures such as needle exchange.[28] A detailed evaluation of the projects funded in Alberta noted that the funding enabled people who use drugs to participate in the design of several of the funded interventions, and that many front-line workers in harm reduction services received hepatitis C information and training that would have been unavailable otherwise.[29] Unfortunately, many of these programs across the country that reached the most vulnerable communities have closed since funding stopped in 2004.[30] In June 2007, the Canadian Hepatitis C Information Centre, one of the flagship federal HCV programs that survived earlier cuts, was finally shut down, a move protested by the national AIDS non-governmental organizations in

[21] Correctional Service of Canada. "Addressing infectious disease issues for Aboriginal offenders." *Let's Talk* 2006; 31(1): 1–4, p. 2. Online via www.csc-scc.gc.ca.
[22] C. Poulin, M. Alary, G. Lambert et al. "Prevalence of HIV and hepatitis C virus infections among inmates of Quebec provincial prisons." *CMAJ* 2007; 177: 252–6.
[23] L. Calzavara, N. Ramuscak, A. Burchell et al. "Prevalence of HIV and hepatitis C virus infections among inmates of Ontario remand facilities." *CMAJ* 2007; 177: 257–61.
[24] CSC, *Infectious Diseases*, *supra* note 20, p. 19.
[25] Correctional Service of Canada. "Infectious Disease Surveillance in Correctional Services Canada: An Overview", Presentation to Community Consultation Committee, 2 October 2007, materials on file.
[26] Health Canada. Hepatitis C Prevention, Support and Research Program, 1999. Online: www.phac-aspc.gc.ca/hepc/pubs/psrpserv-ppsrserv/pdf/aboutServicesDoc.pdf.
[27] See, e.g., Anemia Institute for Research and Education et al. *Responding to the epidemic: Recommendations for a Canadian hepatitis C strategy*. Ottawa, Sept. 2005. Online: www.hepc.cpha.ca.
[28] A full listing of projects supported through fiscal year 2003–2004 is available at www.phac-aspc.gc.ca/hepc/prsp-ppsr_e.html#2.
[29] Public Health Agency of Canada. *Hepatitis C prevention and community-based support fund Alberta/NWT: Evaluation summary report.* Edmonton, 2006.
[30] Canadian Hemophilia Society et al, *supra* note 9, pp. 7, 11; Canadian Hepatitis C Network et al. *Responding to the epidemic: recommendations for a Canadian hepatitis C strategy*. Ottawa, 2005, p. 7, online: www.hemophilia.ca/en/pdf/5.0/Responding_e.pdf.

Canada, among other groups.[31]

Provincial and territorial health services provide diagnostic and treatment services for hepatitis C patients. In 2005, for example, the BC Ministry of Health estimated that it spent over $100 million per year on HCV prevention and care.[32] In addition to allocations of provincial resources in the late 1990s, the federal government in 1999 allocated $300 million (of which $132 million is slated for Ontario and $66 million for British Columbia). This sum is to be paid over 20 years to assist provinces and territories in dealing with the massive impact of hepatitis transmission through blood transfusion in the years before HCV screening of the blood supply.[33] The last of these payments is expected in the 2014–15 fiscal year. British Columbia reported that it has used part of that allocation for prevention and outreach, though the lion's share has gone to treatment and training of health professionals.[34] Ontario's Ministry of Health and Long-Term Care reported in 2007 that its HCV prevention program supports 32 needle exchanges and their satellites, regulation and inspection of tattoo parlours, and regulation of acupuncture services.[35]

Some programs also exist to combat HCV in some Canadian prisons. At the federal level, the CSC claims to have a "multifaceted" prevention and control program for HIV and HCV that "aims to use best practices and knowledge derived from current research and policy."[36] Methadone therapy is offered in federal prisons, though a decision by the courts was necessary to trigger the implementation of these programs.[37] The CSC also provides bleach for "disinfection of injecting equipment."[38] At the time of this writing, there was no access to sterile injecting or tattooing equipment in Canadian prisons (see discussion below).[39]

Challenges related to hepatitis C prevention in Canada

HCV seems to be absent from the "radar screen" of the Canadian public. It also receives little attention and funding support from some governments. In the early 1990s, the discovery that some 160,000 people in Canada had contracted HCV through contaminated blood used in transfusions put the disease in the headlines. Since then, apart from media reports of compensation for thousands of those early cases, there have been few media reports and no sustained, large-scale public awareness campaigns.[40]

Even when people are aware of HCV, their tendency to associate it with the use of illegal drugs in itself may be a barrier to public support for comprehensive and increased HCV research and prevention, treatment and support programs. People who use illegal drugs face deep social stigma and harsh criminal sanctions in Canada, and ensuring health and social services for criminalized and stigmatized people is always challenging. People who use drugs are also discriminated against in health services.[41]

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[31] Canadian HIV/AIDS Legal Network and six other national organizations. Letter to J. Potts, Public Health Agency of Canada, 25 June 2007, on file.

[32] British Columbia Ministry of Health. *Supporting British Columbians infected with hepatitis C: a report on the undertaking between the Government of British Columbia and the Government of Canada, 1999-2004*. Vancouver, 2005, p. 2.

[33] Ibid., pp. 1–2; see also Ontario Ministry of Health. *Ontario's use of funding provided by the Federal Hepatitis C Undertaking Agreement.* Toronto, 2007, p. 1.

[34] Ibid., British Columbia Ministry of Health, pp. 2, 4.

[35] Ontario Ministry of Health, *supra* note 33, p. 3.

[36] Correctional Service of Canada. *Infectious diseases prevention and control in Canadian federal penitentiaries 2000–01*. Ottawa, 2003, p. 2. Available at www.csc-scc.gc.ca.

[37] B. Sibbald. "Methadone maintenance expands inside federal prisons." *Canadian Medical Association Journal* 2002; 167(10): 1154.

[38] Ibid., p. 20.

[39] For the most thorough and recent review of HIV and HCV prevention measures in Canadian prison systems, see: G. Dias and G. Betteridge. *Hard Time: Promoting HIV and Hepatitis C Prevention Programming for Prisoners in Canada*. Toronto: Canadian HIV/AIDS Legal Network and Prisoners' HIV/AIDS Support Action Network, 2007. Online via www.aidslaw.ca/prisons or www.pasan.org.

[40] Canadian Hemophilia Society et al., *supra* note 9, p. 24.

[41] For a discussion of anti-drug-user stigma specifically in the context of HCV, and a review of literature on the subject, see: B.L. Paterson et al. The depiction of stigmatization in research about hepatitis C. *International Journal of Drug Policy* 2007; 18(5): 364–373. See also: M. Hopwood and C. Treloar. The drugs that dare not speak their name: Injecting and other illicit drug use during treatment for hepatitis C infection. *International Journal of Drug Policy* 2007; 18(5): 374–380; L. Brener et al. Prejudice

As outlined in more detail below, it has long been the case in Canada that the vast majority of federal actions to address use of street drugs has been in the area of criminal law enforcement and policing. This emphasis persists in spite of voluminous evidence that prohibition of drug possession, and the enforcement of prohibition through policing and penal sanctions, is largely ineffective in reducing drug supply or demand. It can also be counterproductive to effective delivery of and access to health services for people who use drugs, including HIV and HCV prevention.[42] In the political environment of 2008, a shift in Canada toward both a more public health-focused and less policing-based approach to illicit drug use seems unlikely. The new National Anti-Drug Strategy launched by the federal government in 2007 is the first in many years to exclude completely and explicitly any funding for — or even any mention of — harm reduction measures, while adding significant new funding for additional efforts to enforce criminal laws on drugs. The new strategy promised additional funding for efforts to prevent and treat addiction, but initial signs suggest that even some of this "prevention" and "treatment" funding may end up supporting initiatives rooted in the criminal justice system such as compelled treatment via drug treatment courts. Drug courts have shown to be ineffective and to raise human rights concerns. They are not a good alternative to the idea of enhancing health services, for which there is great need and a solid evidence base.[43] The political discussion of harm reduction at the federal level has happened at a time when the government needs to decide whether Insite, the supervised injection facility in Vancouver's Downtown Eastside, can continue to operate under a legal exemption from the threat of criminal prosecution of its staff and clients for drug possession.[44] Federal-level opposition to harm reduction broadly does not bode well for HCV prevention among people who inject drugs and who cannot abstain from drug use.

(a) Ensuring access to sterile drug use equipment

Needle exchanges and other sterile syringe programs have been demonstrated again and again as an effective HIV prevention tool.[45] However, there is not a clear consensus in published literature about the effectiveness of sterile syringe programs for prevention of HCV.[46] A 2004 WHO review observed that HCV, which is much more infectious than HIV through contact with blood, had already become prevalent in some countries among people who inject drugs before the time needle exchanges were established.[47] A large proportion of people who inject drugs likely became infected with HCV quite soon after beginning to inject drugs. By the time they began to use needle exchanges, it was too late to prevent infection.[48] Nonetheless, according to WHO's review in 2004, "there is increasing evidence that use of syringe exchanges has led to significant reductions in both hepatitis B and C,"[49] and some studies have reported some impact on HCV transmission through use of syringe programs.[50] An extensive large-sample cohort study in Amsterdam concluded that when needle exchange,

among health care workers toward injecting drug users with hepatitis C: Does greater contact lead to less prejudice? *International Journal of Drug Policy* 2007; 18(5): 381–387.

[42] See, e.g., K. deBeck et al. "Canada's 2003 renewed drug strategy — an evidence-based review." *HIV/AIDS Policy and Law Review* 2006; 11(2/3): 1, 5 ff; J. Csete. *Do Not Cross: Policing and HIV Risk Faced by People Who Use Drugs*. Toronto: Canadian HIV/AIDS Legal Network, 2007. Online via www.aidslaw.ca/drugpolicy.

[43] Government of Canada. "Budget 2007: A Safer Canada", online at http://www.budget.gc.ca/2007/themes/paasce.html; Government of Canada. "National Anti-Drug Strategy", online at www.nationalantidrugstrategy.gc.ca/nads-sna.html. Regarding drug treatment courts, see: B. Fischer, "'Doing good with a vengeance': a critical assessment of the practices, effects and implications of drug treatment courts in North America," *Criminal Justice* 3(3) (2003): 227–248; "Annex: Drug Treatment Courts", in *Legislating for Health and Human Rights: Model Law on Drug Use and HIV/AIDS*, Module 1: Criminal law issues. Toronto: Canadian HIV/AIDS Legal Network, 2006, pp. 29–30.

[44] See, e.g., J. Tibbetts, "Tories to shun 'safe drug' sites; lack of money 'ominous' for harm-reduction effort," *National Post*, 23 May 2007; P. O'Neil, "Foreign pressure trumps drug safety: injection site loses federal support," *Ottawa Citizen*, 26 March 2007.

[45] See, e.g., A. Wodak and A. Coonie. *Effectiveness of sterile needle and syringe programming in reducing HIV/AIDS among injecting drug users* (Evidence for Action Technical Papers series). Geneva: World Health Organization, 2004.

[46] See, e.g., H.A. Pollack. Cost-effectiveness of harm reduction in preventing hepatitis C among injection drug users. *Medical Decision Making* 2001; 21(5):357–367.

[47] Ibid., p 14.

[48] S. Zou, L. Forrester and A. Giulivi. "Hepatitis C update." *Canadian Journal of Public Health* 2003; 94(2): 127–129, p 129.

[49] Wodak and Coonie, *supra* note 45 at 14.

[50] See a recent review of the published literature on this topic at N.M.J. Wright and C.N.E. Tompkins. "A review of the evidence for the effectiveness of primary prevention interventions for hepatitis C among injecting drug users." *Harm Reduction Journal* 2006; 3:27, doi:10.1186/1277-7517-3-27, available at www.harmreductionjournal.com.

methadone maintenance and other services are readily available together, they are effective in reducing HCV incidence, even though each service alone might be ineffective.[51] These studies indicate that aggressive and comprehensive investment in needle exchange, an integral and well-supported link between needle exchanges and other programs, and outreach to newer injectors are needed if syringe programs are to make an appreciable difference in HCV prevention. Yet recent research indicates that, as a result of numerous barriers, the coverage levels achieved by existing needle exchange programs in Canada are far below what is needed.[52]

Federal-level opposition to harm reduction broadly does not bode well for HCV prevention among people who inject drugs and who cannot abstain from drug use.

A factor that is often overlooked, perhaps because it is less relevant for HIV than for HCV, is the sharing of injection equipment other than syringes. Because of HCV's high infectivity, the sharing of injecting equipment (e.g., swabs, spoons and tourniquets) and equipment used to smoke drugs such as crack cocaine (e.g., pipes and other tools which may carry only a tiny amount of blood) may be linked to HCV transmission, even if it is not a significant risk for HIV.[53] A study in Seattle (U.S.A.) demonstrated high HCV risk associated with drug preparation equipment, including cookers and cotton filters, even when injection does not take place.[54] The I-Track study, which tracks behaviours of people who use illicit drugs in Canada, found in one investigation that a significant number (41%) of people who injected drugs shared equipment other than needles.[55] Crack smoking has been identified as a possible risk factor for transmission of HCV,[56] and recent research among people who smoke rather than inject crack and heroin has found that their prevalence of HCV is substantially higher than in the general population.[57] Educational outreach aimed at reducing the sharing of injection equipment other than syringes and needles is rare, though some needle exchanges in Canada provide sterile filters and cookers.[58]

In some Canadian municipalities, harm reduction programs have moved beyond responding to the risks of harm associated only with the use of drugs by injection to include addressing the harms of other forms of drug use, such as oral crack use ('crack smoking'). A growing evidence base on the potential for HCV transmission through the sharing of equipment used for non-injection drug use (e.g., crack pipes) has prompted such measures. In recent years, several cities in Canada have implemented such measures specifically in the form of so-called 'safer crack use kits' distribution. Safer crack use kits typically include materials such as glass

[51] C. Van Den Berg et al. "Full participation in harm reduction programmes is associated with decreased risk for human immunodeficiency virus and hepatitis C virus: evidence from the Amsterdam Cohort Studies among drug users." *Addiction* 2007; 102(9):1454–1462.
[52] A. Klein. *Sticking Points: Barriers to Needle and Syringe Programs in Canada*. Toronto: Canadian HIV/AIDS Legal Network, 2007, online via www.aidslaw.ca/drugpolicy.
[53] N. Crofts, C.K. Aitken and J.M. Kaldor. "The force of numbers: why hepatitis C is spreading among Australian injecting drug users while HIV is not." *Medical Journal of Australia* 1999; 170: 220–221.
[54] H. Hagan et al. "Sharing of drug preparation equipment as a risk factor for hepatitis C." *American Journal of Public Health* 2001; 91(1): 42–46.
[55] M. Hennink et al. "Risk behaviours for injection with HIV and hepatitis C virus among people who inject drugs in Regina, Saskatchewan." *Canada Communicable Disease Report* 2007; 33(6): 53–59, p. 57.
[56] B. Fischer et al. Hepatitis C Virus (HCV) transmission among oral crack users: Viral detection on Crack Paraphernalia. *European Journal of Gastroentorology and Hepatology* 2008; 20(1): 29–32; E Roy et al. Risk factors for hepatitis C virus among street youths. *Canadian Medical Association Journal* 2001; 165(5): 557–60.
[57] S. Tortu et al. Hepatitis C among non-injecting drug users: a report. *Substance Use and Misuse* 2001; 36: 523–534.
[58] A. Klein, *supra* note 52, pp. 14–15.

pipe stems, rubber mouthpieces and brass filters. These objects allow people who smoke crack to do so more safely by using their own equipment. They also reduce the chance of users suffering injuries that may increase HCV risk such as burned or cracked lips. In some cities, however, these programs have faced opposition. For example, in mid-2007, the Ottawa city council rescinded the funding for the safer crack use initiative of the Ottawa public health department, essentially forcing the program to be terminated. This decision flew in the face of a positive, independent evaluation of the program, the advice of the city's own medical officer of health, and support from front-line organizations across the country that provide health services to people who use drugs.[59]

To the degree that needle exchanges are useful for HCV prevention in some populations, especially if they distribute other equipment in addition to syringes, policy-makers should be concerned that there are many barriers to implementation and utilization of sterile syringe programs in Canada. These barriers include:[60]

- Uncertainty regarding possible criminal liability

  The *Controlled Drugs and Substances Act* prohibits unauthorized possession of needles or other items containing traces of illegal drugs.[61] Even if this prohibition is rarely enforced, it can be intimidating both to people who would use health services to obtain sterile syringes or other sterile drug use equipment, and to health workers providing such equipment. It is theoretically possible to argue, as a defence against actual or threatened criminal prosecution, that possession of such equipment is authorized — and therefore not illegal — if it has been obtained from a government-funded needle exchange program. However, such reasoning has not yet been tested in the courts.

  Also of importance to hepatitis C prevention is the "drug paraphernalia" section of the *Criminal Code*, which prohibits the promotion or distribution of "instruments for illicit drug use." Most recently, this provision has been cited by police representatives such as the Ottawa Chief of Police as the basis for their opposition to public health programs that distribute safer crack use kits to those who smoke rather than inject crack. However, explicitly excluded from this term are any items that are "devices," which the *Food and Drugs Act* define as "any article, instrument, apparatus or contrivance… manufactured, sold or represented for use in the…mitigation or prevention of a disease."[62] It may be possible, therefore, to argue that not only sterile syringes but also cookers, filters, swabs, tourniquets and other materials related to the use of illegal drugs (including stems for crack pipes to reduce the harms of smoking crack) are exempt from this prohibition because these are items used in the "mitigation or prevention of disease." Again, however, this interpretation of the current criminal law has not been tested in the courts.

  In 2003, the Ontario Ministry of Health and Long-Term Care advised medical officers of health in the province that the lack of research on whether these non-syringe materials have preventive value with respect to blood-borne diseases might mean that they would be considered drug paraphernalia under the law. In 2006, the Ministry revised its opinion, noting that there was new evidence that infections can occur through sharing of injection equipment other than needles and syringes. Nonetheless, some needle exchange programs in Ontario still cite the original position in their decision not to supply injection equipment other than needles. The ambiguities in the law on this subject have certainly created confusion in the minds of people who use drugs as well as in those of service providers. Hence the importance

[59] L. Leonard et al. *Safer Crack Use Initiative: Evaluation Report*. Ottawa: City of Ottawa (Public Health Department), October 2006, pp. 35–36. For additional detail about the results of the program's evaluation, see: L Leonard et al. "'I inject less as I have easier access to pipes' — Injecting, and sharing of crack-smoking materials, decline as safer crack-smoking resources are distributed." *International Journal of Drug Policy* 2007; doi: 10.1016/j.drugpo.2007.02.008.

[60] The factors noted here are elaborated upon in Klein, *Sticking Points*, Ibid., pp. 13–39.

[61] *Controlled Drugs and Substances Act*, S.C. 1996, c. 19, as amended, ss. 2 and 4.

[62] *Food and Drugs Act*, R.S.C. 1985, c. F-27, as amended, s. 2.

of clear political support, including funding, for such programs. In early 2008, in response to the decision by Ottawa city councillors to cancel municipal funding for the city's safer crack use initiative, the Ontario Minister of Health decided to provide provincial funding to continue the program. This action sent an encouraging signal to public health departments across the province of the importance of including distribution of such materials in harm reduction services.[63]

In some cases, police have appropriated or destroyed injecting or inhaling equipment, an ill-conceived strategy from a public health perspective.

- Policing practices

  Police crackdowns and other intensive policing have in some cases reportedly intimidated people who would otherwise use needle exchanges. Aggressive police tactics are not only ineffective but often harmful to health services for people who use drugs. Numerous reports in Canada have documented cases of police crackdowns that have discouraged or impeded people who use drugs from seeking clean syringes or other health services.[64] In a 2003 police crackdown in Vancouver, service providers reported that clients sought fewer syringes because they were afraid to be caught with them.[65] Both Small and colleagues along with a team from Human Rights Watch documented cases during police crackdowns in Vancouver in which people also hid or otherwise discarded syringes unsafely for fear of being discovered with them.[66]

  In some cases, including with respect to clean crack pipes delivered by health services in Toronto, police have appropriated or destroyed injecting or inhaling equipment,[67] an ill-conceived strategy from a public health perspective.[68] In Ottawa, there has been some systematic documentation of the practice of police confiscation or destruction of crack pipes found in the possession of detained persons. In an evaluation of Ottawa's safer crack use program, approximately one-quarter of respondents who smoke crack reported that police had confiscated the glass pipe stems they had obtained from the program.[69] Indeed, Ottawa's police

[63] "Ottawa gets a spanking." *Ottawa Citizen*, 15 January 2008; Hon. George Smitherman, Minister of Health and Long-Term Care. "Taming the beast of addiction takes effort." *Ottawa Citizen*, 24 January 2008,

[64] See, e.g, T Kerr et al. The public health and social impacts of drug market enforcement: A review of the evidence. *International Journal of Drug Policy* 2005; 16:210-220; W Small et al. Impact of intensified police activity upon injection drug users in Vancouver's Downtown Eastside: Evidence from an ethnographic investigation. *International Journal of Drug Policy* 2006; 17(2): 85–95; Csete, *Do Not Cross*, *supra* note 42; Klein, *Sticking points*, *supra* note 52, pp. 13–22.

[65] Human Rights Watch. *Abusing the user: Police misconduct, harm reduction and HIV/AIDS in Vancouver.* New York, 2003, pp 19–20.

[66] Small et al., *supra* note 64; Ibid., Human Rights Watch.

[67] T. Appleby. "New police strategy designed to blanket high-violence areas." *The Globe and Mail*, February 13, 2006, p. A1.

[68] J. Csete (Canadian HIV/AIDS Legal Network). Letter to Chief William Blair, Toronto Police Service, on the reported destruction of crack pipes by police officers in Toronto, 13 February 2006, on file. See also L. Maher and D. Dixon. "The cost of crackdowns: policing Cabramatta's heroin market." *Current Issues in Criminal Justice* 2001; 13(1): 5–22, p. 7.

[69] L. Leonard et al. *Safer Crack Use Initiative: Evaluation Report*. Ottawa: City of Ottawa (Public Health Department), October 2006, pp. 35–36. For additional detail about the results of the program's evaluation, see: L. Leonard et al. "'I inject less as I have easier access to pipes' — Injecting, and sharing of crack-smoking materials, decline as safer crack-smoking resources are distributed." *International Journal of Drug Policy* 2007; doi: 10.1016/j.drugpo.2007.02.008.

chief declared publicly that this would be police practice.[70]

Police crackdowns and other aggressive policing strategies have at times led to an increase in drug injection. People who would otherwise smoke heroin or other drugs may switch to injection because it is quicker and has a stronger impact (and is less visible than smoke), important considerations for someone hiding from the police.[71] Intensive policing may also be associated with displacement of those who use drugs from their regular injecting networks or helpers, which may introduce new infectious disease risks. It may also displace users from the neighbourhoods where they may be comfortable seeking sterile syringes and other services. In addition to the accounts from Vancouver noted above, CACTUS-Montréal, the oldest needle exchange in Montréal, has made numerous complaints in recent years to the police department about officers who station themselves outside CACTUS' door, and in some cases even enter the needle exchange, to make arrests or conduct searches.[72] In addition, several AIDS service organizations have reported that people who use drugs are sometimes banned by the terms of their parole or probation agreements, or the conditions attached to a conditional discharge or bail conditions, from entering the neighbourhoods where needle exchanges are located, another ill-conceived practice from a public health perspective.

- Other barriers

  Needle exchanges may be difficult to use because they are inconveniently located, have limited hours of operation, or have rules that clients find burdensome. In some cases, needle exchanges are located in remote or relatively unsafe neighbourhoods because residents organize to keep them out of better areas. As in many countries, needle exchange services in Canada are rare in rural areas and smaller cities. Stigma and privacy concerns are also often important barriers to use of needle exchange services.[73]

Designing effective prevention programs requires a better understanding of a complex behaviour such as initiation of drug use or of drug injection.

There is no definitive answer to the question of whether the demand for clean needles and other injection equipment is being met in Canada because neither that demand nor the supply and distribution efforts to meet it — including pharmacy sales of syringes — is consistently measured across the country.[74] Nonetheless, studies in some parts of the country indicate that some areas are grossly underserved with syringes, needles and other injecting equipment. In British Columbia, which has the longest history of needle and syringe programs in Canada, there are needle exchanges in only 14 cities.[75] Ready access to clean injection equipment is needed as part of effective HCV and HIV prevention efforts, but Canada appears to be a long way from that prevention goal.

[70] "Ottawa's police stepping in city's crack pipe program: medical chief." *CBC News*, 19 January 2007, online: www.cbc.ca/health/story/2007/01/19/crack.html.
[71] Ibid., Maher and Dixon, p. 11.
[72] Ibid., p 21.
[73] For more detailed discussion of these concerns, see A. Klein, *supra* note 52, pp. 23–33.
[74] Ibid., pp 11–12.
[75] Ibid.

(b) Preventing and reducing drug injection

Prevention of illicit drug use is a major public health challenge with implications well beyond hepatitis C, and an analysis of its importance with respect to hepatitis C is beyond the scope of this paper. Prevention or reduction of drug injection, however, is particularly relevant, since HCV is so readily transmitted through contaminated injection equipment.

Effective prevention of injection requires an understanding of factors that motivate initiation of injection. Numerous studies have investigated these factors with varied results, suggesting that these factors vary considerably from setting to setting. A 2003 study of 415 street-involved young people in Montréal showed that those most likely to initiate injection were those who had recently been homeless, had a friend who used drugs, had been tattooed, had recently used hallucinogens and freebase cocaine or crack, or had ever experienced sexual abuse.[76] Among a group of older persons who use Insite, the supervised injection facility in Vancouver, about 75 percent reported that someone else performed the injection during their first episode of drug injection.[77] Studies from other settings have noted the importance of having a friend or family member who injects drugs, having someone who assists the first act of injection, and relying on someone else to procure syringes as correlates of initiation of injection.[78] A study from Baltimore (U.S.A.) indicated that factors leading to initiation of drug injection may differ significantly between younger adolescents and older adolescents or young adults.[79] Designing effective prevention programs requires a better understanding of a complex behaviour such as initiation of drug use or of drug injection; this requires additional research and tools for assessing risk factors and the benefits of various interventions.

Other research has investigated the characteristics of people who were able to stop injecting, whether they continued to use drugs or not. A large-sample study in Montréal in the late 1990s concluded that many people who injected drugs in that sample had periods of ceasing injection, sometimes spurred by contact with staff of needle exchanges or even pharmacies.[80] In this study, age and duration of injection were not significant factors in predicting cessation of injection. Both these authors and those investigating similar questions in New York[81] note the importance of drug market factors, especially the price and quality of available drugs, as determinants of cessation of injection. That is, otherwise appropriate and potentially effective interventions to encourage people to inhale rather than inject drugs will be futile without the availability of the high-quality drugs sought by those who inhale.

There are a few published reports of interventions that claim success in preventing initiation of drug injection among people who already consume drugs by some other means. Hunt and others reviewed a range of such interventions, most in the U.K. and involving small samples. They conclude that a much greater understanding is needed of the capacity of smoking, "chasing" and other alternatives to injection to "deliver equivalent sensations without the risk."[82] They also note that an impediment to work in this area is that no country or region has adopted reduction of injection — as opposed to cessation of drug use — as a policy and program goal. In the political environment in Canada in early 2008, with the federal government resistant to supporting harm reduction measures and continually promoting abstinence-based goals of drug control, it is unlikely that

[76] E. Roy et al. "Drug injection among street youths in Montreal: Predictors of initiation." *Journal of Urban Health* 2003; 80(1): 92–105.
[77] T. Kerr et al. "Circumstances of first injection among illicit drug users accessing a medically supervised safer injection facility." *American Journal of Public Health* 2007; 97(7): 1228–1230.
[78] See, e.g., J. Abelson et al. "Some characteristics of early-onset injection drug users prior to and at the time of their first injection." *Addiction* 2006; 101(4): 548–555; M.C. Doherty et al. "Gender differences in the initiation of injection drug use among young adults." *Journal of Urban Health* 2000; 77(3): 396–414.
[79] C.M. Fuller et al. "Factors associated with adolescent initiation of injection drug use." *Public Health Reports* 2001; 119(Supp): 136–145.
[80] J. Bruneau et al. "Intensity of drug injection as a determinant of sustained injection cessation among chronic drug users: the interface with social factors and service utilization." *Addiction* 2004; 99: 727–737.
[81] D.C. Des Jarlais et al. "The transition from injection to non-injection drug use: long-term outcomes among heroin and cocaine users in New York City." *Addiction* 2007; 102: 778–785.
[82] N. Hunt et al. "Preventing and curtailing injecting drug use: a review of opportunities for developing and delivering 'route transition interventions'." *Drug and Alcohol Review* 1999; 18: 441–451, p. 448.

reduction of injection without insisting on abstinence would be proposed as a national policy goal.

A recent program in Canada reportedly resulted in transition from injection to inhalation of crack. A 2006 evaluation commissioned by the City of Ottawa, notably, reported that among participants in the city's safer crack use initiative, there was a decline in injecting in favour of smoking during the year-long evaluation period.[83] In addition, many participants who did not completely cease injection said that they injected less frequently when they received safer smoking equipment from the program. The impact of this program on HCV incidence was hard to determine since most of the participants were already infected with HCV. (Other researchers in Canada have detected transmissible HCV on crack pipes, concluding that clean crack pipes may help reduce HCV risk.[84]) As noted above, in the city's evaluation of the program, 25% of the participants said the police had confiscated or destroyed their clean pipes,[85] a practice that undermines the individual and public health benefits such a program might have.

(c) Treatment of dependence on injected drugs

Methadone maintenance therapy (MMT) is well established in Canada and provides an opportunity for people who inject heroin and other opiates to stabilize their cravings with regular consumption of non-injected methadone. The vast majority of people who consume illicit drugs in Canada use opioids in some form.[86] WHO noted in a 2004 position paper that MMT "can decrease the high cost of opioid dependence to individuals, their families and society at large by reducing heroin use, associated deaths, HIV risk behaviours and criminal activity." WHO also asserted that MMT is a critical component of national HIV responses where opioid dependence is prevalent.[87] Methadone therapy is the only opioid addiction treatment currently in widespread use in Canada. Buprenorphine, which has been important for treatment of opioid dependence in some countries,[88] was approved by Health Canada in early 2005 for use in the country. Initiatives between 2005 and late 2007 to educate physicians regarding its prescription should facilitate its wider availability.

The effectiveness of MMT as an HIV prevention measure is well accepted, but its effectiveness for HCV prevention is less clear on a population level. Methadone treatment has obvious potential for HCV prevention among individuals not yet infected for whom the treatment would mean ending or significantly reducing injection. On a population level, given that HCV is so readily transmitted following initiation of drug injection, MMT programs would presumably have to reach people before they begin injection or shortly thereafter to affect HCV prevention. In reality, in many settings MMT patients tend to be people with relatively long experience of injection, and many go in and out of treatment, exposing themselves to injection-related risks during periods of continued injecting.[89] Some experts note, however, that methadone programs represent an opportunity to provide education and counselling for persons with HCV about avoiding transmission to others. They can also be points of referral to services providing clean injecting equipment for those still injecting.[90]

Targeting people for MMT who do not have long exposure to HCV is a difficulty both for service delivery and for studying the impact of MMT on hepatitis C. A 2006 literature review of HCV prevention methods found equivocal results on this point, with most studies reporting some association of MMT participation with

[83] L. Leonard, E. DeRubeis and N. Birkett. *City of Ottawa Public Health Safer Crack Use Initiative* (Evaluation report). Ottawa, October 2006, pp. 11–12.
[84] B. Fischer et al. "Hepatitis C Virus (HCV) transmission among oral crack users: Viral detection on crack paraphernalia." *European Journal of Gastroenterology and Hepatology* 2008; 20(1): 29–32
[85] L. Leonard, *supra* note 83, p. 7.
[86] B. Fischer et al. "Illicit opioid use in Canada: Comparing social, health and drug use characteristics of untreated users in five cities (OPICAN study)." *Journal of Urban Health* 82(2): 250–266, p 250.
[87] World Health Organization, Joint UN Programme on HIV/AIDS, UN Office on Drugs and Crime. *Substitution maintenance therapy in the management of opioid dependence and HIV/AIDS prevention: Position paper*. Geneva: United Nations, 2004, p 2.
[88] See, e.g., European Monitoring Centre for Drugs and Drug Addiction. Country drug treatment overviews: France. Online: www.emcdda.europea.eu.
[89] Fischer et al., "Hepatitis C, illicit drug use and public health", *supra* note 2, p, 486.
[90] H. Thiede et al. "Methadone treatment and HIV and hepatitis B and C risk reduction among injectors in the Seattle area." *Journal of Urban Health* 2000; 77(3): 331–345, p. 343.

lower HCV incidence, though the associations were not generally statistically significant.[91] As noted above, the Amsterdam cohort study concluded that readily accessible low-threshold methadone programs together with needle exchange and other services for people who use drugs were associated with reduced HCV incidence.[92]

To the degree that MMT is useful for hepatitis C control, it should be of concern that only an estimated 25–30% of those who might benefit from MMT in Canada are enrolled in programs.[93] The utilization rate of MMT programs in Canada compares unfavourably with that of Australia, Switzerland, Belgium — countries that have invested heavily in opioid treatment — and even the U.S., according to some estimates.[94] Access to methadone treatment is plainly unequal across Canada, available mostly only in major urban centres.[95]

Coverage of MMT programs is limited partly by the number of doctors who are authorized to prescribe methadone. To prescribe methadone, doctors must receive an exemption from prosecution under section 56 of the *Controlled Drugs and Substances Act* (CDSA) and must usually also be certified by the college of physicians in their province or territory.[96] (Some provincial colleges in Canada have required physicians wishing to prescribe buprenorphine to also hold a *CDSA* s. 56 exemption for prescribing methadone; others have not required it, but have encouraged it.) Some physicians with general family practices may be unwilling to have methadone patients mixed in with their other patients.[97] A physician may also be reluctant to be the only methadone prescriber in his or her community — this is certainly the case in many Canadian towns — for fear that methadone prescription will overwhelm an existing practice.[98] Some physicians may simply not want to deal with the complex problems of people with drug dependencies.

The relatively low utilization of existing methadone programs in Canada is probably due in significant part to the negative perception of such programs among potential or former patients. The OPICAN study involving regular opioid and other drug users in Vancouver, Edmonton, Toronto, Montréal and Québec City concluded that methadone programs in many parts of Canada do not adequately account for the day-to-day challenges faced by people who use drugs and live in poverty, without permanent housing and often supplementing opioid use with use of cocaine or other drugs (which would be grounds for dismissal from many MMT programs).[99] A qualitative study in Toronto, Montréal and Vancouver noted that patients were discouraged by strict rules on urine testing, condescending attitudes of service providers, restrictions on "take-home" doses, and inconvenient hours.[100] In addition, Health Canada's 2002 guideline to "best practices" in MMT suggested there were concerns among patients about inadequate dosages of methadone and about the abstinence orientation of some programs.[101]

Fischer and others have documented an important shift in opioid use in Canada away from heroin in favour of prescription opioids such as oxycodone, hydromorphone, morphine and codeine, most of which are diverted from medical sources.[102] Among the important questions raised by this shift are whether these prescription

[91] Wright and Tompkins, *supra* note 50, p. 5.
[92] Van Den Berg et al., *supra* note 51.
[93] Fischer et al., "Illicit opioid use in Canada," *supra* note 86, p. 251.
[94] Ibid.; Canadian HIV/AIDS Legal Network. *Injection drug use and HIV/AIDS: legal and ethical issues*. Montreal, 1999, p. 85.
[95] Health Canada and Canadian Centre on Substance Abuse. *National framework for action to reduce the harms associated with alcohol and other drugs and substances in Canada*. Ottawa, 2005, p. 20.
[96] See Health Canada, "Methadone Program." Online: www.hc-sc.gc.ca/dhp-mps/substancontrol/exemptions/methadone/index_e.html.
[97] M. Erdelyan. *Methadone maintenance treatment : a community planning guide*. Toronto: Centre for Addiction and Mental Health, 2000, p. 11.
[98] Ibid., p. 21.
[99] Fischer et al., p. 262.
[100] B. Fischer et al. "Canadian illicit opiate users' views on methadone and other opiate prescription treatment: An exploratory qualitative study." *Substance Use and Misuse* 2002; 37(4): 495–522.
[101] Health Canada. *Best practices: methadone maintenance treatment.* Ottawa, 2002, online: www.hc-sc.gc.ca/hl-vs/pubs/adp-apd/methadone-bp-mp/index_e.html.
[102] B. Fischer et al. "Change in illicit opioid use across Canada" *Canadian Medical Association Journal* 2006; 175(11): 1385–1387; B. Fischer et al. Changes in illicit opioid use across Canada. *CMAJ* 2006; 175(11): 1–3; S. Sigmon. "Characterizing the emerging population of prescription opioid abusers." *Am J Addict* 2006; 15: 208–12; B. Fischer and J. Rehm. "Illicit opioid use in

opioids are mostly injected or consumed in other ways,[103] and whether methadone therapy designed for treating heroin addiction is a useful response to addiction to prescription opioids. Both these questions merit further research. Emerging evidence suggests that those who use only prescription opioids as opposed to heroin might be less likely to be injectors.[104]

HCV treatment is costly but, given the high costs of the long-term consequences of untreated HCV, every dollar spent on treatment is estimated to save $4 in health costs.

Challenges in treatment of hepatitis C

Great strides have been made in the development of effective hepatitis C treatment. The preferred treatment is a combination of pegylated interferon and ribavirin. To treat HCV genotype 1, which is the dominant strain in Canada, a 48-week course of this drug combination is needed; genotypes 2 and 3 are addressed by a 24-week course.[105] Genotype 1 has a lower success rate of treatment — about 40–45% probability of substantial reduction of HCV in the blood following treatment (i.e., clearing the virus from the body) versus about 75–80% in the case of the other genotypes. The combination treatment has been demonstrated to be relatively well tolerated, but side effects may include flu-like symptoms (especially early in treatment), fatigue, hair loss, anaemia and depression.[106] Severe but reportedly rare side effects of interferon therapy include thyroid disease, suicidal tendencies and heart or kidney failure. Pregnant women should not take interferon or ribavarin.

HCV treatment is costly but, given the high costs of the long-term consequences of untreated HCV, every dollar spent on treatment is estimated to save $4 in health costs (and more if economic productivity is factored in).[107]

Some countries have explicitly excluded people who inject drugs from eligibility for this combination therapy, as did Canada until relatively recently.[108] It was thought by some experts that active drug users would be unable to adhere to the long treatment regimen, and drug resistance could result from incomplete treatment. It has also been a policy in some places that treatment should not begin before the patient abstains from drugs for at least six months.[109] Several studies have since demonstrated that with appropriate support — including psychological and social service support — people who use drugs adhere as well as other populations to

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the 21st century: witnessing a paradigm shift? (editorial)". *Addiction* 2007; 102(4): 499–501; J. Havens et al. Prevalence of opioid analgesic injection among rural nonmedical opioid analgesic users. *Drug Alcohol Depend* 2007;87(1): 98–102.

[103] Ibid., Havens et al. This research uncovered a high rate of injection of prescription opioids in a population in Appalachian Kentucky (USA).

[104] Fischer et al. "Comparing heroin users and prescription opioid users in a Canadian multi-site poulaion of illicit opioid users. *Drug Alcohol Rev*(in press); Ibid., Sigmon.

[105] Canadian Centre on Substance Abuse. Fact sheet: hepatitis C virus (HCV) infection and illicit drug use. Available at www.ccsa.ca.

[106] Canadian Hemophilia Society. *Hepatitis C: common disabling symptoms and treatment side effects*. Toronto, 2006, online via www.hemophilia.ca.

[107] Canadian Hemophilia Society et al., op.cit., p. 6.

[108] Canadian Centre on Substance Abuse, op.cit.; L.E. Taylor, B. Schwartzapfel and P.M. Gholan. "Limiting harm from chronic hepatitis C infection for HIV-positive people with drug dependency: prevention and treatment," in: International Harm Reduction Development Program. *Delivering HIV care and treatment for people who use drugs: lessons from research and practice*. New York: Open Society Institute, 2006, pp. 95–111, p. 105.

[109] Ibid., L.E. Taylor et al.

treatment.[110] Blanket exclusion of people who use drugs from HCV treatment could amount in some cases not only to unethical practice[111] but also to illegal discrimination based on "disability" (since drug dependence has been recognized as a disability in Canadian anti-discrimination law).[112]

Nonetheless, prejudices remain. In some communities, people who use drugs themselves may be reluctant to seek services for hepatitis C, fearing public identification as drug users or the reporting of their drug use to criminal authorities. In addition, multidisciplinary support for those undergoing treatment may be lacking, especially for people actively using drugs. Whether they use drugs or not, people who are without stable housing, stable social networks, the means to attend clinic sessions, and psychological and other support for tolerating the side effects of treatment may be less likely to complete treatment.

Hepatitis C treatment coverage urgently needs to be increased. Fischer and others calculated that at current rates of treatment, the number of people being treated for HCV in a year is less than the number of new infections per year. That is, currently HCV treatment efforts in Canada fail to yield a net reduction in HCV prevalence.[113] Patient groups have noted a number of barriers to treatment. A 2004 report by community groups including the Canadian Hemophilia Society found that there were very long waiting lists in British Columbia and Ontario to see a hepatitis specialist and then further waiting to initiate treatment.[114] The same report estimated there were only 40 physicians in the country with a specialty in liver disease serving several hundred thousand people affected by the hepatitis viruses. Patient groups have also criticized the practice of requiring liver enzyme abnormalities, demonstrated over several months, as a condition of beginning treatment, citing studies showing that significant liver disease may exist notwithstanding normal enzyme levels.[115]

The report of a 2004 Canadian "consensus conference" on hepatitis C, prepared by clinicians and researchers from across the country, called for the scale-up of educational programs for physicians and nurses to enable primary care providers to manage hepatitis C effectively.[116] Another practical step toward successful treatment is suggested by a body of research that demonstrates that for people with opiate addictions, methadone maintenance therapy is very useful in helping patients adhere to HCV treatment[117] as well as HIV treatment. This is another reason why Canadian policy-makers should give serious attention to improving access to and quality of methadone programs.

HCV and specific vulnerable populations

(a) HCV and prison

Canada, like many countries, is losing the battle to control HCV in prison. As noted above, HCV prevalence is very high in Canadian prisons relative to the rest of the population. Drug injection is widely practiced in prisons in most countries including Canada, but Canadian policy seems to be based on denial of this reality. Based on its own research and surveillance, the CSC has noted that HCV prevalence is higher in the general prison population than among new entrants, a finding that the CSC says "remains unexplained….

[110] Ibid.
[111] B. Eldin et al. "Is it justifiable to withhold treatment for hepatitis C from illicit drug users?" *New England Journal of Medicine* 2001; 345(3): 211–214.
[112] For a more extended discussion, see: J. Csete and R. Pearshouse. *Dependent on Rights: Assessing Treatment of Drug Dependence from a Human Rights Perspective*. Toronto: Canadian HIV/AIDS Legal Network, 2007, at pp. 20–21 (and accompanying statutes and case law cited in footnotes 80-82), online via www.aidslaw.ca/drugpolicy > Publications.
[113] Fischer et al., "Hepatitis C, illicit drug use, and public health," p. 486.
[114] Canadian Hemophilia Society et al., *supra* note 9, p. 23.
[115] Ibid., pp. 22–23.
[116] M. Sherman et al. *Management of viral hepatitis: A Canadian consensus conference 2003/2004*. Published by Canadian Association for the Study of the Liver and other professional networks with support from Health Canada and Correctional Service Canada, 2004, p. 9. Available at http://www.hepatology.ca/cm/FileLib/consensus_English_Aug_04.pdf.
[117] See, e.g., D. Sylvestre. "Treating hepatitis C in methadone maintenance patients: an interim analysis." *Drug and Alcohol Dependence* 2002; 67(2): 117–123.

Although infection within prison may occur, there have been no studies in Canada to provide evidence of this phenomenon."[118] A recent review of HIV and HCV prevention programs in Canadian prisons summarizes compelling evidence that, in fact, HCV transmission takes place in prisons.[119] The studies noted above, by Calzavara and colleagues among those in Ontario remand facilities and by Poulin and colleagues among those in Quebec provincial prisons, have also highlighted the link between HCV prevalence and injection drug use within this population.

Countries that have succeeded in reducing HCV transmission among prisoners are those that have instituted needle exchange programs in prisons.[120] These include Switzerland, Spain and Moldova. Rigorous evaluations of prison needle exchange programs in a number of countries show that they make it possible to reduce transmission in prison of both HIV and the more infective HCV to zero.[121] In 2006, the Public Health Agency of Canada presented the CSC with evidence from other countries of the effectiveness of prison needle exchange for infectious disease prevention.[122] This move by PHAC followed years of urging the implementation of such programs by Canadian expert groups, including the CSC's Expert Committee on AIDS and Prisons,[123] the Canadian HIV/AIDS Legal Network,[124] the Ontario Medical Association[125] and the Canadian Medical Association.[126] It is also consistent with recommendations included in a framework document publicized by WHO, the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the UN Office on Drugs and Crime (UNODC).[127]

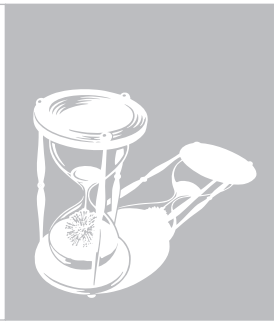
Unfortunately, in the political environment of early 2008, there is no further policy discussion of sterile syringe programs in Canadian prisons. Indeed, even a groundbreaking pilot safe tattooing program that was begun in federal prisons in 2005 was discontinued by the federal Minister of Public Safety in December 2006 before the government's own evaluation of the infectious disease impact of the pilot could be completed.[128] CSC highlights its methadone program as the best evidence of its commitment to HCV and HIV prevention.[129] However, since people with a significant history of drug injection are over-represented in the prison population, it is likely that many of the methadone patients in prisons would have already been exposed to or infected with HCV. Methadone and bleach alone cannot succeed as an HCV prevention strategy in Canadian prisons.

Prison presents a particularly important opportunity for raising awareness of HCV and providing HCV treatment, as a service both to prisoners and to the communities to which they will return. However, the prison environment also presents many challenges. Basic information on HCV was provided in some prisons by non-governmental organizations (NGOs) whose programs were funded by the discontinued federal program.[130] According to CSC, "upon admission and throughout incarceration," prisoners are "encouraged" to have a voluntary test for HIV and hepatitis A, B and C, and those who test positive are referred to specialized

[118] CSC, *Infectious Diseases*, *supra* note 20, p. 19.
[119] Betteridge and Dias, *Hard time*, *supra* note 39, pp. 6–7.
[120] See R. Lines et al. *Prison needle exchange: lessons from a comprehensive review of international evidence and experience* (2nd ed.) Toronto: Canadian HIV/AIDS Legal Network, 2006, online via www.aidslaw.ca/prisons > Publications.
[121] Ibid., esp. pp. i–iii.
[122] Public Health Agency of Canada. *Prison needle exchange: review of the evidence*. Ottawa: PHAC, 2006.
[123] Correctional Service of Canada. *HIV/AIDS in prisons: Final report of the Expert Committee on AIDS and Prisons*. Ottawa: Minister of Supply and Services, 1994.
[124] R. Jürgens. *HIV/AIDS in Prisons: Final Report*. Montreal: Canadian HIV/AIDS Legal Network, 1996, pp. 52ff, online via www.aidslaw.ca/prisons; R Lines. *Action on HIV/AIDS in Prisons: Too Little, Too Late — A Report Card*. Montreal: Canadian HIV/AIDS Legal Network, 2002, pp. 16–17, online via www.aidslaw.ca/prisons.
[125] R. Elliott. "Deadly disregard: government refusal to implement evidence-based measures to prevent HIV and hepatitis C virus infections in prison." *Canadian Medical Association Journal* 2007; 177(3): 262–264.
[126] Canadian Medical Association. Resolution 26 (17 August 2005), online: www.cma.ca/index.cfm/ci_id/45252/1.htm.
[127] UNODC, UNAIDS and WHO. *HIV/AIDS prevention, care, treatment and support in prison settings: a framework for an effective national response*. New York: United Nations, 2006, online: www.unodc.org/pdf/HIV-AIDS_prisons_July06.pdf.
[128] Elliott, *supra* note 128, p. 263.
[129] CSC, *Infectious Diseases*, *supra* note 20, p. 20.
[130] A list of federally funded programs, including those of several prison service organizations, is available at www.phac-aspc.gc.ca/hepc/prsp-ppsr_e.html#2.

services.[131] The degree to which this policy is a reality is unclear, but a prisoner who wants to know more about HCV may be reluctant to ask questions of health staff for fear of being labelled a drug user. As with HIV, testing for HCV should be conducted only with adequate pre-test counselling and information to ensure informed consent, post-test counselling to support ongoing prevention efforts and access to care, and conditions of confidentiality. This last aspect of good-quality, and legally and ethically sound practice may be difficult in the prison environment. According to one study, for example, U.S. federal guidelines that recommend HCV testing for prisoners with a self-reported history of drug use were ineffective because prisoners were reluctant to report such a history for fear of breaches of confidentiality.[132] Peer-run programs are needed to overcome this fear, and there are not enough such programs.

The shame, stigma and social exclusion faced by people who use drugs is usually much more intensely suffered by women than men.



With respect to HCV treatment in prison, it may be difficult to follow people serving short sentences through a 48-week treatment regimen, particularly if there is not a link to community-based services. A report of HCV treatment in a U.S. prison noted that prisoners serving sentences of 15 months or less were excluded from treatment.[133] Measures should be in place to continue treatment in cases where prisoners are transferred to another facility, as well as links to services in the community to which prisoners are released. In the U.S. case, people with a history of drug dependence were "strongly encouraged" to enrol in treatment for that dependence and otherwise had to have one year of documented abstinence to qualify for HCV treatment.[134] Many prisons may not have the programs or staff to ensure good psychological and other support for people who struggle with the side effects of treatment, but these should be priorities for the prison health care system.

Despite these challenges, as shown by a study in British Columbia,[135] successful treatment of HCV in prison can be and has been achieved. Primary care physicians working with the prison system can manage this treatment unless there are unusual complications.[136] As in the community, HCV treatment in prison, while costly, is cost-effective and indeed represents an enormous savings in health expenditure over time.

(b) Women and HCV

The shame, stigma and social exclusion faced by people who use drugs is usually much more intensely suffered by women than men. Women in most cultures are regarded as nurturing care-givers, guardians of respectability, responsibility and virtue within families, and role models and mainstays for children.[137] Many

[131] Correctional Service of Canada. "Addressing infectious disease issues for Aboriginal offenders." *Let's Talk* 2006; 31(1): 1–4, p. 2, online via www.csc-scc.gc.ca.
[132] G.C. Macalino, D. Dhawan and J.D. Rich. "A missed opportunity: hepatitis C screening of prisoners." *American Journal of Public Health* 2005; 95(10): 1739–1740.
[133] S.A. Allen et al. "Treatment of chronic hepatitis C in a state correctional facility." *Annals of Internal Medicine* 2003; 138(3): 187–191.
[134] Ibid., p. 187.
[135] J. Farley et al. "Feasibility and outcome of HCV treatment in a Canadian federal prison population." *American Journal of Public Health* 2005; 95(10): 1737–1739.
[136] Allen et al., op.cit., p. 188.
[137] See, e.g., N.M.J. Wright, C.N.E. Tompkins and L. Sheard. "Is peer injecting a form of intimate partner abuse? A qualitative study of the experiences of women drug users." *Health and Social Care in the Community* 2007; doi: 10.1111/j.1365-2524.2007.00700.x (online), p 1.

studies have found higher levels of guilt, shame, anxiety and mental illness among women who use drugs than their male counterparts.[138] Women with children and pregnant women are particularly affected by stigma—as drug users, they are perceived as "bad" parents and "bad" women. Reaching women who use drugs with harm reduction or medical treatment services requires special outreach, which rarely exists in Canada.

Women in Canada, as in many countries, are much more likely than men to be initiated into drug injection by a sexual partner.[139] More women than men have sexual partners who also use drugs and more are in sexual relationships with their drug-using partners.[140] Women have been found in some studies to be "second on the needle," whereby men first inject themselves and then inject women using the same equipment.[141] Women may also rely on sexual partners for their injection equipment, including syringes, filters, spoons and other containers.[142] In Canada and elsewhere, women are also more likely than men to need or seek assistance in the act of injection, often provided again by a sexual partner. Needing assistance in injecting is an important risk factor for syringe-sharing and consequent high risk of blood-borne disease.[143] As a result of all of these patterns, some women may be likely to share needles, even if clean equipment is available, because of the nature of their relationship with injecting partners.[144] Gender-mediated power dynamics in these situations also may reduce women's ability to feel they are in control of their drug use, with implications for prevention programs and messages. Few programs have tailored outreach or education to women with these factors in mind.

In the area of drug dependence treatment, there is a robust body of research and experience that indicates that techniques developed for dealing with drug-dependent men may be ineffective for women.[145] Men are likely to report that their main motivation for drug use was related to pleasure, whereas women are more likely to report that they used drugs to alleviate physical or emotional pain;[146] the same techniques may not be effective in addressing such divergent motivations. Aggressive and confrontational approaches designed to induce guilt and shame in men may be even more inappropriate for women, who may already have a surfeit of guilt and shame.[147] Drug treatment programs that feature public sharing of experiences and group catharsis may lead women who have experienced abuse to be retraumatized.[148] Pregnant women may be particularly difficult to reach with HCV prevention programs and drug dependence treatment because of the intense stigma they face

[138] L. Nelson-Zlupko, E Kauffman and M.M. Dore. Gender differences in drug addiction and treatment: Implications for social work intervention with substance-abusing women. *Social Work* 1995; 40(1): 45–54. p. 47.

[139] A.M. de Oliveria Cintra et al. "Characteristics of male and female injecting drug users of the AjUDE-Brasil II Project." *Cad. Saúde Pública* 2006; 22(4): 791–802; Rhodes et al., op.cit., pp. 7, 8.

[140] See, e.g., R. MacRae and E. Aalto. "Gendered power dynamics and HIV risk in drug-using sexual relationships." *AIDS Care* 2000; 12(4): 505–515.

[141] See, e.g., R. Freeman, G. Rodriguez and J. French. "A comparison of male and female intravenous drug users' risk behaviors for HIV infection." *American Journal of Drug and Alcohol Abuse* 1994; 6(2): 129–57; R. MacRae and E. Aalto. "Gendered power dynamics and HIV risk in drug-using sexual relationships," *AIDS Care* 2000; 12: 505–515; and W.M. Wechsberg and E.R. Cavanaugh. "Differences found between women in and out of treatment: Implications for interventions." *Drugs and Society* 1998; 13: 65–82.

[142] A.G. Davies et al. "Gender differences in HIV risk behaviour of injecting drug users in Edinburgh." *AIDS Care* 1996; 8(5): 517–527; UNODC, op.cit., p. 8; G.A. Bennett et al. "Gender differences in sharing injecting equipment by drug users in England." *AIDS Care* 2000; 12(1): 77–87.

[143] See, e.g., E. Wood et al. "Requiring help injecting as a risk factor for HIV infection in the Vancouver epidemic: Implications for HIV prevention." *Canadian Journal of Public Health* 2003; 94(5): 355–359; A. Kral et al. "Risk factors among IDUs who give injections to or receive injections from other drug users." *Addiction* 1999; 94(5): 675–683; C. Tompkins et al. "Exchange, deceit, risk and harm: the consequences for women of receiving injections from other drug users." *Drugs: Education, Prevention and Policy* 2006; 13(3) (2006): 281–297.

[144] R. Roman-Crossland, L. Forrester and G. Zaniewski. "Sex differences in injecting practices and hepatitis C: A systematic review of the literature." *Canada Communicable Disease Report* 2004; 30(14): 125–132.

[145] UNODC, op.cit., p 18; CAMH, pp. 46–47.

[146] N.P. Langan and B.M.M. Pelissier. "Gender differences among prisoners in drug treatment." *Journal of Substance Abuse* 2001; 13: 291–301, p 295.

[147] See, e.g., M.A. Jessup et al. "Extrinsic barriers to substance abuse treatment among pregnant drug dependent women." *Journal of Drug Use Issues* 2003; 33(2): 285–304.

[148] L. Nelson-Zlupko, E. Kauffman and M.M. Dore. Gender differences in drug addiction and treatment: Implications for social work intervention with substance-abusing women. *Social Work* 1995; 40(1): 45–54, p. 49.

as people using drugs. Women with children may be impeded from drug treatment and other services because of the lack of child care or because children are not allowed in drug treatment clinics, or because they fear intervention by child protection authorities that could mean the removal of their children on the basis of their mothers' drug use.

As noted above, the combination drug used for HCV treatment is counter-indicated for pregnant women. Thus, treating women in the reproductive ages for HCV may be particularly challenging, especially as many women who are at high risk for the disease do not have good access to birth control services.[149]

HCV and other health programs for women in prison are also challenging.[150] Women constitute a small minority of incarcerated persons in most countries, including Canada. They are sometimes housed in small units beside men's prisons where they are likely to find health services designed for men.[151] Sometimes their small numbers make it difficult for prison authorities to justify special services for women. Because fewer institutions house women, women prisoners are more likely to be located far from their families, communities and support networks. Community-based organizations providing services for prisoners may thus be unable to reach women as easily as they can men.[152]

In addition to the risks associated with injecting drugs, often with non-sterile and shared equipment, women in prison may face HCV risk from tattooing or body-piercing with contaminated equipment. Self-mutilation involving the cutting of skin, which is little studied in prison, also probably occurs more among women than men in prison. In Australia it was estimated that although women constituted 4–5% of the prison population, they accounted for 16% of cases of self-injury.[153] In Canada, one expert concluded that self-injury among women in prison is a coping strategy frequently linked to experiences of sexual abuse in childhood.[154]

There is plainly a great need for programs, including women-run programs, that are designed based on the complex reality of women's circumstances with respect to HCV risk and HCV treatment, but there are very few such programs in Canada.[155]

(c) Challenges to HCV programs for Aboriginal communities

HCV prevalence among Aboriginal people in Canada is estimated to be seven times higher than in the rest of the population.[156] Injection drug use, poverty, poor access to health services, and street involvement are also disproportionately present among Aboriginal people, and the effects of all of these are exacerbated by discrimination. Socio-economic instability in many cases may influence the initiation or continuation of drug use.[157] Several studies in Canada have found alarming levels of HCV prevalence among young Aboriginal people, including girls and young women.[158] Young Aboriginal women in these studies have been reported

[149] A.E. Weber et al. "High pregnancy rates and reproductive health indicators among female injection-drug users in Vancouver, Canada." *European Journal of Contraception and Reproductive Health* 2003; 8(1): 52–58.
[150] For a detailed discussion of challenges in addressing HIV and HCV among women in prison in Canada, see: A DiCenso et al., *Unlocking Our Futures: A National Study on Women, Prisons, HIV, and Hepatitis C*. Toronto: Prisoners' HIV/AIDS Support Action Network, 2003, online: www.pasan.org/Publications/Unlocking_Our_Futures.pdf.
[151] J. Csete. *"Vectors, vessels and victims": HIV/AIDS and women's human rights in Canada.* Toronto: Canadian HIV/AIDS Legal Network, 2005, pp. 35–36, online via www.aidslaw.ca/women.
[152] Ibid.
[153] S. Lazzaro. "Mulawa women's prison campaign." *Green Left Weekly*, 31 August 1994, online via www.greenleft.org.au.
[154] J. Heney. *Report on self-injurious behaviour in the Kingston Prison for Women*. Ottawa: Correctional Service of Canada, 2005, online via www.csc-scc.gc.ca.
[155] For a discussion of the specific HIV- and HCV-related needs of women in prison, and some information about promising programs, see Betteridge and Dias, *Hard Time*, *supra* note 39, pp. 82–88.
[156] S. Zou, L. Forrester and A. Giulivi. "Hepatitis C update." *Canadian Journal of Public Health* 2003; 94(2): 127–129, p 128.
[157] H.X. Wu et al. "Incidence and risk factors for newly acquired hepatitis C virus infection among Aboriginal versus non-Aboriginal Canadians in six regions, 1999–2004." *European Journal of Clinical Microbiology and Infectious Disease* 2006; 26: 167–174, p. 173.
[158] Ibid., Wu et al.; P.M. Spittal et al. "The Cedar Project: Prevalence and correlates of HIV infection among young Aboriginal people who use drugs in two Canadian cities." *International Journal of Circumpolar Health* 2007; 66(3): 226–240, online:

to have significant involvement in sex work, which may increase their risk of being in situations where injection practices are unsafe.[159] A study in Vancouver found Aboriginal young people to be more likely to inject cocaine than their non-Aboriginal counterparts.[160] Cocaine injection carries very high HCV risk since it entails many more injections per day than heroin or other opioids. Aboriginal persons are also significantly over-represented in prisons in Canada: while Aboriginal people represent approximately 2.5% of the Canadian population as whole, a 2004 study reported that approximately 17% of men and 26% of women in federal prisons were Aboriginal.[161] The available data indicate Aboriginal people are over-represented among reported HCV cases in federal prisons.[162]

Aboriginal health services are under the jurisdiction of the federal government. While various HCV programs for Aboriginal communities have been funded under federal initiatives,[163] both researchers and community-based advocates have called urgently for more culturally appropriate Aboriginal-run programs based on Aboriginal values, particularly those designed for and by young people and women, and more resources to overcome the legacy of years of inequitable access to health services.[164] The Canadian Aboriginal AIDS Network notes that Aboriginal persons who use drugs have themselves identified a need for research on the quality of existing programs on illicit drug use and for more and better-funded programs in their communities, based on harm reduction rather than abstinence and informed by an understanding of Aboriginal realities.[165]

Conclusions and recommendations

The "viral time bomb" of hepatitis C is ticking in Canada. The state of programs and policies on hepatitis C does not inspire confidence that this epidemic is being taken seriously by policy-makers. Hepatitis C is already a significant burden on the public health system and could become a much greater one without an urgent scaling up of evidence-based programs. People who inject drugs, the population most affected by HCV, are severely marginalized in Canadian society, and they tend to be the focus of criminal law enforcement more readily than they are of innovative and strong health programs. It is politically easy for a disease that mostly affects such a marginalized group to be given less priority than it should, especially when simplistic and ineffective prohibition-based policies dominate political discussions.

To what other countries' experiences might Canada look for inspiration? When the U.K.-based NGO The Hepatitis C Trust undertook a campaign in 2005–06 to spur the U.K. government into more intensive action on hepatitis C, it pointed to the experience of France.[166] In France, from 1994 to 2004, the percentage of HCV-positive people aware of their disease and being followed in the health system went from 24% to 56% though a government-run awareness campaign.[167] According to French authorities, important elements of the French national response to hepatitis C include anonymous HCV testing available at HIV clinics, family planning clinics, and in many other locations; annual mass media campaigns; one or two hepatitis C reference centres per region with comprehensive prevention, care and support services; special information campaigns for

http://ijch.fi/issues/663/663_Spittal.pdf; C.L. Miller et al. "The future face of coinfection: prevalence and incidence of HIV and hepatitis C virus coinfection among young injection drug users." *Journal of Acquired Immune Deficiency Syndrome* 2004; 36(2): 743–749.

[159] Ibid., Spittal et al., and Miller et al.

[160] C.L. Miller et al. "Elevated rates of HIV infection among young Aboriginal injection drug users in a Canadian setting." *Harm Reduction Journal* 2006, 3:9, doi:10/1186/1477/7517-3-9, online via www.harmreductionhournal.com.

[161] "A health care needs assessment of federal inmates in Canada." *Canadian Journal of Public Health* 2004; 95(S1): S1-S63, p. 15, online: http://acsp.cpha.ca/shared/cjph/archives/CJPH_95_Suppl_1_e.pdf.

[162] Correctional Service of Canada. "Addressing infectious disease issues for Aboriginal offenders", *supra* note 21. For a discussion of HIV- and HCV-related needs of Aboriginal persons in prisons, and some information about promising programs, see Betteridge and Dias, *Hard Time*, *supra* note 39, pp. 89–98.

[163] See listing of projects funded under the 1999–2004 federal Hepatitis C Prevention, Support and Research Program, available at http://www.phac-aspc.gc.ca/hepc/prsp-ppsr_e.html#2.

[164] See, e.g., Spittal et al., op.cit., p 237.

[165] Canadian Aboriginal AIDS Network. *Joining the circle: Aboriginal harm reduction — Program manual*. Ottawa: CAAN, 2007, p. 3, online via www.caan.ca.

[166] The Hepatitis C Trust. "France is winning the fight against hepatitis C." Online via www.hepcuk.info.

[167] Ibid.

people who inject drugs and for tattooing and piercing parlours; a well-funded research program; and sustained government funding for all these components.[168] In the UK, at the urging of patient and community-based groups, an All-Parliamentary Hepatology Group was formed that has conducted "audits" of hepatitis services in health districts across the country.[169] These actions show a commitment to hepatitis C control that is lacking in Canada.

Hepatitis C is already a significant burden on the public health system and could become a much greater one without an urgent scaling up of evidence-based programs.

Community-based organizations serving people affected by hepatitis C in Canada have articulated recommendations again and again for scaled-up programs for prevention, testing, treatment and support.[170] The essence of those recommendations remains valid and is paraphrased as follows:

- The components of the 1999–2004 federal hepatitis C program should be reinstated, vastly scaled up and supported by sustained and predictable funding. This should include sustained and adequate funding for community-based organizations that can reach marginalized people who use drugs and can offer information, referral to testing and treatment services, and peer support for harm reduction and treatment. Some community-based service providers have estimated the cost of the needed community-based educational and support services to be about $18 million annually, well in excess of the amounts funded under the five-year program.[171] Health Canada and provincial ministries of health should establish a goal to guide this major program — such as, for example, reducing new HCV infections to one half their current level in five years — and allocate sufficient funds to monitor progress toward that goal. Canada's comprehensive HCV initiative should give high priority and adequate resources to expanded community-based programs run by organizations that can reach young people who use drugs and others at particularly high risk.

- Comprehensive harm reduction services, including greatly scaled-up outreach to newer injectors, young people, Aboriginal communities and women should be universally available. Syringe exchange, methadone maintenance and other services should be integrated and coordinated, and there should be ready access to cookers, filters and other injection (and inhalation) equipment in addition to syringes and needles. To the greatest degree possible, harm reduction services should be linked to broader social services, including housing, psycho-social support, and other health services.

- Access to and availability of HCV treatment should be substantially scaled up through increased capacity and funding, with equal access for people with HCV across the country. Public health authorities at all levels should establish awareness-raising for health

[168] A.M. Julien-Depradeux, Direction générale de la santé, République Française. "National strategy for prevention and control of hepatitis C and B virus infection in France." Unpublished presentation, 18 November 2004, online: www.vhpb.org/files/html/Meetings_and_publications/Presentations/VDL22Jullien.pdf.
[169] United Kingdom All-Party Parliamentary Group. *A matter of chance: Audit of the Department of Health 2004 Hepatitis C Action Plan for England*. London, 2006, online via www.hepcuk.info.
[170] Canadian Hemophilia Society et al., *supra* note 9, pp. 47–53; Canadian Hepatitis C Network et al., *supra* note 30, pp. 10–16.
[171] Ibid., Canadian Hepatitis C Network et al., p. 12.

professionals and monitoring systems to ensure that no one who needs treatment, including people who are actively using drugs, is excluded from it. In addition, more resources for HCV testing and comprehensive psychological and social support for people undergoing treatment are required. Anonymous, non-nominal, and confidential testing should be made available and offered with information and counselling at a wide range of health facilities.

- Public information campaigns as well as training for health professionals should include not only the basics of HCV prevention and treatment but also messages designed to reduce discrimination against people who use drugs in health services and other sectors.

- Comprehensive HCV prevention, testing, treatment and support services should be made available in all federal, provincial and territorial prisons, including access to sterile injection and inhalation equipment. HCV treatment capacity and infrastructure should be expanded so that all inmates are reached with information on HCV and have access to HCV testing and treatment services without significant waiting time or other impediments.

- A dramatically scaled-up research program on HCV should include participatory research on improving outreach and effectiveness of HCV programs for people who inject drugs.[172] As has been done with HIV, Canada's HCV program should make significant investments of public funds in researching effective prevention methods, including an HCV vaccine, and improved treatment regimens.

[172] For discussion of this principle of involvement of those who are directly affected in the response to HIV and HCV, see: R Jürgens. *"Nothing About Us Without Us": Greater, Meaningful Involvement of People Who Use Illegal Drugs: A Public Health, Ethical, and Human Rights Imperative*. Toronto: Canadian HIV/AIDS Legal Network, 2005, online via www.aidslaw.ca/drugpolicy.