

Toward the elimination of HCV vertical transmission: A targeted, patient-informed hepatitis C engagement program in persons who use drugs in their child-bearing years in New Brunswick, Canada

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The region experienced a 26.6% increase in hepatitis C screening in 20-39-year-olds compared to the previous year. The Hepatitis Engagement Program outreach model developed with feedback from this age group was successful in expanding and improving hepatitis C screening and treatment in this population.

BACKGROUND

Hepatitis C virus (HCV) infections have been steadily rising in Canadians under the age of 40 years. Between 2011 and 2018, rates in adults aged 20-39 increased from a low of 35.3% in 30-39 year-olds to a high of 66.2% in those 25-29 years-old.¹ The shift is thought to be related to the rise in substance use among the younger populations.² This raises significant concerns for possible rise in the incidence of childhood HCV infections acquired through vertical transmission as more women of childbearing age are being chronically infected with HCV.³ HCV screening and care varies across Canada and is not centrally coordinated through provincial health authorities. As a result, community-based organizations find themselves paving the way with innovative programs that are successfully addressing many of the barriers associated with HCV care. RECAP is a non-profit harm reduction clinic in New Brunswick, Canada with the mission to prevent and treat HCV through holistic interprofessional care.

METHODS

The Hepatitis Engagement Program (HEP) is a nurse-led outreach HCV program targeting people who use drugs between the ages of 20-39 years. Outreach clinics were set up throughout the region to target this population for HCV screening using point-of-care and dried blood spot testing. Those who were HCV-positive were treated through a low barrier, nurse-initiated HCV treatment pathway. The program was scheduled to run for 12 months and was designed to be dynamic based on information gained from patients participating in the clinics.

Table 2. Top 3 HEP clinic locations by attendees and proportion HCV-positive

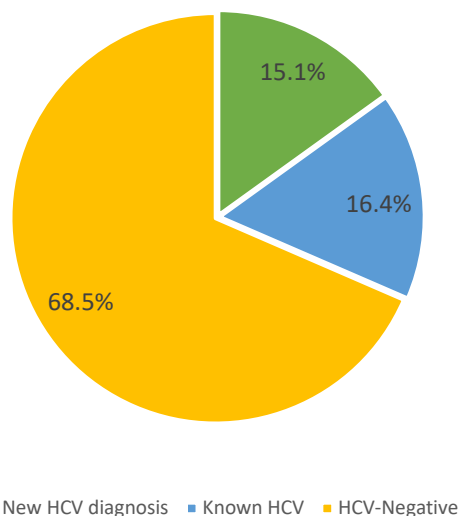
Top 3 by Proportion HCV-Positive (%)	Top 3 by Number of Attendees (n)
1. Community Agencies (23.6)	1. Provincial Corrections (35)
2. Provincial Correctional Centre (18.6)	2. Community Agencies (31)
3. Pharmacies (16.0)	3. Shelters / Medical Centre (17 each)

DISCUSSION

HCV prevalence among PWUD in their childbearing years was higher than outside this age range. High numbers of new infections were found on re-screening. HEP demonstrates the significant burden of HCV in this age group. Treatment and regular re-screening are key to HCV elimination, but emphasis may also be placed on screening high-risk infants for early identification of HCV through vertical transmission.

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■ New HCV diagnosis ■ Known HCV ■ HCV-Negative

Figure 1. HCV status after first visit

RESULTS

From July 2019 to March 2020, 378 individuals accessed care through 125 clinics with 146 (38.6%) from the HEP target population. Provincial correctional centres had the highest number in attendance; however, community agencies had the highest proportion of HCV-positives identified (Table 2). Injection drug use was reported by 91 (62.3%), of whom 43 (47.5%) reported sharing needles. HCV-positive status was found in 31.5% (n=44) at baseline (Figure 1). Follow-up was possible on 27 of which 55.6% (n=15) were initiated on treatment as of April 2021 (Figure 2). A total of 8 (11.8%) with ongoing risk factors accessed rescreening off which 5 (62.5%) were positive a median of 8 months following initial screening. A total of 5 re-infections were found, including 3 who were previously treated.

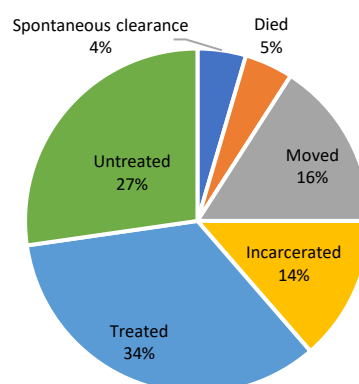


Figure 2. Status of patients with baseline HCV-positive status at follow-up

Table 1. Baseline demographics of HEP target population

		% (n)
Sex	Female	30.1 (44)
	Male	69.9 (102)
Age	20-24	23.3 (34)
	25-29	27.4 (40)
	30-34	28.8 (42)
	35-39	20.6 (30)
	40-44	19.9 (28)
Has Children	Yes	58.9 (86)
	No	36.3 (53)
	Unknown	4.8 (7)
Drug use in the last 30 days	Injection	30.8 (28)
	Snorting	17.0 (23)
Types of drugs used	Opioids	72.6 (106)
	Cocaine	82.9 (121)

66.7% of people who screened negative at baseline had ongoing risk factors

11.8% were rescreened through HEP.

62.5% of those rescreened were found to be HCV-positive

14 initiated on HCV treatment

5 had SVR results as of April 2021

3 re-infections were found