Toward the elimination of HCV vertical transmission: A targeted, patientinformed hepatitis C engagement program in persons who use drugs in their child bearing years in southern **New Brunswick**

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BACKGROUND

- Substance use disorder (SUD) is rising among young adults in Canada. This increase in SUD is associated with an increase in hepatitis C virus (HCV) among people who use drugs (PWUD), with the incidence of HCV rising 28.6% in those aged 30-39 years and 62.3% in those 25-29 years from 2011 to 2017 [1].
- Among women in this age group, increasing HCV rates raise the concern that more infants are being born to HCV-positive mothers [2].
- Men within this age group are also a reservoir. Failure to focus on HCV elimination in this cohort, likely to associate with women of similar age, can increase the likelihood of infection among women with ongoing risk factors.

METHODS

investigator-sponsored research grant.

- Phase 1: A qualitative study to identify primary modes of information gathering and motivations and barriers to HCV treatment engagement of persons who use drugs (PWUD) aged 20-39 years with a history of snorting and/or injection drug use (IDU) who had an unknown HCV status, or known HCV infection but not connected to care.
- Phase 2: A 12-month comprehensive outreach Hepatitis C Engagement Program (HEP) to increase screening and engagement in HCV care among the target population.

overall and by post-testing HCV status	All Dations	1101//.)	1101//
	All Patients	HCV(+)	HCV(-)
Mean age (SD)	n=117 29.9 (+/- 5.4)	n=39 31.0 (+/- 5.1)	n=78 29.3 (+/- 5.6
Female sex, % (n)	29.1 (34)	25.6 (10)	30.8 (24)
No primary care provider, % (n)	30.8 (36)	30.8 (12)	30.8 (24)
Currently on OAT, % (n)	40.2 (47)	51.3 (20)	34.6 (27)
Reported having children, % (n)	53.9 (63)	53.9 (21)	53.9 (42)
Outreach Location, % (n)	· ,	· ,	` '
- Community organizations	55.6 (65)	59.0 (23)	53.9 (42)
- Mobile clinic	6.8 (8)	10.3 (4)	5.1 (4)
- Office within institution	23.9 (28)	18.0 (7)	26.9 (21)
- Pharmacy	8.6 (10)	10.3 (4)	7.7 (6)
- RECAP	5.1 (6)	2.6 (1)	6.4 (5)
History of IDU % (n)	65.5 (76)	92.1 (35)	52.6 (41)
Last injection use, % (n)			
- < 30 days	38.2 (29)	42.9 (15)	34.2 (14)
- 30 days-6 months	9.2 (7)	8.6 (3)	9.8 (4)
- > 6 months, < 12 months	4.0 (3)	2.9 (1)	4.9 (2)
- 12-24 months	7.9 (6)	5.7 (2)	9.8 (4)
- > 24 months	25.0 (19)	11.4 (4)	36.6 (15)
- Unknown	15.8 (12)	28.6 (10)	4.9 (2)
History of snorting/sniffing substances, % (n)	89.7 (104)	86.8 (33)	91.0 (71)
Last use by snorting/sniffing, % (n)			
- < 30 days	18.3 (19)	18.2 (6)	18.3 (13)
- 30 days-6 months	18.3 (19)	9.1 (3)	22.5 (16)
- > 6 months, < 12 months	8.7 (9)	9.1 (3)	8.5 (6)
- 12-24 months	4.8 (5)	3.0 (1)	5.6 (4)
- > 24 months	34.6 (36)	27.8 (9)	38.0 (27)
- Unknown	15.4 (16)	33.3 (11)	7.0 (5)
Shared drug paraphernalia, % (n)	49.6 (58)	43.6 (17)	52.3 (41)
SUD complications resulting in hospital admission, % (n)	32.1 (36)	51.4 (18)	23.4 (18)

Prevalence among high risk substance users aged 19-39 years old screened in the Hepatitis Engagement Program is 33%. The highest attendance was at clinics which took place within community organizations serving this population (i.e. food banks, soup kitchens). This highlights the need to expand screening and treatment services outside health-based programs in order to achieve HCV elimination.





RESULTS

- In Phase 1, 28 participants with a mean age of 30.5 years were included. Overall, 39% were female, 36% came from rural areas, and 89.3% had unknown HCV status. Active injection and/or snorting of substances was reported by 78.6%. Social media and the internet were cited as poor methods of information dissemination by 57% and 32.1% of participants, respectively. The most effective way to disseminate information identified by participants were posters or pamphlets placed in areas regularly frequented by this population and by word of mouth (Figure 1).
- In Phase 2, a total of 320 individuals have accessed HEP clinics from July 2019 to January 2020. Of those, 195 (65.6%) reported current or past snorting and/or injection drug use and 60.0% (117) of those with risk factors were in our target age group. Thirty-nine (33.3%) were HCV positive. Characteristics are shown in Table 1. The way by which individuals learned of the HEP clinics are shown in Figure 2.

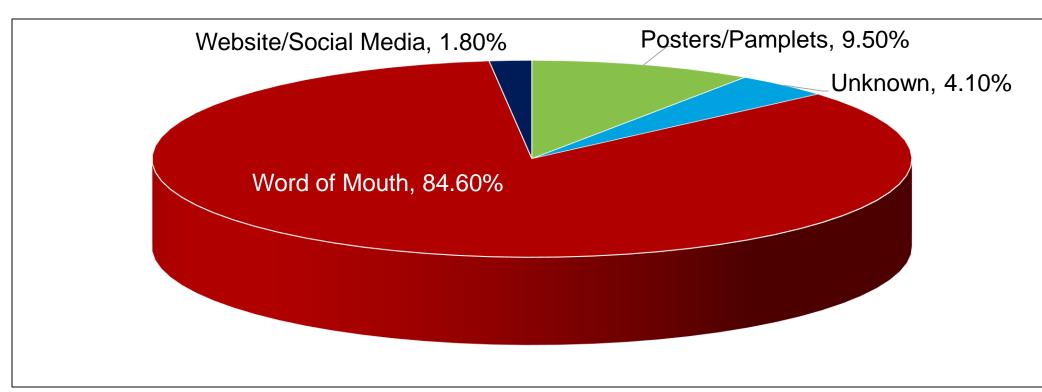


Figure 2: Way in which patients found out about HEP clinics

- As seen in Table 2, of the 39 positive HCV positive patients identified, 48.6% (17) were known positives who were not connected to HCV care.
- 22 were newly identified positives. Five (22.7%) were HCV reinfections (2 had previously spontaneously cleared and 3 had been previously treated) and had risk factors post-treatment.
- Of the 34 women, 67.6% (23) had children. Five (21.7%) of these women will have further follow-up to determine screening needs of their children.

Table 2: Patient-Reported HCV Status on Intake and Final HCV Status			
Final HCV Status ⇒	HCV Positive	HCV Negative (n=77)	
↓ Patient-Reported HCV Status, % (n)	(n=39)		
Known positive, not connected to care	94.4 (17)	5.6 (1)	
Negative, recently tested	30.0 (3)	70.0 (7)	
Negative, remotely tested	14.3 (4)	85.7 (24)	
Previously spontaneously cleared	33.3 (2)	66.7 (4)	
Previously treated and cured	25.0 (3)	75.0 (9)	
Unknown status	23.3 (10)	76.7 (33)	

CONCLUSION

- In the first six months of this program, one third of those screened were HCV positive with high rates of IDU and snorting.
- Approximately half of those screened and at risk were not connected to care.
- Going forward, clinics will be offered on an ongoing basis to continue to provide access to rapid HCV screening.
- Through these outreach clinics individuals positive for HCV will be engaged in care and initiated on treatment.
- Over the next six months efforts will be made to identify and screen children who may be at risk for vertical transmission based on maternal status and timeline of risk factors.

REFERENCES

1. Canada, G. o. (2020, 01 15). Notifiable Diseases On Line. Retrieved from https://diseases.canada.ca/notifiable/charts?c=cc

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