Evaluation of Hepatitis C Screening Strategies in Different Community Settings in a Canadian Metropolitan Area

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BACKGROUND

- In 2016, Canada signed on to the World Health Organization (WHO)'s Global Viral Hepatitis Strategy, with the goal of eliminating viral hepatitis as a public threat by 2030
- It is estimated that over 45% of individuals with chronic hepatitis C virus (HCV) infection in Canada remain undiagnosed
- Scaling up HCV screening and linkage to care programs is essential to achieve WHO's targets
- Understanding current rates of HCV diagnosis and linkage to care in different community settings is critical information for developing future screening strategies

OBJECTIVE

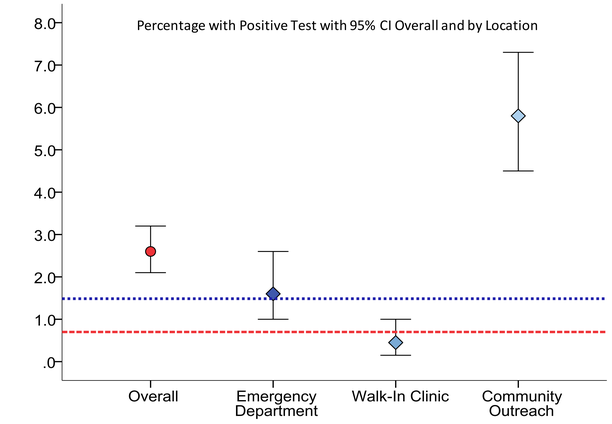
- **To evaluate HCV screening strategies implemented in three different community settings as part of our Viral Hepatitis Care Network (VIRCAN) program: emergency department (ED), medical walk-in clinic (MC) and community outreach (OT)**

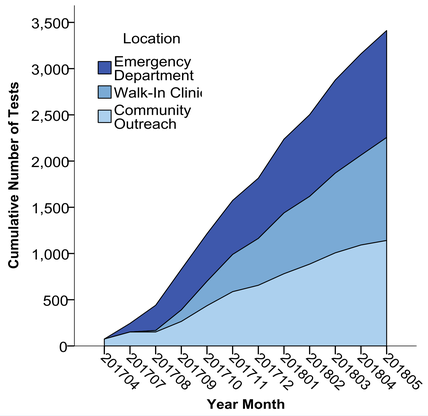
METHODS

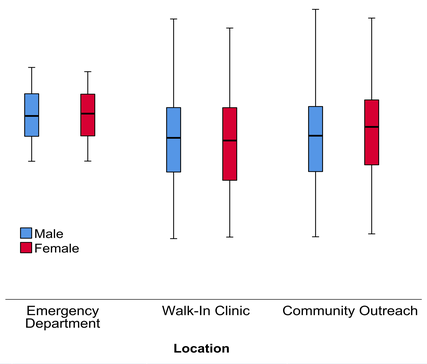
- We implemented birth cohort (1945-1975) HCV testing in the ED and MC, and universal testing during OT
- Blood samples in the ED were collected by finger prick on Dried Blood Spot (DBS) collection cards and tested for anti-HCV with reflex to HCV RNA
- In the MC and OT, we used anti-HCV point-of-care testing followed by HCV RNA on DBS card
- Patients with positive HCV RNA were linked to care

RESULTS

Characteristics	HCV Ab tests				p-value
	Total	Emergency Department	Walk-in Clinic	Outreach Initiatives	
	N = 3412	N = 1157	N = 1114	N = 1141	
		33.90%	32.60%	33.40%	
Age *(mean, SD)*	53 (14)	58 (9)	49 (15)	51 (15)	<0.0001
Age *(median IQR range)*	54 (44-63)	58 (51-65)	50 (37-60)	53 (39-62)	<0.0001
Male *n (%)*	1587 (46.9)	603 (52.1)	438 (39.3)	546 (49.1)	<0.0001
HCV Ab Positives *n (%)*	90 (2.6)	19 (1.6)	5 (0.4)	66 (5.8)	<0.0001
HCV RNA Tests *n/HCV Ab positives (%)*	67/90 (74.4)	18/19 (94.7)	4/5 (80.0)	45/66 (68.2)	0.053
HCV RNA Positives *n/HCV RNA tests (%)*	43/67 (64.2)	14/18 (77.8)	3/4 (75.0)	26/45 (57.8)	0.36
Linkage to Care *n/HCV RNA positives (%)*	22+7/43 (76.9)	8+1/14 (71.4)	3/3 (100.0)	11+6/26 (75.0)	1







HCV Ab Positives	Total	Emergency Department	Walk-in Clinic	Outreach Initiatives
n (%)	90 (2.6)	19 (1.6)	5 (0.45)	66 (5.8)
EXACT 95% CI	2.1-3.2	1.0-2.6%	0.15-1.0	4.5-7.3
Compared to general Canadian population 0.7%	<0.0001	0.001	0.21	<0.0001
Compared to US Emergency Department 10.3%	<0.0001	<0.0001	<0.0001	<0.0001
Compared to Canadian birth cohort population 1.5%	<0.0001	0.378	0.001	<0.0001

CONCLUSIONS

- **The HCV prevalence in the OT was seven times higher than the general population, but fewer underwent HCV RNA testing**
- **The HCV seropositivity among the ED birth-cohort was significantly higher than the general population**
- **Using the DBS for HCV testing ensured a high HCV RNA test uptake**
- **The community outreach and EDs are useful strategies for identifying more cases, however better interventions are needed to improve HCV RNA testing rate and linkage to care**

CONTACT INFORMATION

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