On-Treatment Factors Associated with Follow-Up After Hepatitis C Treatment in Inner-City Community Health Clinics: A Prospective Cohort Study

John Koo[1], Susan Nouch[2, 3], Lesley Gallagher[2], Margaret Erickson[1], Rabab Elbaharia[2], Holly Kleban[2], Jennifer Quesnelle[2], Steven Persaud[2], Deborah Kason[2, 3], Daniel Pare[2, 3], Laura Knebel[2, 3], Mark Viljoen[2], Wendy Zhang[1], Nic Bacani[1], Paul Sereda[1], Jeannie Shoveller[1], David Hall[2, 3], Michael Norbury[2, 3], Rolando Barrios[1, 2, 3], Mark Hull[1, 2, 4]

1. BC Centre for Excellence in HIV/AIDS, Vancouver, BC; 2. Vancouver Coastal Health Authority, Vancouver, BC; 3. Department of Family Practice, University of British Columbia, Vancouver, BC; 4. Division of Infectious Diseases, Department of Medicine, University of British Columbia, Vancouver, BC

Background

People with injection drug use (IDU) have high rates of HIV/HCV co-infection in the inner-city Downtown Eastside, Vancouver, British Columbia [1]. Direct acting antivirals offer HCV cure, yet marginalized populations face barriers to access and long term engagement in care [2]. Restrictions in many regions limit prescribing of HCV medications to specialist physicians and exclude active substance users from treatment coverage. HCV treatment by family physicians in primary care and addiction clinics may facilitate treatment expansion in this population, however being lost to follow up (LTFU) after HCV treatment still poses a challenge [3].

Objective

We evaluated on-treatment factors associated with being LTFU following HCV treatment delivered in a regional HCV care program integrated into primary care.

Methods

Study Participants

Individuals assessed for HCV therapy within three inner-city multidisciplinary primary care clinics September 2015 - June2017 were enrolled in a prospective cohort

Data Collection

Data was gathered from pre-treatment and post-treatment self-administered questionnaires which includes demographics, substance use and attendance to care and support group. Clinical variables collected from the Electronic Medical Record (EMR) included: genotype, co-infections, treatment regimens, medical comorbidities, mode and frequency of HCV medication dispensing and HCV treatment outcomes and follow-up. Participants were recorded as achieving SVR12 if HCV RNA was negative, and as LTFU if no HCV visit occurred within 10 weeks of SVR 12 due date.

Statistical methods

Categorical variables were compared using Chi-squared test or Fisher's exact test. Logistic regression model was used to examine on-treatment factors associated with LTFU. Level of significance set at $p<0.05$.

Results

Overall 135 Individuals were due for SVR 12 prior to June 1 2017. Of them 9 received pre-DAA treatment. Intention-to-treat SVR12 and SVR12 for those with results were 84% and 97%, respectively (Figure 1), while 24% were LTFU with no results (Table 1).

Figure 1: SVR 12 results (N=135)

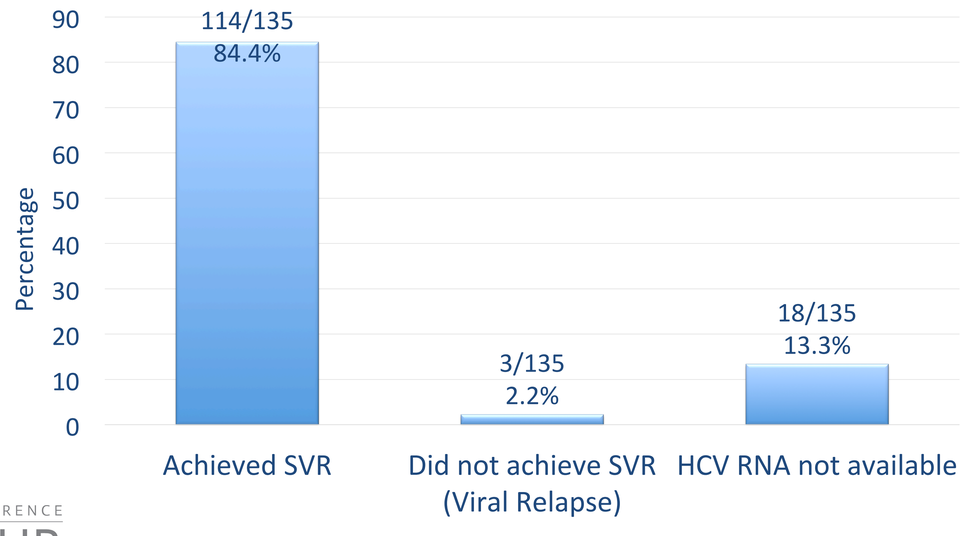

Table 1: On-treatment factors associated with LTFU: bivariate analysis

	Not LTFU (n=103)	LTFU (n=32)	P-Value
Gender-N (%)			P=0.250
Male	81 (78.64)	22 (68.75)	
Female	22 (21.36)	10 (31.25)	
Age			P=0.159
Median (IQR)	54 (48-60)	51 (46-58.5)	
IDU in the last month of treatment-N (%)			**P=0.035**
Yes	14 (13.59)	9 (28.13)	
No	52 (50.49)	11 (34.38)	
No answer	37 (35.92)	12 (37.50)	
Opioid agonist therapy (OAT)-N (%)			P=0.519
Yes	55 (53.4)	15 (46.88)	
No	48 (46.6)	17 (53.13)	
OAT and HCV tx at the same clinic-N(%)	**n=55**	**n=15**	**P=0.004**
Yes	42 (76.36)	5 (33.33)	
No	13 (23.64)	10 (66.67)	
Med dispensing location-N (%)			P=0.820
Pharmacy	25 (24.27)	9 (28.13)	
HCV clinic	61 (59.22)	19 (59.38)	
Other	17 (16.50)	4 (12.50)	
Med dispensing frequency-N (%)			P=0.742
Daily or daily observed	35 (34.31)	12 (37.50)	
Weekly or Bi-weekly	67 (65.69)	20 (62.50)	
Attended support Group-N (%)			P=0.749
Yes	67(65.05)	17 (53.13)	
No	13 (12.62)	4 (12.50)	
No answer	23 (22.33)	11 (34.38)	

Table 2: Multivariate analysis of factors associated with LTFU

	Adjusted OR (95% CI)	P-value
Age at treatment initiation	0.99 (0.94-1.04)	0.709
Gender		
M vs. F	0.47 (0.16-1.38)	0.170
Same clinic (OAT clinic same as HCV clinic?)		
yes vs. no	**0.11 (0.03-0.45)**	**0.002**
IDU in the last month of tx		
yes vs. no	**5.64 (1.52-21.01)**	**0.010**

Conclusion

In our study, we focused on on-treatment factors such as IDU during treatment, dispensing frequency, support group attendance and locations for dispensing HCV treatment + OAT. We found that participants who reported IDU in the last month of treatment were more likely to be LTFU, whereas patients who received OAT care and HCV treatment at the same location were less likely to be LTFU. Our results suggest that integrating OAT and HCV treatment in same location may assist with improved follow-up. Further research into interventions to support patients with active IDU to maintain engagement following HCV treatment may be warranted.

References

1. Hayashi K, Milloy MJ, Wood E, Dong H, Montaner JS, Kerr T. Predictors of liver-related death among people who inject drugs in Vancouver, Canada: a 15-year prospective cohort study. J Int AIDS Soc 2014; 17(1): 19296.
2. Bruggmann P, Litwin A. Models of care for the management of HCV among people who use drugs: one size does not fit all. CID 2013; 57: S56–S61.
3. Grebely J, Bruneau J, Bruggmann P, Harris M, Hickman M, et al. Elimination of hepatitis C virus infection among PWID: The beginning of a new era of interferon-free DAA therapy. Int J Drug Policy 2017; 47:26-33.

CONFERENCE CAHR 2018 CSP3.06

Conflict of Interest Disclosure: I have no conflicts of interest

For information, contact: Susan.Nouch@vch.ca

Vancouver CoastalHealth

BRITISH COLUMBIA CENTRE *for* EXCELLENCE *in* HIV/AIDS

Providence HEALTH CARE How you want to be treated.

UBC