PERSONS WITHOUT DURABLE HIV VIRAL SUPPRESSION ARE LESS LIKELY TO INITIATE TREATMENT FOR HEPATITIS C

Katherine Penrose[1], Miranda Moore[2], Kizzi Belfon[1], Amber Casey[1], Nirah Johnson[2], Jessie Schwartz[2], and Angelica Bocour[2]
New York City Department of Health and Mental Hygiene, New York, NY, [1]HIV Care and Treatment Program and [2]Viral Hepatitis Program

2018 NYC Viral Hepatitis Research Symposium

PURPOSE

Individuals co-infected with HCV and HIV experience accelerated liver disease progression and higher mortality than HCV mono-infected individuals.

Current guidelines recommend that HIV/HCV co-infected individuals be prioritized for HCV treatment. However, many co-infected individuals have not yet been treated for HCV.

We examined factors associated with not initiating HCV treatment in 2016 among co-infected individuals in New York City (NYC).

METHODS

A deterministic cross-match of the NYC HIV and HCV surveillance registries was conducted to identify individuals who:

- were diagnosed with both viruses by the end of 2015
- were alive and living in NYC at the end of 2016
- had ≥1 positive HCV RNA test prior to 2016

Definitions

- Co-infection – an HIV diagnosis and a positive HCV RNA test reported by December 31, 2015
- HCV treatment initiation – first negative RNA result in 2016 preceded by a high positive RNA result (≥1,000 IU/mL)
- Durable HIV viral suppression – ≥2 HIV viral loads (VL) that were ≥3 months apart, and no VLs >200 copies/mL in 2016

Multivariable Poisson regression with robust error variance was used to identify factors associated with non-initiation of HCV treatment. Adjusted risk ratios (aRR) were reported.

RESULTS

- Of **5,568** co-infected individuals without a negative HCV RNA result reported prior to 2016:
  - **26% initiated HCV treatment** and
  - **46% achieved durable HIV viral suppression** in 2016
- Compared to those with durable HIV viral suppression, individuals without durable HIV viral suppression were **66% less likely to initiate HCV treatment** in 2016 (aRR: 1.35; 95% CI: 1.30 – 1.39).
- Among co-infected individuals without durable HIV viral suppression who had not initiated HCV treatment in 2016, **53% had ≥1 suppressed HIV VL** in 2016.

Table 1. Characteristics[1] of individuals living and reported with HIV and HCV by December 31, 2015 in NYC, by HCV treatment (Tx) initiation in 2016

	INITIATED HCV TX	NO HCV TX	ARR (95% CI)
All (N=5,568)	1,450 (26.0%)	4,118 (74.0%)	
Durable HIV Viral Suppression (2016)			
No	480 (15.8%)	2550 (84.2%)	1.35 (1.30 – 1.39)
Yes	970 (38.2%)	1568 (61.8%)	Ref
Race/Ethnicity			
Black	590 (24.3%)	1826 (75.6%)	1.03 (0.98 – 1.08)
Latino/a	634 (27.6%)	1661 (72.4%)	0.97 (0.93 – 1.02)
White	204 (26.2%)	575 (73.8%)	Ref
Other/Unknown[2]	22 (28.2%)	56 (71.8%)	1.01 (0.88 – 1.16)
Gender			
Male	1061 (25.9%)	3031 (74.1%)	Ref
Female	374 (26.5%)	1037 (73.5%)	1.00 (0.96 – 1.03)
Transgender	15 (23.1%)	50 (76.9%)	1.01 (0.88 – 1.15)
Birth cohort			
<1945	37 (25.9%)	106 (74.1%)	1.06 (0.96 – 1.17)
1945-1965	1075 (27.7%)	2807 (72.3%)	Ref
>1965	338 (21.9%)	1205 (78.1%)	1.04 (1.01 – 1.08)
Area-based Poverty Level (2016)[3]			
<10% below FPL	118 (30.6%)	267 (69.4%)	Ref
10 to <20% below FPL	364 (26.1%)	1031 (73.9%)	1.04 (0.97 – 1.12)
20 to <30% below FPL	347 (29.3%)	837 (70.7%)	1.00 (0.93 – 1.08)
≥30% below FPL	614 (25.4%)	1799 (74.6%)	1.06 (0.98 – 1.13)
Unknown	7 (3.7%)	184 (96.3%)	1.34 (1.25 – 1.44)
Incarceration History[4]			
No	1034 (27.6%)	2715 (72.4%)	Ref
Yes	416 (22.9%)	1403 (77.1%)	1.02 (0.99 – 1.06)
Years since HCV Diagnosis			
1-5 years	213 (26.1%)	602 (73.9%)	Ref
6-10 years	436 (24.1%)	1371 (75.9%)	1.03 (0.98 – 1.08)
>10 years	801 (27.2%)	2145 (72.8%)	1.01 (0.96 – 1.06)

[1]Demographic characteristics were obtained from the NYC HIV Surveillance registry.
[2]Other race/ethnicity includes Asian/Pacific Islander, Native American and multiracial categories.
[3]Area-based poverty is based on NYC ZIP code of residence and is defined as the percent of the population in a ZIP code whose household income is below the Federal Poverty Level (FPL.). This measure is not available for people missing ZIP code or living outside of NYC.
[4]Incarceration history was defined as having ≥1 HIV lab reported from a correctional facility prior to the end of 2016.

CONCLUSIONS

- People who did not achieve durable HIV viral suppression in 2016 were less likely to have initiated HCV treatment.
- Lower HCV treatment initiation among those without durable HIV viral suppression could be a holdover from the previous New York State Medicaid HCV treatment requirement of controlled HIV viral load.
- Half of individuals without durable HIV viral suppression achieved at least one suppressed HIV VL, indicating that short-term treatment adherence was manageable for many of those who had not achieved durable HIV viral suppression.
- As HCV treatment is of short duration, our findings suggest that individuals without durable HIV viral suppression could adhere to HCV treatment with appropriate support.

LIMITATIONS

- Our durable HIV viral suppression definition may be restrictive, as it does not include individuals who are monitored less frequently due to well-controlled HIV, though 83% of individuals without durable viral suppression had at least one unsuppressed HIV VL or no HIV labs in 2016.

ACKNOWLEDGEMENTS

We would like to thank Ann Winters of the Viral Hepatitis Program, Sarah Braunstein and Sonny Ly of the HIV Epidemiology and Field Services Program, and Mary Irvine and Graham Harriman of the HIV Care and Treatment program for their input. This work was supported through a grant from the Health Resources and Service Administration (U90HA30517).