

HEPATITIS C VIRUS INFECTION AND CO-INFECTION WITH HIV AMONG PWID IN 10 U.S. CITIES

#0602

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Background

- Population-based hepatitis C virus (HCV) surveillance among persons who inject drugs (PWID) has been limited and has primarily included HCV antibody testing to identify HCV exposure.
- Previously studies have estimated exposure to HCV at 43% (Lansky et. al. 2014) to 73% (Nelson et. al. 2011) among U.S. PWID.
- Testing for presence of HCV antibody and HCV RNA would allow for identifying acute, chronic, and cleared or treated infections, thereby better characterizing HCV in a high-burden population.
- Quantifying acute and chronic HCV infection and HIV/HCV co-infection, and evaluating associated characteristics, among PWID is important for informing HIV and HCV elimination efforts.

Methods

- 2018 National HIV Behavioral Surveillance
- Respondent-driven sampling was used to recruit PWID who reported injecting drugs in the past 12 months, were ≥18 years old, and resided in one of 10 U.S. cities.

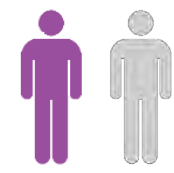
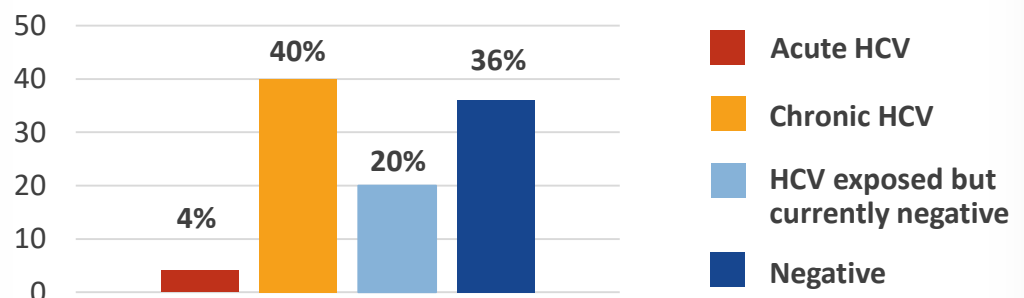


- Participants provided self-reported data on demographics and risk behaviors via an interview-assisted questionnaire.
- Participants completed HIV, HCV antibody, and HCV RNA testing.
- HCV RNA testing was conducted at participating local laboratories.
- Analyses were limited to 3,795 eligible PWID (72% male, median age 45) who consented to HIV and HCV testing and had valid HCV antibody and HCV RNA test results.
- Adjusted prevalence ratios (aPRs) and 95% confidence intervals (CIs) were obtained using Poisson regression with robust standard errors clustered on recruitment chain and adjusted for network size and city.

HCV Antibody	HCV RNA	HCV infection interpretation	Current HCV infection
Nonreactive	Detected	Acute	Yes
Reactive	Detected	Chronic	Yes
Reactive	Not detected	HCV exposed but currently negative	No
Nonreactive	Not detected	Negative	No

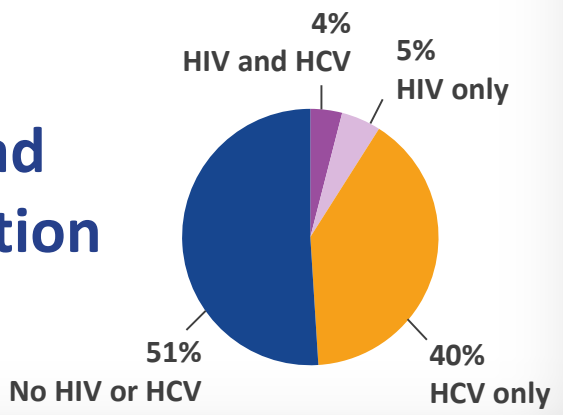
Results

Acute and chronic HCV prevalence was high among U.S. urban PWID



Nearly half of all PWID had current HCV infection

1 in 25 PWID had HIV/HCV co-infection



Category	Characteristic	aPR	95% CI
Acute HCV infection was highest among PWID who:	were male	4.3%	
	were ages 25-34	4.2%	
	were black	4.5%	
	lived in Miami	17.6%	
	lived in Philadelphia	5.3%	
	were HIV-positive	4.6%	
Current HCV infection was higher among PWID who:	were white (vs. black)	1.3	1.1-1.5
	were injecting >5 years (vs. ≤5)	1.5	1.2-1.8
	injected >1 time/day (vs. <1 time/day)	1.5	1.3-1.7
	shared syringes (vs. not)	1.2	1.1-1.3
	shared injection equipment (vs. not)	1.3	1.1-1.4
	were transgender (vs. female)	6.3	2.8-14.5
HIV/HCV co-infection was higher among PWID who:	were injecting >5 years (vs. ≤5)	2.0	1.3-3.1
	injected speedball most often (vs. heroin)	2.1	1.4-3.0
	injected stimulants most often (vs. heroin)	1.8	1.1-2.9
	lived in Miami (vs. DC)	2.3	1.3-3.9
	were white (vs. black)	1.3	1.1-1.5

Limitations

- NHBS is not a nationally representative sample and testing only took place in 10 NHBS cities; thus, results may not be generalizable to all U.S. PWID.
- NHBS is a cross-sectional surveillance activity and therefore we cannot make conclusions about temporality of the associations observed.

Conclusions

- Conducting both HCV antibody and RNA testing simultaneously allowed for identification of acute, chronic, and cleared or treated HCV infection.
- About 64% of all PWID had been exposed to HCV and 44% had current HCV infection (4% acute, 40% chronic); approximately 20% of PWID had cleared infection or been treated.
- Having HCV infection or HIV/HCV co-infection was associated with injection and sharing risk behaviors as well as demographic characteristics.
- HCV and HIV elimination efforts should focus on reducing injection and sharing risk behaviors among PWID, ensuring access to sterile injection equipment, and providing treatment to prevent further transmission.

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