

1147. Factors Associated with Spontaneous Resolution of HCV Infection in Untreated Individuals, Philadelphia

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Background. Hepatitis C virus (HCV) affects approximately 3.2 million individuals in the United States. An estimated 70% of HCV-infected individuals suffer from chronic infection. The specific factors associated with spontaneous clearance of HCV in the remaining 30% of individuals remains poorly defined. This study uses surveillance data to highlight differences between those who spontaneously clear HCV infections and those who are chronically infected in a large urban area.

Methods. The Philadelphia Department of Public Health (PDPH) collects clinical and risk factor data from patients and providers as a part of an enhanced surveillance project. Surveillance data from January 1, 2013 – May 31, 2014 was used to compare those with RNA-positive chronic HCV cases to individuals with resolved infection (currently RNA-negative). Demographics, active risk factors (injection drug use (IDU), tattoos, incarceration, many lifetime sex partners and being a man who has

sex with men) and passive risk factors (organ/blood transfusion, needle stick, and hemodialysis) were compared.

Results. Of the 739 HCV patients investigated, 84 (11%) had resolved infections without receiving treatment. These 84 individuals were less likely to be male (42% vs 62%, p-value = 0.0007), black (19% vs 47%, p-value < 0.0001), and were younger (median: 31 years vs 49 years, p-value < 0.0001) than those with chronic infections. Chronically infected individuals were more likely to be in care for HCV (61% vs 35%, p < 0.005) and have histories of IDU (54% vs 23%, p-value < 0.0001) or incarceration (54% vs 16%, p-value < 0.0001).

Conclusion. Our findings support prior studies showing that African-Americans and males are less likely to show spontaneous clearance of HCV. The association between high risk behavior and reduced HCV clearance may be partially explained by reinfection with new viral strains, though further studies are warranted. By defining the mechanisms underlying viral control, it may be possible to utilize robust surveillance data to target individuals for treatment and/or care using risk and demographic indicators. The use of new medications for HCV treatment with this enhanced targeting technique may allow for additional clearance of HCV infection in non-resolved patients.

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