Prevalence of HCV among Persons Who Inject Drugs (PWID): Comparison of Urban Versus Rural Oregon Counties

Tasha Poissant, MPH, Acute and Communicable Disease Program, Oregon Public Health Division

Background

Hepatitis C is the most common bloodborne chronic viral infection and the leading cause of liver disease in the United States. Hepatitis C virus (HCV) is transmitted primarily through blood or blood products, and infection is rare among persons who do not share needles or other injection equipment. Injection drug use is a well-recognized risk factor for hepatitis C; however, most investigations into the roles of injection drug use in transmission of HCV have focused on urban populations. We compared the prevalence of hepatitis C among persons who inject drugs (PWID) in urban and rural settings in Oregon.

Method

From March 2007 to September 2009, 19 local health departments in both urban and rural Oregon were selected to perform targeted anti-HCV screening on high-risk individuals. Selection criteria for LHDs included the ability to perform testing without requiring additional funding for administrative costs of screening, ability to integrate HCV testing within existing HIV screening programs, and availability of post-test counseling for individuals undergoing screening. LHD staff followed the CDC’s recommendations for screening. Testing was indicated for those that met at least one of the following criteria:

- Four injected illegal drugs.
- Recovered/transmitted/injury/threat prior to 1990.
- Ever been homeless/harmic.
- Required detoxification or treatment at home or in hospital.
- Shared evidence of illegal drugs.

Outreach settings included needle exchange sites, jails, HIV testing sites, alcohol and drug treatment sites, as well as county health department sites. Basic demographic and risk factor data were collected at the time of testing. Tests obtained through RIBA-negative or ELISA testing at the Oregon State Public Health Laboratory (OSPHL) using the Ortho HCV and ELISA assays (Ortho-Clinical Diagnostics, Raritan, NJ). Selected sites, specimens were obtained via finger stick and tested by a commercial assay (Home Access Hepatitis C test [Home Access Hepatitis C test [Home Access Health Corporation, Hoffman Estates, IL]), for antibodies to HCV. Positive HCV antibody results with rapid or confirmatory test results of a true positive were considered confirmatory. Values >3.8 units per milliliter were considered positive and used in the analysis. All seropositive results were confirmed using the RIBA-2 test.

Results

From March 2007 to November 2009, 1,142 anti-HCV screening tests were performed, and 310 (27.1%) of 1,142 individuals tested had detectable antibodies to hepatitis C. Of these, 1,142 (32.7%) were under the age of 40. Of the 1,142 individuals, 109 (98%) were among admitted injection drug users.

Among PWID, 310/1142 (27%) tested positive overall, while the prevalence of HCV among PWID under 40 years (310/1142) (27.1%) was under the age of 40. Of the 1142 individuals, 109 (98%) were among admitted injection drug users.

In this study, we found that the prevalence of HCV among PWID is lowest in rural settings. This finding is consistent with previous studies, which have noted a lower prevalence of HCV in rural settings. The findings from this study are subject to at least three limitations. Our prevalence estimates into the roles of injection drug use in transmission of HCV have focused on urban populations. The prevalence of HCV among PWID has been lower in rural settings, which may be due to a lower prevalence of injection drug use or to differences in the risk behaviors of PWID in rural settings. The prevalence of HCV among PWID in urban and rural settings was 27.1% and 20.0%, respectively. The results highlight that — although the prevalence of HCV among PWID in urban and rural settings was comparable, the prevalence of HCV among PWID in rural settings was lower than in urban settings.

Discussion

In this study, we found that the prevalence of HCV among PWID is lowest in rural settings. This finding is consistent with previous studies, which have noted a lower prevalence of HCV in rural settings. The prevalence of HCV among PWID in urban and rural settings was 27.1% and 20.0%, respectively. The results highlight that — although the prevalence of HCV among PWID in urban and rural settings was comparable, the prevalence of HCV among PWID in rural settings was lower than in urban settings.

The findings from this study are subject to at least three limitations. Our prevalence estimates into the roles of injection drug use in transmission of HCV have focused on urban populations. The prevalence of HCV among PWID has been lower in rural settings, which may be due to a lower prevalence of injection drug use or to differences in the risk behaviors of PWID in rural settings. The prevalence of HCV among PWID in urban and rural settings was 27.1% and 20.0%, respectively. The results highlight that — although the prevalence of HCV among PWID in urban and rural settings was comparable, the prevalence of HCV among PWID in rural settings was lower than in urban settings.

Prevalence of HCV among PWID by risk group, overall and with injection drug use excluded, HCV Screening Program, Oregon, 2007-2009 (n=1142*)