

## INJECTION DRUG USE, INJECTION RISK AND HIV/HCV STATUS AMONG PEOPLE ACCESSING A SYRINGE SERVICE PROGRAM; A LATENT CLASS ANALYSIS

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**Background:** Injection drug use (IDU) has become a significant public health problem. IDU has been related closely with the opioid epidemic; however, trends in IDU of other substances have been increasing over the same time period. Patterns of different substances injected among people who inject drugs (PWID) may be associated with increased risky behavior and HIV/HCV acquisition. This study aims to determine the injection drug use patterns among PWID accessing a syringe service program (SSP) for the first time.

**Methods:** A latent class analysis (LCA) was performed on 837 participants enrolling in a syringe service program (SSP) for the first time. Associations between classes on socio-demographic variables, high-risk injection practices, overdose, and HIV/HCV status were analyzed using the automated 3-step procedure in latent class regression in Mplus.

**Results:** A three-class solution was determined: *Heroin-primary injectors* (73.6%), *Methamphetamine-only injectors* (10.4%) and *Polysubstance injectors* (16.0%). Compared to *Heroin-primary injectors*, *Polysubstance injectors* were more likely to report lower income (OR=1.68, 95% CI: 1.02-2.75), homelessness (OR=2.58, 95% CI: 1.60-4.15), ever overdose (OR=2.32, 95% CI: 1.39-3.87), injecting more than seven times a day (OR=2.06, 95% CI: 1.22-3.47), sharing works (OR=2.92, 95% CI: 1.81-4.68), and injecting in a public setting (OR=5.49, 95% CI: 3.27-9.21). In addition, *Methamphetamine-only injectors* were more likely to be male (OR=15.77, 95% CI: 1.62-153.5), more educated (OR=3.33, 95% CI: 1.82-6.25), have higher income (OR=1.82, 95% CI: 1.06-3.13), report stable housing (OR=1.96, 95% CI: 1.05-3.57), report gay/bisexual orientation (OR=32.85, 95% CI: 16.58-65.12), and private (in home) injection (OR=3.97, 95% CI: 1.98-7.95) compared to the *Heroin-primary injectors*.

**Conclusion:** Results from this study show varying PWID populations that are accessing syringe services. SSPs are a pivotal touchpoint to these populations, and targeted preventive interventions among differing injection drug use populations may be needed to further reduce HIV and HCV risk-related behaviors.

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