NIDA Conference Abstract

Title: Polydrug use patterns and the provision of injection initiation assistance in Vancouver, Canada and Tijuana, Mexico: A latent profile analysis

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Background: People who inject drugs (PWID) are at higher risk of a range of harms, including overdose and infectious disease acquisition (e.g., HIV and hepatitis C virus). Injection initiation typically involves assistance from an established PWID. However little is known about the characteristics of PWID who provide initiation assistance, and no studies have sought to determine how complex patterns of polysubstance use may influence their likelihood of providing initiation assistance. This study therefore sought to identify latent profiles of drug use patterns among PWID, and then to determine whether profile membership was associated with providing injection initiation assistance to injection-naïve persons in Tijuana, Mexico and Vancouver, Canada, two settings disproportionately impacted by injection drug use.

Methods: Data were collected from two sites participating in PRIMER (NIDA DP2-DA040256), an international cohort consortium investigating factors influencing the process of injection initiation assistance. In the present study, recent (past 6 months) data from a Tijuana-based (ECIV) and linked Vancouver-based (VDUS/ARYS/ACCESS) cohorts were used. Latent profile analysis (LPA) was used to identify underlying drug use patterns based on frequency of both injection (IDU) and non-injection (NIDU) heroin, crystal methamphetamine, cocaine, and prescription opioid use in the past six months. Logistic regression analyses were then used to assess the association between profile membership and past six-month injection initiation assistance provision.

Results: A five-class model for VDUS/ARYS/ACCESS participants and a three-class model for ECIV participants were generated based on consonance with existing evidence and statistical indices of best fit. In Vancouver, the high-frequency heroin IDU/high-frequency crystal methamphetamine IDU/low-frequency illicit prescription opioid IDU/low-frequency crystal

methamphetamine NIDU class was associated with a greater likelihood of providing recent injection initiation assistance compared to the referent class (high-frequency heroin IDU/low-frequency IDU and NIDU of all other drugs) (Adjusted Odds Ratio [AOR] = 3.89, 95% Confidence Interval [CI]: 1.71 – 8.88, $p < 0.01$). In Tijuana, the high-frequency heroin IDU/high-frequency heroin and crystal methamphetamine combined IDU/moderate crystal methamphetamine IDU class was associated with a greater likelihood of providing recent injection initiation assistance compared to those reporting high-frequency heroin IDU alone (AOR = 2.45, CI: 1.01 – 5.96, $p < 0.05$).

Conclusion: We identified classes of PWID based on polysubstance use patterns in Vancouver and Tijuana. Complex drug use classes were associated with injection initiation assistance provision in both settings, suggesting that polysubstance use patterns that include high-frequency crystal methamphetamine IDU are associated with a greater likelihood of assisting with injection initiation.

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