DIFFERENTIAL RISK FOR HCV AND HIV AMONG PEOPLE WHO INJECT DRUGS IN KENYA: A LATENT CLASS ANALYSIS SIGNALING NEEDS FOR INNOVATION IN SERVICE DELIVERY

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Background:
Injection drug use practices and access to needle and syringe programs (NSPs) and opioid agonist therapy (OAT) differ among subgroups of people who inject drugs (PWID), but little is known about these subgroups in low- and middle-income countries (LMICs). Understanding these groups is critical to guide resource allocation and improve service delivery.

Methods:
We are recruiting PWID from NSPs in Kenya using respondent driven sampling. Participants completed bio-behavioral surveys and point-of-care HCV, HIV, and HBV testing. We used latent class analysis (LCA) to divide the sample into mutually-exclusive classes based on nine risk- and service access-related measures using MPlus software Version 8.0.

Results:
Among the 2686 participants enrolled, half are from the coast (N=1265, 47.1%), 35.7% from Nairobi (N=959), and 16.6% from western Kenya (N=445). Participants are mainly male (89.9%) and 34.4 (SD=± 8.6) years old on average. One-fifth (N=527, 19.6%) are HCV antibody-positive, one-tenth are HIV-positive (N=275, 10.2%), and 1.2% (N=33) are HBsAg-positive. We obtained three latent classes (LCs) (BIC = 22827, Lo-Mendell-Rubin Adjusted LRT Test (3 classes vs. 2 classes) = 403, $p < 0.001$): LC1 – new moderate frequency PWID with large networks and poor access to NSPs and OAT (N=383, 14.3%), LC2 – long-term high-frequency PWID with large networks, high access to NSP and low access to OAT (N=1649, 61.4%), and LC3 – long-term low-frequency PWID with small networks, high access to NSP and moderate access to OAT (N=654, 24.4%) (Figure 1). Compared to those in LC1, PWID in LC2 and LC3 were more likely to be HIV-positive ($p<0.001$) and HCV-positive ($p=0.001$).

Conclusion:
New PWID may not have had enough years injecting to be exposed to HCV and HIV; however, poor access to NSP and OAT, high-risk practices, and large networks suggest elevated risk. Targeted interventions to engage this group are essential to prevent ongoing HCV and HIV epidemics among PWID.

Disclosure of Interest Statement:
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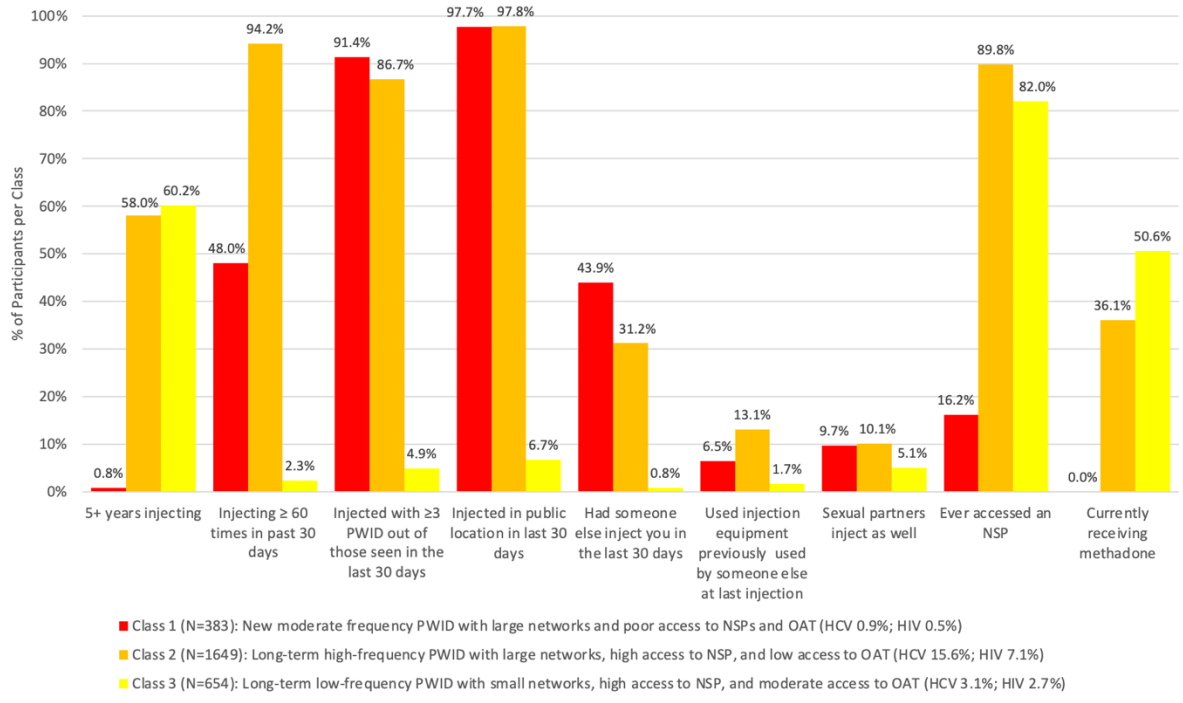
Figure 1. Latent Classes of Risk Behaviors and Harm Reduction Access Among PWID in Kenya



Class 1 (N=383): New moderate frequency PWID with large networks and poor access to NSPs and OAT (HCV 0.9%; HIV 0.5%)

Class 2 (N=1649): Long-term high-frequency PWID with large networks, high access to NSP, and low access to OAT (HCV 15.6%; HIV 7.1%)

Class 3 (N=654): Long-term low-frequency PWID with small networks, high access to NSP, and moderate access to OAT (HCV 3.1%; HIV 2.7%)