

# Correlates of Injection Sharing Behavior Over a 12-month Period Among Young People Who Inject Drugs (YPWID) in New York City

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Results

Introduction

- Sharing injection equipment poses a high risk for HIV and hepatitis C among people who inject drugs (PWID)
- Research on equipment sharing mostly focuses on adults
- Key factors for adult sharing behavior include peer influence, housing instability, and limited harm reduction access<sup>1,2</sup>
- Less is known about how these factors impact young people who inject drugs (YPWID)**
- Early non-medical opioid use is linked to higher equipment sharing rates, but studies focus mostly on adults.
- YPWID may transition faster to injection use and engage in risky behaviors due to less harm reduction access and injection safety experience<sup>3,4</sup>
- Frequent law enforcement interactions among YPWID are linked to increased syringe sharing<sup>5</sup>
- Law enforcement disruptions reduce access to clean injection equipment, raising risks<sup>6</sup>
- More research is needed to understand these dynamics in YPWID to tailor interventions.
- This study examines correlates of injection equipment sharing among YPWID in NYC, aiming to identify factors driving risky behaviors in this group**

Data

- 169 participants recruited for a clinical trial on the Staying Safe intervention, a program aimed to prevent hepatitis C virus (HCV) transmission among YPWID
- Eligibility criteria: 1)** Aged 18 to 29, **2)** Used opioids or heroin at least 12 times in the past 30 days (verified by urine drug screen), **3)** Recent injection drug use (at least once in the past 6 months), **4)** Tested negative for HCV and HIV antibodies at baseline

Methods

- Analysis focused on a subsample (n=61) who reported drug injection in the 3 months before each follow-up** (baseline, 3, 6, 9, and 12 months).
- 46 participants provided data at all five follow-ups, while 14 missed one.
- For those 14, a “carry-forward” method was used to impute missing data.
- Sensitivity analysis found no significant differences between those with complete and incomplete follow-ups.
- Data collected on equipment-sharing frequency for syringes, cookers, and cotton filters within the past 90 days. Responses capped at 90 for potential over-reporting.
- A derived variable, "ever-share," classified participants as "ever sharers" if they shared any equipment during the 12-month study; others were classified as "never sharers."

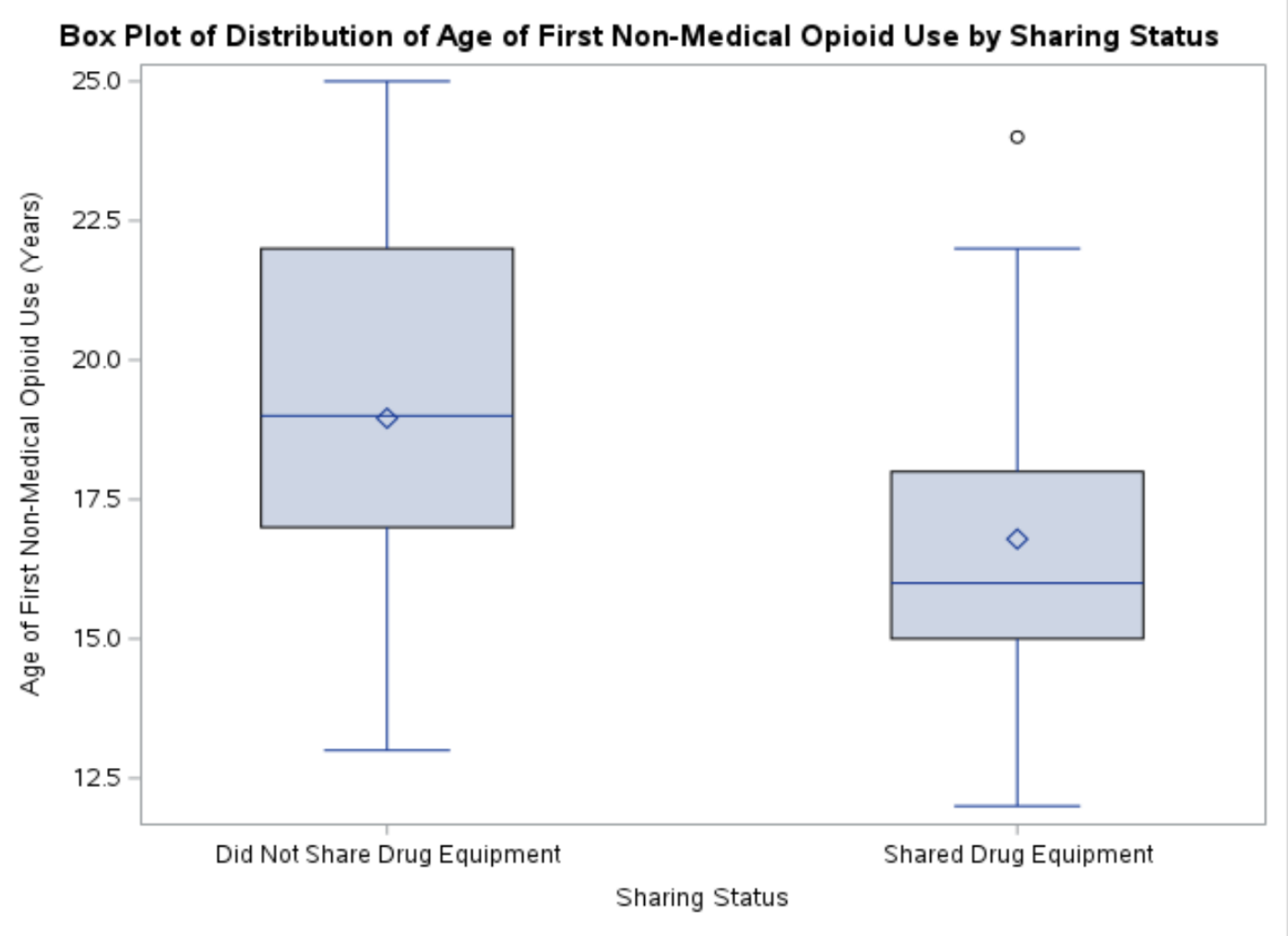
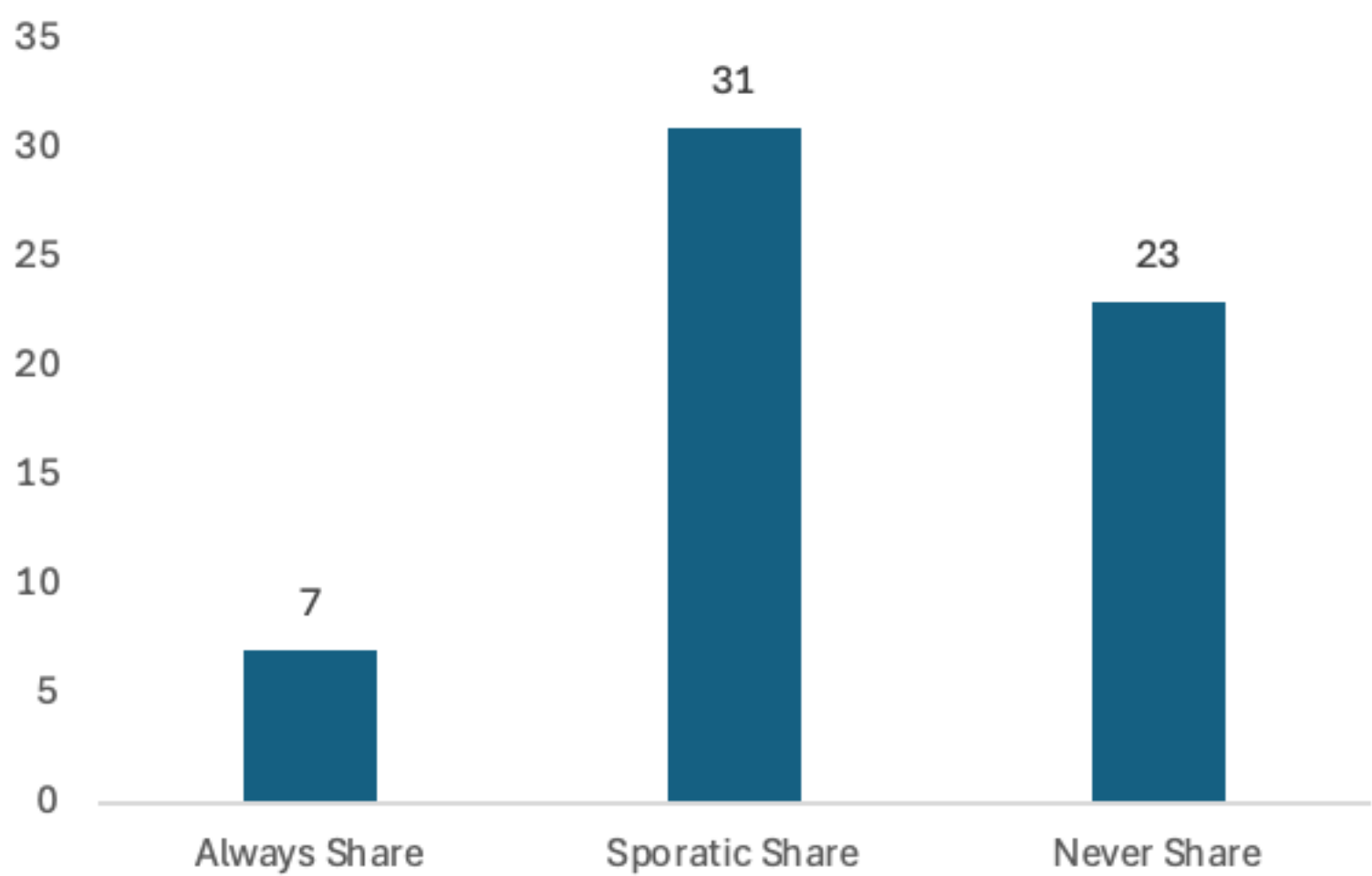
Results

Table 1: Sociodemographic and Health Behavior Characteristics of Participants by Injection Equipment Sharing Status, Including Measures Across the Study Period (N = 61)

	Total	Ever Shared Equipment	Never Shared Equipment	p-value
		38 (62.3%)	23 (37.7%)	0.0548
Sociodemographic				
Age (years); mean(SD)	25.4 (3.3)	24.7 (3.5)	26.3 (2.8)	0.0387*
Sex				
Male	41 (67.2%)	25 (61.0%)	16 (39.0%)	0.7608
Female + Other	20 (32.8%)	13 (65.0%)	7 (35.00%)	
Race (M = 1)				
White	41 (68.3%)	28 (68.3%)	13 (31.7%)	0.2416
Not White	19 (31.7%)	10 (52.3%)	9 (47.4%)	
Health Behavior Variables				
Age at first non-rx opioid use (years); mean(SD)	17.6 (2.9)	16.8 (2.5)	19 (3.1)	0.0074*
Age at first injection (years); mean(SD)	20.7 (3.1)	20.2 (3.0)	21.5 (3.3)	0.1333
Homeless During Study Period				
Yes	25 (41.0%)	17 (68.0%)	8 (32.0%)	0.4436
No	36 (59.0%)	21 (58.3%)	15 (41.7%)	
Arrests during study period				
Yes	21 (34.4%)	13 (61.9%)	8 (38.1%)	0.9636
No	40 (65.6%)	25 (62.5%)	15 (37.5%)	
Days injected over the last 30 days ; median across follow-up period (IQR)	25 (20.0)	25 (15.0)	15 (23.0)	0.2322
Times injected on days injected; median across follow-up period (IQR)	3 (2.0)	2 (1.0)	3 (2.0)	0.4022

\* Significant at p < 0.05; M = Missing; rx = prescription; SD = Standard Deviation; p-values determined by Chi-Square tests for categorical variables, t-tests for continuous variables, and Wilcoxon Rank-Sum tests for count data

Drug Equipment Sharing Behavior Over 1 Year Among Young PWID in NYC



Discussion

- Younger age and early initiation of non-medical opioid use are key factors** linked to sharing injection equipment among YPWID.
- Sharers were **significantly younger and started non-medical opioid use earlier** than non-sharers.
- Younger users may have less knowledge of harm reduction or limited access to sterile equipment, increasing risky practices.
- Traditional sociodemographic factors like gender, race, and homelessness were not significantly associated with sharing.**
- Only 7 "ever-sharers" consistently shared at every follow-up; the other 31 shared sporadically, indicating **fluctuating sharing behavior**.
- Homelessness and arrests were not associated with sharing in this study, but they may influence other risky behaviors.
- Injection frequency (days and times injected) showed slight differences between sharers and non-sharers**, but these were not statistically significant (p > 0.23)..
- Despite the lack of significant findings**, these novel data highlight important behaviors for future studies and interventions in this hard-to-reach group
- Interventions may benefit from focusing on individual risk factors (age, drug use history) rather than solely on sociodemographic characteristics.
- Future research should explore variability in sharing patterns among YPWID to identify intervention points .**