

HIV RISK BEHAVIORS AMONG RECENT AND MORE REMOTE INITIATORS OF DRUG INJECTION IN BAYAMON, PR AND NEW YORK CITY

RR Robles, TD Matos, HM Colón, S Deren, JC Reyes, CA Marrero

Center for Addiction Studies, Universidad Central del Caribe, Bayamón, PR & National Development and Research Institutes, New York, NY



Introduction

Injection drug users (IDUs) is the major group at risk for infection with the Human Immunodeficiency Virus (HIV) in Puerto Rico (CDC, 1998). In Puerto Rico, as in the US mainland, IDUs have changed some of their HIV risk behaviors (Schilling, 1993; Des Jarlais, 1999; Colón, 1992). These changes have been most pronounced for injection behaviors, although changes in sexual risk behaviors have also been reported (Schilling, 1993). However, several studies have shown that new recruits continue to enter the IDU population and that those who have recent-onset of injecting are more likely to engage in HIV risk behavior than more remote-onset injectors. The level of HIV infection among

shooting galleries, inject more frequently and share cooker-cotton and water than IDUs in New York and other large cities in the US mainland. Their study is in search of understanding the prevalence of HIV risk behaviors among recent-onset injectors (< 5 years of injecting) recruited in communities in the city of Bayamón, Puerto Rico and El Barrio in New York City.

Methods

This study is part of a larger research project: The Alliance for Research in El Barrio and Bayamón Project (the ARIBBA Project). ARIBBA is a collaborative project between the Center for Addiction Studies in Puerto Rico and the National Development

Table 1. Sample Profile

	Years Since Onset of Injection		p
	≤ 5 years (n = 126)	≥ 6 years (n = 510)	
Percent Female	26.2	17.6	0.03
Mean Age	30.5	38.7	< 0.01
Percent Without High School Diploma	60.3	58.4	0.70
Percent Married or Living as Married	26.2	23.3	0.50
Percent Homeless	28.6	31.6	0.52
Percent Employed	14.3	12.2	0.52
Percent Recruited in New York	56.3	73.5	< 0.01

recent-onset injectors is high and in HIV epicenters such as Puerto Rico and New York City, the prevalence is substantial. Friedman, et al., found that 20% of recent-onset injectors (≥ 5 years injecting) recruited in New York City were infected with HIV. Previous studies in Puerto Rico show a 21% of HIV prevalence among recent-onset injectors (≥ 5 years injecting) (Neaigus, 1996; Robles, 1992). Moreover, Puerto Rican drug injectors residing in Puerto Rico are more likely to inject in

Bayamón in Puerto Rico, which is part of the San Juan Metropolitan Area. Street drug users are recruited following a plan of random visits to coping areas (drug selling sites) and hangouts operating in the catchment areas. To be eligible, subjects must have injected drugs or smoked Crack during the last 30 days:

The interview protocol was designed in English by both teams of researchers. The questionnaire was translated into Spanish, and the fidelity of

the translation was verified through back translation. The questionnaire was pilot tested in both sites. The assessment interview lasts,

Table 2. Drug Use Patterns

	Years Since Onset of Injection		p
	≤ 5 years (n = 126)	≥ 6 years (n = 510)	
Mean Age at First Injection	27.7	18.8	< 0.01
Mean Age at Start of Regular Drug Use	21.7	18.7	< 0.01
Mean Injections Last 30 Days	137.3	105.9	0.02
Percent Currently in Methadone Treatment	25.4	45.3	< 0.01
Percent Injecting Cocaine	50.8	50.8	0.99
Percent Injecting Heroin	72.2	68.0	0.36
Percent Injecting Speedball	58.7	61.4	0.59

on average, 90 minutes. Interview questions ascertain age of first injections, frequency of injection over the previous 30-days, shared use of needles, cookers-cotton, rinse-water and, use of shooting galleries, current use of Methadone medication, as well as demographics.

The sample of the present study comprises all IDUs recruited between January and December of 1998, 636. IDUs were grouped according to number of years since onset of injection, 5 years or less (126) and 6 years or more (510).

Statistical analyses employed in this study included chi-square and t tests for bivariate analyses.

Results

Table 1 presents selected demographic characteristics for the two categories of recent-onset and remote-onset injectors. Of the sample, 19.8% was recent-onset injectors and 80.2% remote-onset injectors. Recent-onset

injectors were more likely to be female, and as would be expected, recent-onset injectors reported to be younger than remote-onset injectors. More remote-onset injectors were recruited in New York City.

Table 2 present data on drug use patterns and participation in Methadone maintenance programs among recent-onset and remote-onset injectors. Recent-onset injectors were more likely to begin using drug on a regular basis and injecting drugs at a later age than more remote-onset injectors were (21.7 vs. 18.7, and 27.7 vs. 18.8, respectively). Recent-onset injectors injected drug more frequently than remote-onset injectors (137.3 vs. 105.9) but

less likely to be in Methadone medication (25.4 vs. 45.3).

Table 3 presents data on HIV risk behaviors among the two study groups. None of the differences in injection risk behaviors were statistically significant. However, recent-onset injectors were somewhat more likely to use shooting galleries than remote-onset injectors, but as with all other HIV risk behaviors, the relationship was not significant.

We regressed each one of the HIV risk behaviors against years since onset of injection; only frequency of injection showed a linear trend of reduced injection frequency with years of onset of injection (see Figure 1).

Discussion

Recent-onset injectors comprised almost the total sample of IDUs in this study. Clearly, a substantial proportion of current IDUs began injecting drugs despite the knowledge of the threat of AIDS hit hard their drug injecting peers in both Puerto Rico and New York City. Recent-onset drug injectors are more likely to be women and younger than remote-onset injectors.

Similar findings have been reported in previous studies with a sample of IDUs recruited in New York City (Schilling, 1993; Des Jarlais, 1999). In Puerto Rico, as in New York, the quality of street heroin since the middle 1980s is sufficiently strong that drug effects can be obtained through intranasal use. Therefore, individuals who began their drug use in the 1980s might be able to prolong the time of first injection, and at the same time continue their drug use career. It might also be the case that because of the threat of AIDS, drug users have delayed injecting. The fact

and/or cocaine prior to initiation into drug injection clearly requires additional study.

It seems that the threat of AIDS and the purity of the drugs in the street are not enough to prevent initiation of drug injection. Therefore, special programs need to be developed to prevent initiation into this risky health behavior. However, more information to help understand the circumstances under which the extended period of non-injection is sustained is critically needed to be able to formulate and develop effective interventions to arrest the path of young drug users into drug injection.

References

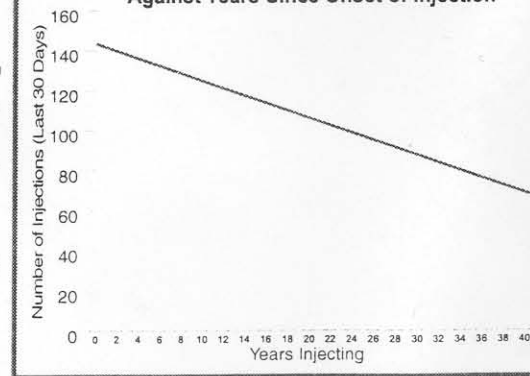
Centers for Disease Control and Prevention (1998). HIV/AIDS Surveillance Report; 10. Colón HM, Robles RR, Sahai H, Matos TD, Marrero C, Reyes JC (1992). Behavioral risk factors for human immunodeficiency virus prevalence among intravenous drug users in Puerto Rico. *American Journal of Epidemiology* 135: 531-540. Schilling RF, El-Bassel N, Gilbert L (1993). Predictors of change in sexual behavior among women on methadone. *American Journal of Drug and Alcohol Abuse*; 19:409-422.

Des Jarlais DC, Friedman SR, Perlis T, Chapman TF, Sotharan JL, Paone D, Monterroso E, Neaigus A (1999). Risk behavior and HIV infection among new drug injectors in the era of AIDS in New York City. *Journal of Acquired Immune Deficiency Syndromes and Human*

Retrovirology; 20:67-72.

Neaigus A, Friedman SR, Jose B, Goldstein MF, Curtis R, Ildefonso G, Des Jarlais DC (1996). High-risk personal networks and syringe sharing as risk factors for HIV infection among new drug injectors. *Journal of Acquired*

Frequency of Injection Regressed Against Years Since Onset of Injection



Immune Deficiency Syndromes and Human Retrovirology; 11: 499-509.

Robles RR, Colón HM, Sahai H, Matos TD, Marrero C, Reyes JC (1992). Behavioral risk factors for human immunodeficiency virus prevalence among intravenous drug users in Puerto Rico. *American Journal of Epidemiology* 135: 531-540.

Schilling RF, El-Bassel N, Gilbert L (1993). Predictors of change in sexual behavior among women on methadone. *American Journal of Drug and Alcohol Abuse*; 19:409-422.

that they are injecting so frequently suggests that by the time they become injectors, they already were heavy drug users. However, the extended period of use of non-injected heroin