



## From Long-Term Injecting to Long-Term Non-Injecting Heroin and Cocaine Use: The Persistence of Changed Drug Habits

Don C. Des Jarlais, Ph.D.<sup>a,\*</sup>, Kamyar Arasteh, Ph.D.<sup>a</sup>, Jonathan Feelemyer, M.S.<sup>a</sup>, Courtney McKnight, Dr.PH.<sup>a</sup>, David M. Barnes, Ph.D.<sup>a</sup>, Susan Tross, Ph.D.<sup>b</sup>, David C. Perlman, M.D.<sup>a</sup>, Aimee N.C. Campbell, Ph.D.<sup>b</sup>, Hannah L.F. Cooper, Ph.D.<sup>c</sup>, Holly Hagan, Ph.D.<sup>d</sup>

<sup>a</sup> Icahn School of Medicine at Mount Sinai, New York, NY, United States

<sup>b</sup> New York State Psychiatric Institute, Department of Psychiatry, Columbia University Medical Center, New York, NY, United States

<sup>c</sup> Department of Behavioral Sciences and Health Education, Rollins School of Public Health, Emory University, Atlanta, GA, United States

<sup>d</sup> College of Nursing, New York University, New York, NY, United States

### ARTICLE INFO

#### Article history:

Received 3 May 2016

Received in revised form 12 August 2016

Accepted 17 August 2016

#### Keywords:

Former-injectors

Relapse

Non-injection drugs use

HIV

Hepatitis C

### ABSTRACT

**Objectives:** Transitioning from injecting to non-injecting routes of drug administration can provide important individual and community health benefits. We assessed characteristics of persons who had ceased injecting while continuing to use heroin and/or cocaine in New York City.

**Methods:** We recruited subjects entering Mount Sinai Beth Israel detoxification and methadone maintenance programs between 2011 and 2015. Demographic information, drug use histories, sexual behaviors, and “reverse transitions” from injecting to non-injecting drug use were assessed in structured face-to-face interviews. There were 303 “former injectors,” operationally defined as persons who had injected at some time in their lives, but had not injected in at least the previous 6 months. Serum samples were collected for HIV and HCV testing.

**Results:** Former injectors were 81% male, 19% female, 17% White, 43% African-American, and 38% Latino/a, with a mean age of 50 (SD = 9.2), and were currently using heroin and/or cocaine. They had injected drugs for a mean of 14 (SD = 12.2) years before ceasing injection, and a mean of 13 (SD = 12) years had elapsed since their last injection. HIV prevalence among the sample was 13% and HCV prevalence was 66%. The former injectors reported a wide variety of reasons for ceasing injecting. Half of the group appeared to have reached a point where relapse back to injecting was no longer problematic: they had not injected for three or more years, were not deliberately using specific techniques to avoid relapse to injecting, and were not worried about relapsing to injecting.

**Conclusions:** Former injectors report very-long term behavior change toward reduced individual and societal harm while continuing to use heroin and cocaine. The behavior change appears to be self-sustaining, with full replacement of an injecting route of drug administration by a non-injecting route of administration. Additional research on the process of long-term cessation of injecting should be conducted within a “combined prevention and care” approach to HIV and HCV infection among persons who use drugs.

© 2016 Elsevier Inc. All rights reserved.

### 1. Introduction

The transition from using illicit drugs through non-injecting routes of administration to injecting greatly increases the risk of harmful consequences (Fuller et al., 2002). Injecting greatly increases the likelihood of infection with blood-borne viruses such as HIV and hepatitis C (HCV), the likelihood of other infections such as skin abscesses and endocarditis, the likelihood of developing a substance use disorder, and the likelihood of an overdose (Degenhardt & Hall, 2012; Garfein, Vlahov, Galai, Doherty, & Nelson, 1996; Kerr et al., 2007; Spijkerman, van Ameijden, Mientjes,

Coutinho, & van den Hoek, 1996). As injecting drug use is heavily stigmatized, injecting also increases the likelihood that the user will experience severe social discrimination (Ahern, Stuber, & Galea, 2007).

Compared to intranasal administration, injecting typically produces more intense drug effects and is a relatively cost-efficient method of drug administration. The transition from non-injecting to injecting drug use is often considered a permanent change in the preferred route of drug administration. While the person who injects may also use non-injectable drugs (nicotine, alcohol, marijuana), continued use of injectable drugs is likely to be primarily through injecting.

“Reverse transitions” from injecting to non-injecting drug use have been observed in a variety of locations, including New York City (Des Jarlais et al., 2007), New Haven (Schottenfeld, O'Malley, Abdul-Salaam, & O'Connor, 1993), Baltimore (Genberg et al., 2011), Amsterdam (Buster et al., 2009), Brazil (Inciardi et al., 2006), China (Li et al., 2011)

\* Corresponding author at: The Baron Edmond de Rothschild Chemical Dependency Institute, Icahn School of Medicine at Mount Sinai, 39 Broadway 5th Floor Suite 530, New York, NY 10006, United States. Tel.: +1 212 256 2548.

E-mail address: ddesjarlais@chpnet.org (D.C.D. Jarlais).

and Malaysia (Tejani, Chawarski, Mazlan, & Schottenfeld, 2011). These “former injectors” can maintain heroin/cocaine use for long periods of time – often decades – without relapsing back to injecting (Des Jarlais et al., 2007). They do as well in methadone treatment as persons who inject (Schwartz et al., 2015) and they are less likely to acquire HCV than persons who continue to inject (Des Jarlais et al., 2013).

There is still much that is not known about reverse transitions from injecting to non-injecting drug use, in particular, how some former injectors avoid relapse to injecting over long periods of time. Relapse is considered one of the defining characteristics of substance use disorders. One would expect that persons who have reverse transitioned from injecting to non-injecting drugs would have great difficulties in avoiding relapse back to a route of administration that produces an intense drug effect at a relatively low monetary cost. For example, in a Baltimore study of 936 persons who ceased injecting, three-quarters of them relapsed back to injecting, the median time before relapse was only 1 year, and both non-injecting use of heroin and of cocaine after ceasing injecting were significantly associated with shorter time to relapse (Shah, Galai, Celentano, Vlahov, & Strathdee, 2006).

In this report we examine various characteristics of a group of 303 former injectors, most of whom have maintained their non-injecting drug use over long periods of time. We specifically examine their reasons for stopping injecting, the length of time since their last injection, whether they are worried about relapsing to injecting, their use of specific mechanisms for avoiding relapse, and their attitudes toward the different highs produced by injecting versus non-injecting drug use. Finally, we consider implications of the findings for reducing drug injecting and for changing drug use behavior in general.

## 2. Materials and methods

The findings reported here are derived from data collected from patients/subjects entering the Mount Sinai Beth Israel drug detoxification and methadone maintenance programs in New York City. The methods for this “Risk Factors” study have been previously described in detail (Des Jarlais et al., 1989, 2009) so only a summary will be presented here. The Mount Sinai Beth Israel detoxification program serves New York City as a whole, with approximately half of the patients residing in Manhattan, one quarter in Brooklyn, one-fifth in the Bronx, and the remainder (about 5%) in other areas. Patients enter the program voluntarily.

Research staff visited the general admission wards of the program in a preset order and examined all intake records of a specific ward to construct lists of all patients admitted within the prior 3 days. All of the patients on the list for the specific ward were then asked to participate in the study. Among patients approached by our interviewers, willingness to participate was more than 95%. After all of the patients admitted to a specific ward in the 3-day period had been asked to participate and interviews had been conducted among those who agreed to participate, the interviewer moved to the next ward. As there was no relationship between assigning patients to wards and the order that the staff rotated through the wards, these procedures would yield an unbiased sample of persons entering the detoxification program.

A structured questionnaire covering demographic characteristics, HIV risk behavior, and drug use history was administered by a trained interviewer to each patient. Most drug use and HIV risk behavior questions referred to the 6 month period prior to the interview. Subjects were asked if they had ever injected illicit drugs, and if yes, their age at first injection and how long it had been since their last injection. “Former injectors” were operationally defined as subjects who 1) reported that they had injected drugs at some point in their lives, 2) reported that they had not injected within the last 6 months, and 3) reported that they had continued to use injectable drugs (heroin, cocaine or amphetamines) through non-injecting routes of administration (intranasal use and/or smoking and/or oral use). Former injectors were also asked about reasons for stopping injecting, whether they were using specific strategies to avoid relapse, and if yes, to describe those strategies.

Multiple responses were permitted for both reasons for ceasing injecting and strategies.

Subjects were also asked to compare the “highs” of cocaine and heroin when used through different routes of administration. They were asked “How do you compare the high of injecting heroin (and/or cocaine) to the high of snorting heroin (and/or cocaine)?”

After completing the interview, each participant was seen by an HIV counselor for pretest counseling for HIV and HCV, along with specimen collection. (It was not possible to collect serum samples from all participants due to problems with collapsed veins.) HIV testing was conducted at the New York City Department of Health laboratory by using a commercial, enzyme-linked, immunosorbent assays (EIA) test with Western blot confirmation (BioRad Genetic Systems HIV-1-2 + 0 EIA and HIV-1 Western Blot, BioRad Laboratories, Hercules, CA). Samples were tested for HCV antibody with the Ortho HCV enzyme immunoassay (EIA) 3.0 (Ortho-Clinical Diagnostics, Inc., Raritan, NJ). Samples with optical density values of >8.0 were considered positive, samples with values of 1.0 to 8.0 were confirmed positive with radio-immune blotting assay (RIBA) (Chiron RIBA HCV 3.0 Strip Immunoblot Assay, Novartis Vaccines & Diagnostics, Inc. Emeryville, CA) and samples with values <1.0 were considered negative.

Serial cross-sectional data have been collected for the project since 1990. We did permit individuals to participate in the study in different years. For the analyses reported here we used only the last interview from the 9 former injectors who participated more than once.

STATA 13 (StataCorp, College Station, TX), was used for analyses and for generating graphs. We utilized the Epanechnikov kernel density estimates for smoothing curves in the graphs.

The study was approved by the Mount Sinai Beth Israel Institutional Review Board.

## 3. Results

A total of 303 participants were included in the analysis; 63% from the detoxification program and 37% from the methadone maintenance program. Below we describe the participant sample along with the results of the qualitative analysis of injecting patterns, strategies to avoid relapse back to injecting, and how different routes of administration produce different highs.

### 3.1. Demographics and drug use behavior

Table 1 presents demographic characteristics, current drug use behaviors, HIV and hepatitis C (HCV) serostatus. The subjects were predominantly male and predominantly African-American and Latino/a.

**Table 1**  
Demographics, current drug use characteristics, and HIV and HCV seroprevalence.

	Mean	SD
Age	50	9.2
Years injected	12	12.2
	N	%
Total	303	100
Gender		
Female	56	18
Male	246	81
Race/ethnicity		
White	51	17
African American	131	43
Latino/a	115	38
Current (past 6 months) drug use		
Speedball (nasal)	34	11
Heroin (nasal)	214	71
Cocaine (nasal)	103	34
Crack cocaine	162	53
Previous drug treatment experience	303	100
Total with valid test results	258	
HIV+	34	13
HCV+	170	66

Download English Version:

<https://daneshyari.com/en/article/4932284>

Download Persian Version:

<https://daneshyari.com/article/4932284>

[Daneshyari.com](https://daneshyari.com)