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# Do law enforcement interactions reduce the initiation of injection drug use? An investigation in three North American settings



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## ABSTRACT

*Background:* The prevention of drug injecting is often cited as a justification for the deployment of law enforcement and for the continuation of drug criminalization policies. We sought to characterize the impact of law enforcement interactions on the risk that people who inject drugs (PWID) report assisting others with injection initiation in three North American countries.

*Methods:* Cross-sectional data from PWID participating in cohort studies in three cities (San Diego, USA; Tijuana, Mexico; Vancouver, Canada) were pooled (August 2014–December 2016). The dependent variable was defined as recently (i.e., past six months) providing injection initiation assistance; the primary independent variable was the frequency of recent law enforcement interactions, defined categorically (0 vs. 1 vs. 2–5 vs.  $\geq$ 6). We employed multivariable logistic regression analyses to assess this relationship while controlling for potential confounders.

*Results*: Among 2122 participants, 87 (4.1%) reported recently providing injection initiation assistance, and 802 (37.8%) reported recent law enforcement interactions. Reporting either one or more than five recent interactions with law enforcement was not significantly associated with injection initiation assistance. Reporting 2–5 law enforcement interactions was associated with initiation assistance (Adjusted Odds Ratio = 1.74, 95% Confidence Interval: 1.01–3.02).

*Conclusions:* Reporting interactions with law enforcement was not associated with a reduced likelihood that PWID reported initiating others into injection drug use. Instead, we identified a positive association between reporting law enforcement interactions and injection initiation assistance among PWID in multiple settings. These findings raise concerns regarding the effectiveness of drug law enforcement to deter injection drug use initiation.

#### 1. Introduction

Injection drug use is associated with a high risk of blood-borne infection such as HIV and hepatitis C virus and, consequently, people who inject drugs (PWID) account for nearly a third of all HIV cases outside of sub-Saharan Africa (UNODC, 2016). Dual epidemics of injection drug use and blood-borne disease have been observed globally, particularly across urban centers in North America (Friedman et al., 2006; Strathdee et al., 2012). Experts have characterized these linked epidemics as syndemics, or, the interaction of multiple coexistent conditions in a population that exacerbates disease morbidity and mortality (Singer and Clair, 2003). Data suggest that the risk of blood-borne disease transmission among PWID is highest during the period immediately after initiating this behavior and as such, this period is critical in driving the expansion of syndemics of injection drug use and blood-borne disease (Garfein et al., 1996; Vlahov et al., 2004). In response, experts have suggested that preventing injection initiation is likely to be more effective in reducing disease incidence than seeking to reduce a range of risks experienced by individuals after they initiate injection drug use (Bluthenthal and Kral, 2015; Vlahov et al., 2004; Werb et al., 2016a).

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Relatedly, previous research on the impact of law enforcement suggests that police interactions with PWID may increase behavioral risks for injection-driven disease transmission and thereby intensify syndemics (Cooper et al., 2005; Friedman et al., 2006; Small et al., 2006; Werb et al., 2016b; Werb et al., 2015; Werb et al., 2008). In North American settings, such as Vancouver and the San Francisco Bay area, studies have found that police surveillance discourages safer injection practices and access to needle exchange programs among PWID, while also increasing the risk that PWID perform rushed injections to avoid detection; the confiscation and destruction of injecting equipment by police also subsequently increased the risk that PWID reported sharing syringes (Bluthenthal et al., 1997; Small et al., 2006; Werb et al., 2008). PWID experiencing such intensified drug law enforcement were also less likely to carry sterile injecting equipment and more likely to experience syringe confiscations, even in settings like Canada, Mexico, and New York State where carrying sterile syringes is legal (Burris and Vernick, 2002; Cooper et al., 2005; Mackey et al., 2014; Werb et al., 2008). Further, law enforcement interactions in some settings have been shown to discourage PWID access to harm reduction services such as needle exchanges and methadone maintenance therapy. This is particularly the case in Tijuana, where data suggest that PWID experience a higher probability of police extortion within 500 m of addiction treatment centers (Small et al., 2006; Werb et al., 2016b; Werb et al., 2015). These findings are in line with a large body of evidence highlighting the impact of intensified policing on disease transmission risk among PWID (Cooper et al., 2005; Friedman et al., 2006; UN General Assembly, 1993; Small et al., 2006; Werb et al., 2016b; Werb et al., 2015; Werb et al., 2008).

Despite this literature, limited research exists on how interactions between PWID and law enforcement may influence the risk that PWID initiate others into injection drug use. Conducting such research is important given that the prevention of drug injecting has been cited as a justification for the deployment of law enforcement and for the continuation of drug criminalization policies (Caulkins, 2005; Caulkins and Reuter, 2010; Caulkins and Tragler, 2016; Kleiman, 1993). These claims are consistent with deterrence theory, which suggests that increasing intensity of police presence will have a deterrent effect on certain illicit behaviors (Nagin, 2013).

Indeed, injection drug use has been established as a socially communicable behavior; that is, a behavior transmitted socially between individuals, dependent on an enabling environment (Sherman et al., 2002; Small et al., 2009). As such, studies suggest that instances of injection initiation are most commonly facilitated by PWID (Harocopos et al., 2009; Small et al., 2009), although socio-structural approaches to preventing these transitions remain mostly unexplored (Werb et al., 2016a). Specifically, samples of PWID have a range of 73%–89% of participants reporting that initiation events were facilitated by other PWID (Jauffret-Roustide et al., 2009; Morris et al., 2012; Werb, 2013).

The application of drug law enforcement, however, has been hypothesized to reduce the risk that individuals are initiated into injection drug use, based on a presumed deterrent effect; furthermore, experts have suggested that its effectiveness may be heightened with increased intensity or level of police numbers via a phenomenon known as 'enforcement swamping' (Caulkins, 2005; Kleiman, 1993; Nagin, 2013). These experts have posited that increased enforcement is effective in preventing the dissemination of drug use initiation at the beginning of an injecting epidemic, and effective at containing injecting once these practices have spread widely across a drug-using population (Tragler et al., 2001). However, the potential of this approach in reducing problematic forms of substance use has not been widely investigated beyond mathematical modeling approaches (Caulkins, 2005; Kleiman, 1993). Specifically, deterrence theory does not consider how drug law enforcement that targets established PWID may influence the risk that PWID expose non-injectors to injecting practices. Indeed, it is possible that targeting established PWID with drug law enforcement may reduce their level of contact with injection-naïve drug users by reducing the visibility of open street drug scenes, or that this may inadvertently increase contact between these two populations through spatial dispersion of injection-using practices (Kolla et al., 2015; Nagin, 2013; Werb et al., 2008). Given the limited empirical evidence base on such approaches, clearly delineating the impact of varying levels of law enforcement interactions on the risk that PWID provide injection initiation assistance may therefore aid in optimizing preventive responses. Thus, using data from PWID in three North American settings, we sought to determine whether the frequency of interactions with law enforcement was associated with PWID providing injection initiation assistance to injection-naïve drug users.

#### 2. Methods

#### 2.1. Subjects and data collection

Preventing Injecting by Modifying Existing Responses (PRIMER) is a multi-site study that pooled data from prospective community-recruited cohort studies of PWID in an effort to investigate whether a range of socio-structural factors influencing disease transmission risk among PWID may also impact the risk that they provide injection initiation assistance to others. The methods used in the PRIMER study have been previously described in full (Werb et al., 2016a). For the present study, we included pooled quantitative data from three cohort studies of PWID participating in PRIMER: the Proyecto El Cuete IV (ECIV) cohort (Tijuana, Mexico), the Study of Tuberculosis, AIDS, and Hepatitis C Risk (STAHR II) cohort (San Diego, USA), as well as three linked cohorts of PWID in Vancouver: the Vancouver Injection Drug User Study (VIDUS; HIV-seronegative PWID), the AIDS Care Cohort to evaluate Exposure to Survival Services (ACCESS; HIV-seropositive people who use drugs), and the At-Risk Youth Study (ARYS; street-involved youth who use drugs). The PRIMER baseline was defined as the visit at which identical questions specific to providing injection initiation assistance were introduced into each cohort's surveys. This was undertaken in August 2014 and coincided with follow-up 7 in ECIV, follow-up 4 in STAHR II, and follow-up 18 for the linked Vancouver-based cohort studies (Werb et al., 2016a). The cross-sectional analysis described herein employs data from the PRIMER baseline.

All cohort studies participating in PRIMER employed open and prospective designs, with similar community recruitment protocols, involving extensive street-based outreach by frontline staff as well as peers in city neighborhoods where PWID are known to congregate. All participants provided consent prior to enrollment. Participant eligibility for the current study is restricted to individuals who reported recent injection drug use at baseline. All cohort survey questionnaires are highly comparable, with identical survey items on the initiation of others introduced at the PRIMER baseline (Werb et al., 2016a). Other survey items are highly comparable as a result of the fact that ECIV and STAHR II were specifically designed as a linked binational study (Robertson et al., 2014), and that these surveys were modeled in part on the original VIDUS survey.

#### 2.2. Analysis

Considering that injecting initiation appears to be a socially communicable phenomenon that is facilitated by the exposure of injecting practices by PWID to non-injectors (Werb et al., 2016a), the dependent variable was defined as reporting recently (i.e., past six months) assisting an individual to inject drugs who had never injected before. The primary independent variable of interest was defined as the frequency of recent (i.e., past six months) law enforcement interactions. Law enforcement interactions were defined as any type of encounters with authorities (e.g., police officers) including stops, detainments, arrests, and drug confiscations. We did not restrict to interactions related to drug or HIV prevention efforts. Based on available survey responses, this was defined categorically (0 encounters vs. 1 vs. 2–5 vs.  $\geq$ 6) to Download English Version:

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