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A peer-led mobile outreach program and increased utilization of detoxification and residential drug treatment among female sex workers who use drugs in a Canadian setting

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ABSTRACT

Background: The objectives of this study were to examine the determinants of using a peer-led mobile outreach program (the Mobile Access Project [MAP]) among a sample of street-based female sex workers (FSWs) who use drugs in an urban Canadian setting and evaluate the relationship between program exposure and utilizing addiction treatment services.
Methods: A detailed questionnaire was administered at baseline and bi-annual follow-up visits over 18 months (2006–2008) to 242 FSWs in Vancouver, Canada. We used bivariate and multivariate logistic regression with generalized estimating equations for both objectives, reporting unadjusted and adjusted odds ratios (AOR) with 95% confidence intervals (CIs).
Results: Over 18 months, 42.2% (202) reports of peer-led mobile outreach program use were made. High-risk women, including those servicing a higher weekly client volume (10+ compared to <10; AOR: 1.7, 95%CIs: 1.1–2.6) and those soliciting clients in deserted, isolated settings (AOR: 1.7, 95%CIs: 1.1–2.7) were more likely to use the program. In total, 9.4% (45) reports of using inpatient addiction treatment services were made (7.5% detoxification; 4.0% residential drug treatment), and 33.6% (161) using outpatient treatment (28.8% methadone; 9.6% alcohol/drug counsellor). Women who used the peer-led mobile outreach were more likely to use inpatient addiction treatment (AOR: 4.2, 95%CIs: 2.1–8.1), even after adjusting for drug use, environmental–structural factors, and outpatient drug treatment.
Discussion: Our findings demonstrate that FSWs at higher risk for sexually transmitted infections and violence are more likely to access this peer-led mobile outreach program and suggest that the program plays a critical role in facilitating utilization of detoxification and residential drug treatment.

1. Introduction

Outreach as a safer environment intervention strategy has been shown to be an effective strategy to prevent HIV and other sexually transmitted or blood-borne infections among drug-using populations, as well as an essential link between marginalized populations and health services (Coyle et al., 1998; Hurley, 1997; Liu et al., 2007; Needle et al., 2005; Vlahov and Junge, 1998; Wood and Kerr, 2006; Wood et al., 2007a). Outreach programs based on harm reduction principles have included the provision of educational material, referrals to health and social services, needle and drug equipment provision, methadone maintenance and distribution of condoms (Badrieva et al., 2007; Boyer et al., 2007; Gowing et al., 2006; Hurley, 1997; Latkin, 1998; Lind et al., 2005; Liu et al., 2007; Needle et al., 2005; Schwartz et al., 2009; Vlahov and Junge, 1998; Watters et al., 1990; Wood et al., 2007a); outreach programs may include fixed sites or mobile workers with different levels of community-based involvement (Needle et al., 2005).

Studies involving injection drug users (IDUs) and female sex workers (FSWs) who use drugs have highlighted the importance of outreach in facilitating access to and utilization of drug treatment services (Bowser et al., 2008; Boyer et al., 2007; Coyle et al., 1998; Latkin, 1998; Needle et al., 2005; Rhodes, 2002). For example, a

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12-city US study estimated that 750,000 to 1 million outreach contacts, to about 250,000 individual IDUs, occurred in the US from 1995 to 2000. Of the IDUs reached, 68% had been referred to addiction treatment, with 41% entering inpatient drug treatment (Needle et al., 2005). Other safer environment interventions, such as supervised injecting facilities in Vancouver, Canada and Sydney, Australia have also improved access to and utilization of detoxification and other addiction treatment among IDUs (Kimber et al., 2008; Wood et al., 2006b). These results highlight the critical importance of safer environment programs in reaching hidden and marginalized populations and in facilitating an "enabling environment" for drug users to engage in risk reduction practices.

In particular, peer-based outreach models have been demonstrated to be an important component of effectively reducing risky drug use behaviours of drug users, as well as connecting drug-using populations to treatment services, including HIV and addiction treatment (Broadhead et al., 2002; Coyle et al., 1998; Deering et al., 2009; Hughes, 1977; Needle et al., 2005; White, 2004). However, little is known about the effectiveness of exposure to peer outreach programs in facilitating utilization of addiction treatment among drug users, and much less is known about this relationship within FSWs who use drugs. While many peer-based outreach models have been developed for IDUs (Broadhead et al., 2002; Broadhead et al., 1998; Latkin, 1998), fewer have been specifically targeted toward FSWs who use drugs, and those that exist are frequently informally operated and small in scale.

Nevertheless, peer-based outreach services by community organizations and sex work cooperatives often serve as the first and sometimes only point of contact between FSWs who use drugs and health and support services, and may thus play a critical role in facilitating access and utilization of addiction treatment for these women. In many settings with semi-criminalized prostitution policy frameworks, the overlap between large un-regulated street-based sex work and drug markets has been shown to drastically confound the risk environment of FSWs (Cusick, 2006; Rekart, 2005) through elevated rates of violence, exploitation, poverty, homelessness, substance use, mental illness, HIV/STI infections, and pre-mature mortality (Cusick, 2006; Lowman, 2000; Miller and Neaigus, 2002; Potterat et al., 2004; Strathdee et al., 2008; Surratt et al., 2004). In Canada, research has also demonstrated direct links between enforcement of punitive sanctions against soliciting in public spaces or collectively working indoors in safer sex work settings, and elevated risk for physical and sexual violence and HIV infection (Shannon et al., 2009a; Shannon et al., 2009b; Shannon et al., 2008b). This research demonstrates how displacement of sex workers to isolated and industrial spaces limits street-based FSWs' access to health and support services and highlights the importance of safer environmental strategies that modify FSWs' working environment to address these inequities. To address the lack of data on outreach programs targeting FSWs, we used prospective cohort data available over an 18-month period (2006 to 2008) to examine the determinants of using a peer-led mobile outreach program among a sample of street-based FSWs who use drugs in Vancouver, Canada and to evaluate the relationship between use of the mobile outreach program and utilization of addiction treatment.

2. Methods

2.1. The Mobile Access Project (MAP) van

In 2003, a coalition of local, provincial and federal governments developed a peer-based mobile outreach program (the Mobile Access Project, or "the MAP van") in partnership with the Women's Information and Safe Haven (WISH) Drop-In Centre Society, a sex worker service agency and the Prostitution Alternative Counselling and Education (PACE) Society. The outreach program was developed in response to growing concerns surrounding high rates of violence, health-related harms and murder among street-based FSWs working in informal tolerance zones in Vancouver (e.g. geographic spaces in which sex work is tolerated by law enforcement but many aspects of sex work are criminalized, including communication for the purposes of prostitution and operating a brothel) (Lowman, 2000; Shannon et al., 2008a). Informal tolerance zones are frequently characterized by spatial isolation and their distance from commercial or residential areas (Hindle et al., 2003; Hubbard et al., 2008; Hubbard and Sanders, 2003).

Briefly, the MAP van began operations in March, 2004 and functions as a nightly (10:30 p.m.–5:30 a.m.) outreach service through WISH and PACE is staffed by a driver, a support worker, and a peer support worker. The peer-based mobile service provides a consistency of service provision to street-based FSWs where they work. The van is a safe space for women to rest, have food, water and coffee during their shifts, and outreach staff collects and distributes reports of recent client violence ("Red Light Alerts", or "bad date" reports), while also responding to specific calls from women. Staff also distribute prevention resources (e.g., condoms, lube, syringes and other drug use paraphernalia such as mouthpieces, alcohol swabs, etc.) and are primary points of contact for support, peer interaction and referral to health, social support and drug treatment services. In 2006, an average of 1496 women accessed the MAP van per month, and 1432 condom packs and 3241 clean needles were distributed per month (Janssen et al., 2009).

2.2. Study design and sample

This analysis is based on data from the Maka Project, a community-based HIV prevention research partnership between the WISH Drop-In Centre Society and the British Columbia Centre for Excellence in HIV/AIDS in Vancouver, Canada. A detailed description of the methodology has been published elsewhere (Shannon et al., 2007). Briefly, between April 2006 and May 2008, 242 women were recruited and consented to participate in a prospective cohort study (response rate of 93%), including baseline and bi-annual interview questionnaires and voluntary HIV screening, through time-spacing sampling, social mapping and targeted outreach to sex work strolls. The majority of these women lived or worked in Vancouver's downtown eastside core, referred to here as the inner city epicentre; this area is notorious for a highly concentrated area of individuals with low-cost housing, poverty, health inequities, substance use and mental illness problems, as well as extensive prevention and harm reduction programming. Women were provided with a stipend of $20 to answer each interview, consistent with other studies in this population. Time-space sampling was used to systematically sample women (inclusive of transgender women) at staggered times and locations based on street-based solicitation spaces identified through mapping (Stueve et al., 2001). Eligibility criteria included being a woman aged 14 years or older who smoked (not including marijuana) or injected illicit drugs in the last month and who was actively engaged in street-level sex work in Vancouver. The study was approved through the Providence Health Care Research Ethics Board and the University of British Columbia Behavioural Research Ethics Board.

2.3. Survey instrument

At baseline and bi-annual follow-up visits, a detailed semi-structured questionnaire administered by peer researchers (current/former sex workers) elicited responses related to demographics, health and addiction service use, working conditions, violence and safety, and sexual and drug-related harms. Detailed health and HIV-related questions, as well as emotional, sexual, and physical abuse experiences, were asked by the project nurse as part of a pre-test counselling questionnaire in order to facilitate counselling and referral to support services. Most variables were time-updated (i.e. asked at baseline and bi-annual follow-ups, with values that could change at different visits), but some were constant over the duration of follow-up and asked only at baseline (e.g. ethnicity).

2.4. Measures

2.4.1. Outcomes. For the first objective, our outcome of interest was a time-updated dichotomous variable describing use of the mobile outreach program in the previous 6-months period. For the second objective, our four drug treatment outcomes of interest included time-updated variables measuring utilization of drug treatment: (1) methadone maintenance therapy; (2) addiction counseling; (3) inpatient detoxification; and (4) residential drug treatment/recovery houses. Both outcomes were based on self-reported responses to the survey item: "Over the last 6 months, have you used any of the following health/support services?", and outcomes were constructed using positive responses to the services listed above. Given high collinearity between variables, and small number of inpatient drug treatment events, we combined use of either or both of methadone maintenance therapy and addiction counseling into a variable of 'outpatient drug treatment' and use of either or both of detoxification services and drug treatment/recovery houses into a variable of 'inpatient drug treatment' for the purposes of our bivariate and multivariate analyses.

2.4.2. Explanatory variables. For all analysis, we considered a variety of factors as potential confounders. Socio-demographic factors included age, ethnicity (coded as 'Caucasian' and 'ethnic minority', the latter including Aboriginal persons self-identified having First Nations, Métis, or Inuit ancestry, or non-status First Nations, as well as Hispanic, Asian or Black). Ethnicity was coded as such because individuals who do not belong to an ethnic minority have previously been found to