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## OFFER OF FINANCIAL INCENTIVES FOR UNPROTECTED SEX IN THE CONTEXT OF SEX WORK

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### Abstract

**Introduction and Aims**—Commercial sex workers (CSW) are often portrayed as vectors of disease transmission. However, the role clients play in sexual risk taking and related decision making has not been thoroughly characterised.

**Design and Methods**—Participants were drawn from the Vancouver Injection Drug Users Study, a longitudinal cohort. Analyses were restricted to those who reported selling sex between June 2001 and December 2005. Using multivariate generalised estimating equation, we evaluated the prevalence of and factors associated with being offered money for sex without a condom.

**Results**—A total of 232 CSW were included in the analyses, with 73.7% reporting being offered more money for condom non-use, and 30.6% of these CSW accepting. Variables independently associated with being offered money for sex without a condom included daily speedball use [adjusted odds ratio (AOR) = 1.21, 95% confidence interval (CI): 0.23–0.62], daily crack smoking (AOR = 1.51, 95% CI: 1.04–2.19), daily heroin injection (AOR = 1.76, 95% CI: 1.27–2.43) and drug use with clients (AOR = 3.22, 95% CI: 2.37–4.37). Human immunodeficiency virus seropositivity was not significant (AOR = 0.98, 95% CI: 0.67–1.44).

**Discussion and Conclusions**—Findings highlight the role clients play in contributing to unprotected sex through economic influence and exploitation of CSW drug use. HIV serostatus has no bearing on whether more money is offered for sex without a condom. Novel interventions should target both CSW and clients. [Johnston CL, Callon C, Li K, Wood E, Kerr T. Offer of financial incentives for unprotected sex in the context of sex work. *Drug Alcohol Rev* 2009]

### Keywords

sex work; injection drug use; condom use; HIV risk

## INTRODUCTION

Commercial sex work is generally regarded as being associated with heightened risk for sexual transmission of the human immunodeficiency virus (HIV) and other sexually transmitted infections (STI). While commercial sex workers (CSW) are often depicted as being risky in terms of the spreading of HIV and/or STI, research from North America and Europe shows that, under certain social and economic conditions, CSW often practise safer sex during commercial encounters [1,2].

Despite evidence to the contrary, public perception of sex work continues to view CSW as a major source of disease transmission [3,4]. As such, there has been an increase in the number of CSW being targeted and ‘morally charged’[5] by the media and enforcement community as vectors of disease transmission to the general population. For example, in Canada, Crime Stoppers recently issued an alert requesting information regarding a CSW who was known to be HIV positive and who had unprotected sex with men in the Vancouver area [6]. This alert was subsequently picked up by various news agencies who published the particular CSW’s photograph. Given that commercial sex transactions involve at least two persons, it is important to consider the potential role that CSW clients play in determining sexual risk-taking behaviour and decision making [7]. Because of the complex nature of such sexual relationships, it is critical to examine the social and contextual factors that may influence commercial sex transactions and the associated risk behaviour. Canadian data examining encounters between CSW and their clients are limited. However, recent findings from a prospective cohort study of CSW in the Downtown Eastside (DTES) of Vancouver highlighted high levels of inconsistent condom use by CSW, and high rates of violence against CSW [8,9].

To date, most sex work-focused HIV prevention strategies work to empower CSW to take a more dominant role in sexual decision making, especially in the negotiation of condom use. Consistent condom use is considered to be one of the most efficacious and cost-effective strategies available to prevent HIV and STI transmission [10–12]. That said, it is important to consider the complexity of sex roles and sexual relationships within commercial sex transactions. It is imperative that programs aimed at increasing the acceptability and use of condoms target the sex buying population [12]. The limited focus on clients in discussions of HIV and STI transmission with regard to sex renders the client behaviour as normative and invisible, thus perpetuating the responsibility for safe sexual behaviour on CSW [13].

In order to gain a greater understanding of sexual decision making related to condom use in the context of commercial sex, we undertook the present analysis involving CSW in Vancouver, Canada to examine offerings of financial incentives by clients in exchange for unprotected sex. We also sought to evaluate the characteristics of CSW that were associated with having been offered more money to have sex without a condom, and to identify the proportion of CSW who accepted money for sex without a condom.

## METHODS

The Vancouver Injection Drug User Study (VIDUS) is a prospective study of injection drug using individuals who have been recruited through self-referral and street outreach from Vancouver's DTES since May 1996. The cohort has been described in detail previously [12,14–16,9,17,18]. Briefly, persons were eligible if they had injected illicit drugs at least once in the previous month, and resided in the greater Vancouver region. At baseline and semi-annually, subjects provide blood samples for HIV and Hepatitis C (HCV) serology and complete an interviewer-administered questionnaire. The questionnaire elicits demographic data as well as information about drug use, HIV risk behavior, including sexual practice and risks related to sex work. All participants provide informed consent, and are given a stipend (\$20 CDN) at each study visit. The study has been approved by the University of British Columbia's Research Ethics Board.

The present analyses included all participants who reported having sold sex between June 2001 and December 2005. Selling sex was defined as an exchange of sex for money, drugs, housing or other goods for services. Because of the nature of the instrument, variables related to incentives for non-condom use were limited to the examination of monetary exchange only. Using a multivariate generalised estimating equations (GEE) analyses, we evaluated the prevalence of and factors associated with being offered money for sex without a condom. We also identified the proportion of CSW who accepted money for sex without a condom. In total, 232 individuals (197 women and 35 men) in the VIDUS cohort were identified as eligible for this analysis.

The primary endpoint in this analysis was self-reported being offered more money not to use a condom. Explanatory variables of interest in this analysis included socio-demographic information: sex, Aboriginal ethnicity (yes/no) and unstable housing. As in previous analyses[14,15,19,20], unstable housing was defined as living in hotels, hostels, recovery houses or being homeless. Drug use variables considered refer to behaviours in the past 6 months and included: daily heroin and cocaine injection, daily crack cocaine smoking, daily speedball use, binge drug use, non-fatal overdose, borrowing and lending used syringes. Other risk characteristics considered included: experiencing a bad date in the last 6 months, incarceration in the past 6 months, drug dealing, alcohol use, drug use with clients and HIV serostatus.

As a first step, we examined rates of being offered money for sex without a condom during follow up. Since analyses of factors potentially associated with being offered money for sex without condom use during follow up included serial measures for each participant, we used GEE for binary outcomes with logit link for the analysis of correlated data to determine which factors were independently associated with having been offered money for sex without a condom [21]. These methods provided standard errors adjusted by multiple observations per person using an exchangeable correlation structure. Therefore, data from every participant follow-up visit were considered in this analysis. For instance, an individual participant may have been offered money for sex without a condom during one follow-up period, but not the next, or vice versa. This approach serves to examine behaviors and characteristics that correlated with times when offers of money for sex without a condom

were and were not received within individuals and between individuals. This approach is commonly used for studies in which a repeated measure binary dependent variable is used in longitudinal studies, and has been used successfully in previous cohort studies of IDU[22,23].

Variables potentially associated with being offered money for sex without a condom were examined in bivariate GEE analyses. In order to adjust for potential confounding, we also fit a multivariate logistic GEE model using an a priori defined model building protocol of adjusting for all variables that were statistically significant at the  $P < 0.10$  level in bivariate analyses. We also identified the proportion of participants who accepted more money for sex without a condom. This GEE modeling was done by using GENMOD procedure in SAS [24,25]. All statistical analyses were performed using SAS software version 8.0 (SAS, Cary, NC, USA). All P values are two-sided.

## RESULTS

In total, 232 VIDUS participants reported selling sex between December 1, 2001 and December 31, 2005 and were therefore eligible for inclusion in this analysis. The final sample included 197 (84.9%) women, 35 men (15.1%) and 89 (38.4%) individuals of Aboriginal ancestry. The median age at baseline was 27 [interquartile range (IQR): 22–34] years. Overall, these participants contributed to 796 observations during the follow-up period and the median number of follow-up visits was 3 (IQR: 1–5). CSW being offered more money to engage in unprotected sex was reported for 481 (60.4%) of all observations, and by 171 (73.7%) of individuals. Of these 71 (30.6%) reported agreeing to have sex without a condom in exchange for more money.

The bivariate GEE analysis shown in Table 1 displays the socio-demographic and drug use factors that were significantly associated with being offered more money to have sex without a condom. Factors positively associated with being offered more money to have sex without a condom included: daily speedball use [odds ratio (OR) = 1.66; 95% confidence interval (CI): 1.11–2.49], daily heroin injection (OR = 2.22; 95% CI: 1.64–3.00), daily crack cocaine smoking (OR = 2.16; 95% CI: 1.55–3.04) and using drugs with a client (OR = 3.37; 95% CI: 2.52–4.73).

In the multivariate GEE analysis shown in Table 1, factors that were positively and independently associated with being offered more money to have sex without a condom included: female sex [adjusted odds ratio (AOR) = 2.26, 95% CI: 1.14–4.48]; daily speedball use (AOR = 1.21, 95% CI: 0.79–1.85), daily crack cocaine smoking (AOR = 1.51, 95% CI: 1.04–2.19), daily heroin injection (AOR = 1.76, 95% CI: 1.27–2.43), experiencing a bad date (AOR = 2.67, 95% CI: 1.49–4.76) and using drugs with a client (AOR = 3.22, 95% CI: 2.37–4.37). There was no significant relationship between being offered more money to have sex without a condom and HIV seropositivity (OR = 0.98, 95% CI: 0.67–1.44).

## DISCUSSION

In the present study, 171 (73.7%) individuals engaging in sex work reported being offered more money to have unprotected sex during a 48 month period. Female sex, daily speedball use, daily heroin injection, crack cocaine smoking, having experienced a bad date and using drugs with clients were independently and positively associated with being offered more money to have sex without a condom. Among those offered more money for sex, 71 (30.6%) accepted. Notably, HIV seropositivity was not associated with being offered more money to have sex without a condom. Given the number of individuals of Aboriginal ancestry in the study and extant literature pointing to the general marginalisation of Aboriginal people in British Columbia, the DTES and the sex industry, it was surprising to discover that there was no significant relationship between being offered more money to have sex without a condom and Aboriginal ethnicity [26,27].

Our finding that nearly 75% of CSW reported being offered more money to have unprotected sex suggests that client behaviour contributes significantly to the risk behaviour of CSW. Our results suggesting that vulnerable CSW are more likely to be offered money for unprotected sex is consistent with previous work documenting how clients can exploit economic vulnerability of CSW by influencing sexual decision making through financial incentives [8,9].

Female CSW were more than twice as likely to be offered more money to have sex without a condom compared with male CSW, pointing to greater HIV/STI vulnerability for female CSW. It is not uncommon for women to initiate into prostitution by exchanging sex for money and/or drugs as a means of supporting drug use [28,29]. Indeed, the findings from this study suggest that indicators of higher intensity addiction were common among the female CSW in this study, and frequent drug use was associated with increased vulnerability and risk taking.

British researchers charge that offering drugs has replaced physical coercion as the predominant form of manipulation and control over sex work [17]. Findings from another prospective cohort study of CSW in our setting additionally suggest that 'dope sickness' and the need to suppress withdrawal impairs CSW ability to make decisions around commercial sex transactions and HIV prevention measures [9]. In the current study, this is indicated by the high prevalence of daily heroin injection among CSW who are offered more money not to use a condom for commercial sex. Discourse focused on risk-taking behaviour in various sex work environments suggest that clients looking for unprotected sex go to the street market to find individuals who are desperate for drugs and thus willing to negotiate higher prices in exchange for non-condom use [17]. In the present analysis, this is demonstrated by high rates of daily crack use and daily speedball use associated with CSW who are offered more money to perform sex without a condom. The high prevalence of drug use with clients also speaks to the fact that clients may not only be aware of CSW drug use, but that they also exploit the associated vulnerability to manipulate sexual transactions.

The high proportion of CSW who accepted more money for sex without a condom is concerning and consistent with previous studies. For example, a study of clients conducted

in Vancouver between 1995 and 1998 demonstrated that while it appears that condom use during commercial sexual contacts is common among clients, especially when intercourse is involved, it is not consistent [30,31]. In 10% of cases, married male clients did not use a condom when they engaged in sexual intercourse commercially, and over 20% of the men did not use a condom when receiving oral sex [30,31]. These results echo those found in prior studies on condom use in the commercial sex trade, suggesting that clients influence condom use as a result of the economic power they hold in the relationship [32–35]. Current prevention strategies focusing on the empowerment of CSW by suggesting CSW take a dominant role in sexual decision making, especially in the negotiation of condom use, do not fully address the complex nature of commercial sex transactions. Given the power dynamic evident in this study, it is clear that clients need to not only be included in prevention strategies, but should be encouraged to take greater responsibility for their role in the prevention of HIV and STI transmission.

Despite power differentials within commercial sex relationships, the media and enforcement community, as exemplified in recent local Crime Stoppers alerts, continue to put sole responsibility for HIV transmission on the CSW [6]. There is an assumption that CSW, because of the nature of their work, are a primary source of HIV infection. Although it is commonly known that there is a higher prevalence of HIV among CSW who use injection drugs [20,36], results from this analysis show that HIV seropositivity was not associated with being asked to exchange sex for more money. This further indicates that CSW should not bear sole responsibility for HIV transmission within commercial sex transactions. Future research should seek to gain a better understanding of the decision making and risk reduction practices of CSW and their clients. Additional consideration should be given to contributing factors related to the nature of CSW work and their environment, especially in the context of drug use. It is also necessary to explore how CSW choose the venue they work in, how they choose their clients, and to examine the related transactions that ensue. Prevention strategies and additional research will serve to better inform the public, the media, and law enforcement around the complex nature of street level commercial sex transactions and the associated health risks.

There are limitations to this study. Perhaps most importantly are issues related to self-report and recall bias. Socially desirable responding is always a possibility in studies that rely on self-report, and reporting stigmatised behaviours, such as not using a condom, may have been underestimated because of this tendency [37]. With respect to this issue, study interviewers are trained to ensure confidentiality in an effort to minimise socially desirable responding. It is also noteworthy that our study was restricted to injection drug using CSW and may not be generalisable to other populations. Finally, we did not specifically study CSW clients. Further, this analysis was limited to an investigation of offers of money for unprotected sex. Future research should also consider offers of drugs, as well as other materials and services.

In summary, the present study indicates that a high proportion of CSW are offered financial incentives by clients for sex without condom use and that this is associated with female sex, daily speedball use, daily heroin injection, daily crack cocaine smoking, having experienced a bad date and using drugs with clients. Commercial sex work at the street level is naturally

a high-risk environment, where there is limited opportunity to negotiate sexual transactions. As a result, interventions should to be designed and informed in collaboration with the affected community and inclusive of CSW and clients. Such interventions informed in conjunction with community will allow for more context-specific programs that will put the onus of responsibility for HIV risk behaviour on all parties. It is imperative that programs aimed at increasing the acceptability and use of condoms for the purposes of reducing HIV and STI risk should be targeted equally towards the sex buying and sex selling population. Given the results of this study highlighting the high-risk environment in which commercial sex transactions take place, interventions should also focus on HIV risk factors beyond condom use. Harm reduction related to drug use and treatment options for CSW should address the economic and social exploitation of street-involved substance using CSW. Interventions should be mindful of the environment in which CSW work, and should address issues that include drug use with clients, violence, and access to health and social services.

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**Table 1**

Bivariate and multivariate GEE of factors associated with being offered more money for sex without a condom (n = 232)

Characteristic	Unadjusted odds ratio (95% CI)	<i>P</i> value	Adjusted odds ratio (95% CI)	<i>P</i> value
Older age (per year older)	0.97 (0.95–0.99)	0.009	0.99 (0.96–1.01)	0.229
Sex (male vs. female)	2.33 (1.27–4.29)	0.006	2.26 (1.14–4.48)	0.019
Aboriginal ethnicity (yes vs. no)	0.84 (0.57–1.24)	0.389		
HIV positivity (yes vs. no)	0.98 (0.67–1.44)	0.924		
Homelessness (yes vs. no)	1.09 (0.75–1.59)	0.63		
Unstable Housing (yes vs. no)	0.95 (0.68–1.33)	0.79		
Incarceration <sup>a</sup> (yes vs. no)	1.59 (1.04–2.43)	0.031	1.19 (0.74–1.92)	0.469
Binge drug use <sup>a</sup> (yes vs. no)	1.42 (0.99–2.03)	0.055		
Dealing <sup>a</sup> (yes vs. no)	1.28 (0.90–1.83)	0.163		
Borrowed syringes <sup>a</sup> (yes vs. no)	1.13 (0.73–1.76)	0.581		
Lent syringes <sup>a</sup> (yes vs. no)	1.08 (0.67–1.77)	0.74		
Daily speedball use <sup>a</sup> (yes vs. no)	1.66 (1.11–2.49)	0.013	1.21 (0.79–1.85)	0.379
Daily heroin injection <sup>a</sup> (yes vs. no)	2.22 (1.64–3.00)	<0.001	1.76 (1.27–2.43)	<0.001
Daily cocaine injection <sup>a</sup> (yes vs. no)	1.30 (0.93–1.83)	0.123		
Crack cocaine smoking <sup>a</sup> (yes vs. no)	2.16 (1.55–3.04)	<0.001	1.51 (1.04–2.19)	0.031
Non-fatal overdose <sup>a</sup> (yes vs. no)	1.36 (0.91–2.06)	0.133		
Alcohol use <sup>a</sup> (yes vs. no)	0.63 (0.30–1.29)	0.208		
Bad date <sup>a</sup> (yes vs. no)	2.82 (1.68–4.73)	<0.001	2.67 (1.49–4.76)	<0.001
Drug use with client <sup>b</sup> (yes vs. no)	3.37 (2.52–4.73)	<0.001	3.22 (2.37–4.37)	<0.001

<sup>a</sup>Denotes activities/events in the previous 6 months;

<sup>b</sup>DTEs, downtown eastside. CI, confidence interval; GEE, generalised estimating equation.