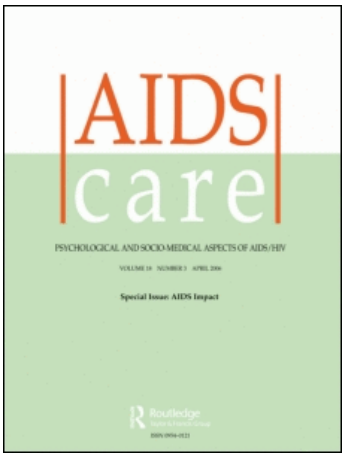

AIDS Care
Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=t713403300

An integrated supervised injecting program within a care facility for HIV-positive individuals: a qualitative evaluation

Andrea Krüsi [ab]; Will Small [a]; Evan Wood [ac]; Thomas Kerr [ac]
[a] British Columbia Centre for Excellence in HIV/AIDS, St. Paul's Hospital, Vancouver, BC, Canada [b] Faculty of Health Sciences, Simon Fraser University, Vancouver, BC, Canada [c] Department of Medicine, Faculty of Medicine, University of British Columbia, Vancouver, BC, Canada

Online Publication Date: 01 May 2009

To cite this Article Krüsi, Andrea, Small, Will, Wood, Evan and Kerr, Thomas(2009)'An integrated supervised injecting program within a care facility for HIV-positive individuals: a qualitative evaluation',AIDS Care,21:5,638 — 644
To link to this Article: DOI: 10.1080/09540120802385645
URL: http://dx.doi.org/10.1080/09540120802385645

AIDS Care
Vol. 21, No. 5, May 2009, 638–644

An integrated supervised injecting program within a care facility for HIV-positive individuals: a qualitative evaluation

Andrea Krüsi[a,c], Will Small[a], Evan Wood[a,b] and Thomas Kerr[a,b]*

[a]*British Columbia Centre for Excellence in HIV/AIDS, St. Paul's Hospital, Vancouver, BC, Canada;* [b]*Department of Medicine, Faculty of Medicine, University of British Columbia, Vancouver, BC, Canada;* [c]*Faculty of Health Sciences, Simon Fraser University, Vancouver, BC, Canada*

(Received 15 April 2008; final version received 31 July 2008)

While there has been growing interest in comprehensive models of treatment and care for individuals living with HIV/AIDS, little attention has been given to the potential role that supervised injecting programs could play in increasing access to prevention and care services for HIV-positive injection drug users (IDU). We conducted 22 semi-structured interviews with HIV-positive IDU regarding a supervised injection program integrated in an HIV focused care facility known as the Dr. Peter Centre (DPC). We also interviewed seven staff members who supervise injections within the facility. All interviews were audio recorded, transcribed verbatim, and a thematic analysis was conducted. Participant and staff reports indicated that the integrated supervised injection program influenced IDUs' access to care by building more open and trusting relationships with staff, facilitating engagement in safer injection education and improving the management of injection-related infections. Participants and staff viewed the program as facilitating the delivery of care through mediating overdose risks, reducing the need to punitively manage drug use onsite and reducing the risks of encountering used syringes on the premises. For some participants, however, feelings of shame and fear of judgment in relation to their drug use limited initial uptake of the program. Our findings identify mechanisms through which integrated supervised injection programs may serve to better facilitate access and delivery of comprehensive care for HIV-positive IDU and highlight the benefits of addressing HIV-positive IDUs' drug use in the context of comprehensive models of healthcare.

Keywords: supervised injecting; access to care for injection drug users

Introduction

The past two decades have given rise to remarkable advances in HIV/AIDS treatment and care. For example, the advent of highly active antiretroviral therapy (HAART) has contributed significantly to the reduction of mortality, morbidity and hospitalization rates for individuals living with HIV/AIDS (Hammer et al., 1997; Hogg et al., 1999; Mocroft et al., 2003; Porter et al., 2003). However, HIV-positive injection drug users (IDU) have derived less benefit than other HIV-positive individuals from recent advances in HIV treatment and care (Bruce & Altice, 2007; Wood et al., 2003).

Elevated rates of HIV-related morbidity and mortality among IDU are mediated by substantial barriers associated with access to basic care and support including primary care services (Ostertag, Bradley, Broadhead, & Altice, 2006), addiction treatment (Metzger & Navaline, 2003), and adequate housing (Evans & Strathdee, 2006; Shannon, Ishida, Lai, & Tyndall, 2006). As a result of barriers to accessing care, IDU often delay seeking medical treatment until conditions have reached advanced stages requiring emergency or acute care (Palepu et al., 1999).

Supervised injection facilities (SIFs) have been implemented in a growing number of settings to address the harms stemming from injection drug use (Dolan et al., 2000). SIFs provide a sanctioned, hygienic environment where IDU can inject pre-obtained illicit substances with sterile injection equipment, under the supervision of trained staff (Broadhead, Kerr, Grund, & Altice, 2002). Evaluations of SIFs have revealed numerous benefits, including increased access to addiction treatment (Kerr, Small, Moore, & Wood, 2007; Tyndall et al., 2006). Little is known about the potential role SIFs could play in facilitating access to and delivery of care for HIV-positive IDU. Therefore, we sought to examine the perspectives of HIV-positive IDU and healthcare staff regarding an integrated SIF within an HIV care facility, with the aim of evaluating the program's influence on access to prevention and care services for HIV-positive IDU.

*Corresponding author. Email: uhri@cfenet.ubc.ca

ISSN 0954-0121 print/ISSN 1360-0451 online

DOI: 10.1080/09540120802385645
http://www.informaworld.com

The Dr. Peter Centre (DPC) Harm Reduction Room (HRR)

The first government-sanctioned SIF in North America opened in Vancouver in September 2003 (Wood et al., 2004a). However, more than a year before the opening of this stand-alone facility, a group of nurses at Vancouver's Dr. Peter Centre (DPC) implemented a supervised injection program (Wood, Zettel, & Stewart, 2003). The DPC offers a day-health program for 230 adults and a 24-bed assisted-living residential program. Approximately 40% (or approximately 93) of day-program participants are IDUs, many live in substandard, unsanitary, single room occupancy housing. The DPC offers basic support such as hot nutritious meals, showers, laundry facilities, referrals to social services and HIV-specialists as well as counselling and nursing support. The supervised injection program, termed the *Harm Reduction Room* (HRR) (Figure 1), involves nurses supervising the injection of street drugs by HIV-positive program participants in a designated space. There are 53 registered HRR users. After the implementation of the HRR there was a steady growth in HRR users. Currently HRR use levels have stabilised at approximately 50 injections per month. Herein we report on the experiences and perspectives of DPC participants who have used the program and staff who work in the HRR.

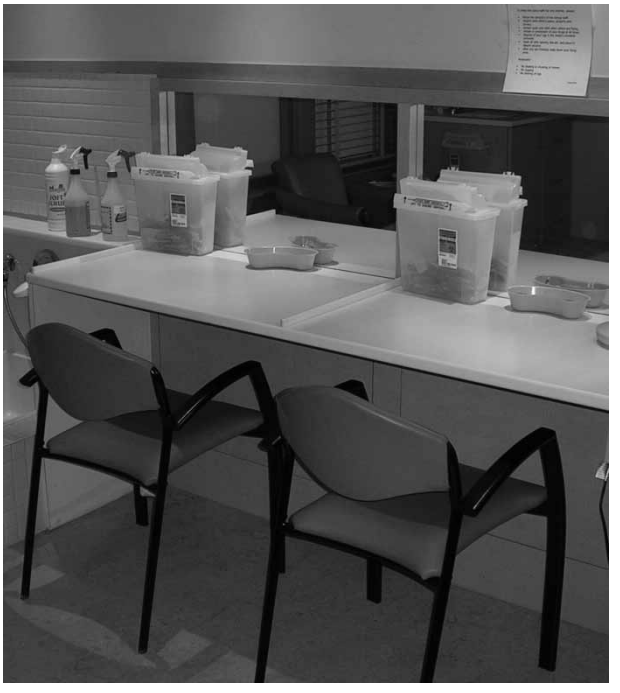

Figure 1. The Dr. Peter Centre Harm Reduction Room.

Methods

We conducted 22 in-depth interviews with DPC participants to discuss their experiences using the HRR. Potential participants were informed about our study during a weekly DPC community meeting, and through information sheets posted within the facility. All DPC participants who approached us and met the minimum criterion of having used the HRR at least once were interviewed. We also conducted seven interviews with staff members who regularly supervise injections within the HRR. The staff sample was recruited using a purposive sampling strategy to ensure adequate representation of staff with various professional backgrounds (e.g. nurses, counsellors) involved in supervising injections at the HRR. All interviews lasted between 30 and 90 minutes and were conducted during May and June 2007.

Participant interviews were facilitated using a semi-structured topic guide encouraging discussion of experiences and impact of the HRR, care experiences at the DPC, and perceived barriers. Staff interviews were facilitated by a different topic guide consisting of questions concerning the operation and integration of the HRR into existing services.

All interviews were audio-recorded and transcribed verbatim. Field notes reflecting on key points and interview dynamics were also kept. The coding framework was developed collaboratively among the research team and included both a priori themes and more inductive categories that emerged from participants' accounts. The thematic categorization of the interview transcripts was facilitated by the use of ATLAS.TI.

All participants provided written informed consent for participation. DPC participants were remunerated with Can$ 20. Staff did not receive payment as interviews were conducted during work hours. The study was conducted with the approval of the Providence Health Care/University of British Columbia Research Ethics Board.

Results

Sample characteristics

The interviewees included 15 male and seven female HIV-positive IDU. Six of the interviewees were residents at the DPC, and the remaining 16 individuals were day-program participants. The mean age among the sample was 43.8 (range 28–54), and the average number of years living with HIV was 12. Sixteen participants were currently on HAART. The median CD4-cell count of our sample was 225 cells/mm3.

Staff members who participated in the interview process included four nurses, two counsellors and one recreation therapist.[1] Five staff interviewees had experience of working at the DPC before the implementation of the HRR.

Access to care

Participants' and staff' perspectives indicated that the HRR influenced participants' access to care by building more trusting relationships with staff and facilitating engagement in a broader array of support services, including safer injection education and care for injection-related infections.

Acceptability

Participants' perspectives on the acceptability of using the HRR were strongly influenced by the perceived benefits of injecting under supervision. The most common motivations for injecting in the HRR were hygiene, safety from the risks associated with overdoses, and physical safety. While both male and female participants named physical safety as a benefit of injecting in the HRR, this theme was particularly common in female participants' accounts:

> I got a safe place to use, and all my new syringes are there. It's safe in case I overdose, or someone is going to rob me or anything like that. I'd feel safer in the room there ... I've been robbed like three times on East Hastings. Beaten up and robbed. (Female participant #14)

The view that the HRR facilitates the use of other services at the facility constituted a common theme in staff' accounts:

> Usually people are like 'well what's the use I'm already [HIV] positive, so what does it matter?' Our role is to help them understand that, yeah, you're positive but you can stay healthier longer by taking care of yourself across the board, including supervised injection with safer equipment, as well as other health care needs, eating well and taking your medication as it's prescribed as best you can. (Non-Nursing staff #2)

Safer injection education

Participants described the HRR as a unique setting for accessing safer injection education and pointed out that the guidance received in the HRR impacted their injection practice and reduced the occurrence of injection-related infections:

> They offer cleanliness and hygiene, it's real good. Now I use an alcohol swab more, I didn't use them before ... That's why a lot of people get abscesses, because of the hygiene. And, plus after 27 years of using, I wasn't doing it right. (Male participant #6)

Several participants also stressed the influence of environmental and situational factors in shaping their injection practices and expressed that the HRR ameliorated these pressures:

> It [the HRR] reinforced good practice. I already knew what they were, but I was pretty careless, pretty sloppy a lot of the time. Because you're in a pressurised situation, say you're under scrutiny ... I'll go in the washroom and use. And all of a sudden, your anxiety level jumps. So you're doing things quicker, you are not safe ... I wouldn't even cook the heroin, or use tap water, and I had abscesses all the time...I know for a fact I've shared water, which I shouldn't have done ... I'm sure that's where I got Hep [hepatitis C] from. (Male participant #11)

Staff attributed a perceived reduction in abscesses and injection-related infections to increased opportunities to engage participants with *in situ* safer injection education. Staff also commented that the HRR allowed participants to be more open about their drug use which facilitated early presentation of injection-related infections, and in turn increased access to treatment and helped prevent complications:

> We used to have a lot more injecting-related abscesses ... I've seen a reduction, possibly teaching, through vein maintenance and rotating sites. If there are abscesses we just intervene sooner. They're willing to tell us about it sooner. They're not hiding it now. (Nurse #3)

Relationships

Numerous participants commented that the supervised injection program fostered more understanding and trusting relationships with staff:

> I think it made, made our relationship stronger ... Like they know where I'm coming from. (Male participant #13)

> I think it's actually a good thing. Because you [the staff] get to know what drug addicts are as individuals. And without making an 8 act play about your life, they just got to get to know you ... It builds a relationship. (Male participant #11)

Staff also viewed the relationships built in the context of the HRR as enhancing participants' access to care, by encouraging openness concerning participants' health concerns:

> In the injection room you cover so much ground. You really get a sense of, where they're at. What's going on with their health, their numbers [blood

counts], their docs, their concerns, their stuff. That wouldn't, happen with, ''can I have an ibuprofen cause I've got a headache?''(Nurse #3)

Delivery of care

Overdose prevention

Before the implementation of the HRR it was difficult to adequately address participants' drug use at the Center. Participants and staff state that since the establishment of the HRR, the negative impacts of overdose incidents occurring at the facility have been reduced as injecting behavior no longer has to be concealed:

> I used to be here before they had that room, I wasn't supposed to but I did [inject], a couple of times in the washroom. This is much better. There was one person that was found, they OD'd in the washroom. It was a good thing he left the door unlocked. They took care of him. He lived but ... if he'd locked the door, he would have been dead ... We haven't found anyone OD'ing in the bathrooms anymore. (Male participant #22)

Legitimate space

Providing a legitimate space for injecting reduced the need to punitively regulate injecting behavior and reduced improperly discharged syringes at the facility:

> What should we do? [prior to the implementation of the HRR] We knew they just injected in the bathroom. [Should we] put them on a month's suspension? Now it's much better ... We cannot, provide healthcare services, but, continue to, deal with, particular aspects of participants' lives, which have direct impact on their health, in a purely punitive manner. (Nurse #7)

Barriers to using the Harm Reduction Room (HRR)

While many participants viewed the HRR as enhancing care and support at the DPC, some participants were more reluctant to engage in supervised injecting.

Type of substance

Participants' views on the acceptability of the HRR were also shaped by their expectations regarding the influence of injecting in the HRR on their intoxication. Participants' reports reflected a greater willingness to inject opiates in the HRR compared to stimulants as stimulants often leave participants feeling restless and somewhat suspicious:

> Cocaine is a different thing. I hate being, trapped in one spot, when I'm doing cocaine ... I like to wander, you get so hyped up, you go back and forth like a ping pong ball. I can't do that [in the HRR]. (Male participant #4)

Shame

Although many participants reported that the HRR enhanced therapeutic relationships, others reported that existing relationships may complicate access to the program. Some participants described how shame and fear of judgment may mediate their access to the HRR:

> You become close to staff and, it's like a family kind of thing. You don't wanna disappoint them and let them know that you're doin' it. I think that they look down on you more if they know you're using. I think cause the staff know that you've just done something, that anything you do after that is going to be, oh it's the drug that's making her do that. (Female participant #12)

Discussion

Consistent with previous work demonstrating the value of integrating HIV care with Methadone Maintenance Therapy (Palepu et al., 2006), our findings further highlight the potential benefits of integrating harm reduction interventions within HIV care settings, and suggest that a SIFs can positively influence access to care for HIV-positive IDU. The perspectives of HIV-positive IDU and healthcare staff interviewed in this study indicate that the integrated SIF may influence IDUs' access to care by building more open and trusting relationships with staff, facilitating engagement in safer injection education and improving the management of injection-related infections. Study participants reported that the program helped to reduce overdose risks and the need to punitively manage drug use onsite. For some participants, however, feelings of shame and fear of judgment in relation to their drug use complicated the uptake of the program.

Due to heightened susceptibility, injection-related infections constitute a major health risk for HIV-positive IDU (Bruce & Altice, 2007; O'Connor, Selwyn, & Schottenfeld, 1994) and represent a key concern in care. The HRR appears to positively influence injection practices by modifying the immediate physical and social setting that shape the act of injecting (Moore, 2004). Our findings regarding the influence of the HRR on safer injecting are consistent with previous work which reported that a significant proportion of SIF users obtain safer injection education (Wood et al., 2005). Participants view the collaborative injection education afforded by the HRR as offering benefits above and beyond

conventional information-based approaches (Moore, 2004).

Lack of trust and poor relationships with healthcare providers have been identified as important components of IDUs' avoidance of healthcare facilities and delays in seeking care (Altice, Mostashari, & Friedland, 2001; Ostertag et al., 2006). Failure to acknowledge clients' substance use within care settings can compromise healthcare relationships and result in a lack of attention to a central aspect of IDUs' health (Bruce & Altice, 2007). Participants' and staff' perspectives suggest that the HRR helped to reduce mistrust between IDU and healthcare providers (Bruce & Altice, 2007; Merrill, Rhodes, Deyo, Marlatt, & Bradley, 2002) and aided the disclosure of injection-related infections and other health issues, which in turn increased opportunities for staff to provide adequate care.

The HRR facilitated the delivery of care at the DPC by creating a legitimate physical space for injecting illicit substances. As observed in other settings (Evans & Strathdee, 2006; Kerr et al., 2007), prior to the implementation of the HRR, overdose incidents in secluded areas and behind locked doors within the DPC constituted a major problem and policing onsite injections consumed substantial staff time. Consistent with previous work documenting a reduction of improperly discharged syringes after the implementation of a SIF (Wood et al., 2004b), the HRR reduced the number of improperly discarded syringes at the facility. Additionally, the commonly used strategy of banning IDU from services as a way of sanctioning drug use within service facilities (Evans & Strathdee, 2006) was no longer necessary after the implementation of the HRR, increasing participants' access to care at the DPC.

Participants' perspectives on the barriers to injecting at the HRR demonstrate a careful weighing of the advantages and disadvantages of using the program (Kerr et al., 2007) and bring to light some of the limitations of an integrated SIF. In line with previous studies, participant reports revealed concerns regarding the effect of injecting under supervision on their intoxication (Kerr et al., 2007). Also consistent with previous work a number of participants in this study expressed feelings of shame about disclosing their injection behavior to staff (Malins, Fitzgerald, & Threadgold, 2006; Rhodes et al., 2007). While SIFs can improve access to care among IDU, acceptance of such programs is shaped by a range of societal forces. The relative success of harm reduction interventions is shaped by the social environments in which they occur and is affected by factors such as the discrimination and stigmatization of IDU (Rhodes, 2002; Small, Rhodes, Wood, & Kerr, 2007). In order to achieve maximum effectiveness, harm reduction interventions need to be supplemented by sustained efforts in changing the macro social environment that can compromise uptake of care (Rhodes, 2002).

The present study has a number of limitations. The views represented in our sample may not be entirely representative of all DPC participants who have made use of the HRR, as some participants with deviating views may have chosen not to participate. This study focused exclusively on the views of IDU who have used the HRR at least once; therefore, the views of IDU who attend the DPC but do not use the service are not represented. Likewise, the perspectives of non-IDU DPC participants regarding the HRR were not explored here. Added insights, concerning the acceptability of the HRR could have been gained by interviewing opiate and stimulant users separately. However, this proved difficult in this setting as most IDU are polysubstance users. In addition, we did not collect data on the impact of the HRR on participants' safer sex practices, and therefore we were unable to make inferences concerning the impact of the HRR on participants' sexual practices. Lastly, although we investigated the impact of the HRR on access to care, we did not obtain data specific to the impact of the HRR on access and adherence to HAART. Future studies should seek to investigate this further. An integrated SIF may provide unique opportunities for enhancing uptake of directly observed HAART.

The findings of the present study highlight the value of integrating a SIF within a comprehensive care facility for HIV-positive IDU. Despite some participants' reservations concerning privacy, our data indicates that integrating SIFs into HIV/AIDS care programs for IDU may help overcome some of the significant barriers to care among this population.

Acknowledgements

The authors wish to thank the study participants for their time and participation. We also thank the research and administrative staff at the B.C. Centre for Excellence in HIV/AIDS for their research assistance, including Julio Montaner, Deborah Graham, and Tricia Collingham. Thanks are also due to the DPC participants, administration, and staff for their cooperation and patience.

Andrea Krüsi is supported by a SFU Graduate Fellowship.

Will Small is supported a Michael Smith Foundation for Health Research Senior Graduate Studentship and a Canadian Institutes of Health Research Doctoral Research Award.

Thomas Kerr is supported by a Michael Smith Foundation for Health Research Scholar Award and the

Canadian Institutes of Health Research New Investigator Award.

Will Small, Andrea Krüsi and Thomas Kerr designed the data collection instruments and conducted the analyses of the data. Andrea Krüsi prepared the first draft of the manuscript. All authors contributed to the design of the study as well to the revision of the manuscript.

Note

1. According to the HRR protocol counsellors and other non-nursing staff can supervise the injection preparation; however during the actual act of injecting and immediately afterwards the presence of a qualified nurse is required.

References

Altice, F.L., Mostashari, F., & Friedland, G.H. (2001). Trust and the acceptance of and adherence to antiretroviral therapy. *Journal of Acquired Immune Deficiency Syndromes*, *28*(1), 47–58.

Broadhead, R.S., Kerr, T.H., Grund, J.P., & Altice, F.L. (2002). Safer injection facilities in North America: Their place in public policy and health initiatives. *Journal of Drug Issues*, *32*(1), 329–355.

Bruce, R.D., & Altice, F.L. (2007). Clinical care of the HIV-infected drug user. *Infectious Disease Clinics of North America*, *21*(1), 149–179.

Dolan, K., Kimber, J., Fry, C., Fitzgerald, J., McDonald, D., & Frautmann, F. (2000). Drug consumption facilities in Europe and the establishment of supervised injecting centres in Australia. *Drug and Alcohol Review*, *19*, 337–346.

Evans, L., & Strathdee, S.A. (2006). A roof is not enough: Unstable housing, vulnerability to HIV infection and the plight of the SRO. *International Journal of Drug Policy*, *17*(2), 115–117.

Hammer, S.M., Squires, K.E., Hughes, M.D., Grimes, J.M., Demeter, L.M., Currier, J.S., et al. (1997). A controlled trial of two nucleoside analogues plus indinavir in persons with human immunodeficiency virus infection and CD4 cell counts of 200 per cubic millimeter or less. AIDS Clinical Trials Group 320 Study Team. *New England Journal of Medicine*, *337*(11), 725–733.

Hogg, R., Yip, B., Kully, C., Craib, K., O'Shaughnessy, M., Schechter, M., et al. (1999). Improved survival among HIV-infected patients after initiation of triple-drug antiretroviral regimens. *Canadian Medical Association Journal*, *160*(5), 659–665.

Kerr, T., Small, W., Moore, D., & Wood, E. (2007). A micro-environmental intervention to reduce the harms associated with drug-related overdose: Evidence from the evaluation of Vancouver's safer injection facility. *International Journal of Drug Policy*, *18*(1), 37–45.

Malins, P., Fitzgerald, J., & Threadgold, T. (2006). Spatial 'Folds': Then entwining of bodies, risks and city spaces for women injecting drug users in Mebourne's central business district. Gender. *Place and Culture*, *13*(5), 509–527.

Merrill, J.O., Rhodes, L.A., Deyo, R.A., Marlatt, G.A., & Bradley, K.A. (2002). Mutual mistrust in the medical care of drug users: The keys to the "narc" cabinet. *Journal of General Internal Medicine*, *17*(5), 327–333.

Metzger, D.S., & Navaline, H. (2003). Human immunodeficiency virus prevention and the potential of drug abuse treatment. *Clinical Infectious Diseases*, *37*(5), S451–S456.

Mocroft, A., Ledergerber, B., Katlama, C., Kirk, O., Reiss, P., d'Arminio Monforte, A., et al. (2003). Decline in the AIDS and death rates in the EuroSIDA study: An observational study. *Lancet*, *362*(9377), 22–29.

Moore, D. (2004). Governing street-based injecting drug users: A critique of heroin overdose prevention in Australia. *Social Science and Medicine*, *59*, 1547–1557.

O'Connor, P.G., Selwyn, P.A., & Schottenfeld, R.S. (1994). Medical care for injection-drug users with human immunodeficiency virus infection. *New England Journal of Medicine*, *331*(7), 450–459.

Ostertag, S., Bradley, R.E., Broadhead, R.S., & Altice, F.L. (2006). Trust and other characteristics associated with health care utilization by injection drug users. *Journal of Drug Issues*, *36*(4), 953–974.

Palepu, A., Strathdee, S.A., Hogg, R.S., Anis, A.H., Rae, S., Cornelisse, P.G., et al. (1999). The social determinants of emergency department and hospital use by injection drug users in Canada. *Journal of Urban Health*, *76*(4), 409–418.

Palepu, A., Tyndall, M.W., Joy, R., Kerr, T., Wood, E., Press, N., et al. (2006). Antiretroviral adherence and HIV treatment outcomes among HIV/HCV co-infected injection drug users: The role of methadone maintenance therapy. *Drug Alcohol Dependence*, *84*(2), 188–194.

Porter, K., Babiker, A., Bhaskaran, K., Darbyshire, J., Pezzotti, P., & Walker, A.S. (2003). Determinants of survival following HIV-1 seroconversion after the introduction of HAART. *Lancet*, *362*(9392), 1267–1274.

Rhodes, T. (2002). The 'risk' environment: A framework for understanding and reducing drug related harm. *International Journal of Drug Policy*, *13*, 85–94.

Rhodes, T., Watts, L., Davies, S., Martin, A., Smith, J., Clark, D., et al. (2007). Risk, shame and the public injector: A qualitative study of drug injecting in South Wales. *Social Science and Medicine*, *65*(3), 572–585.

Shannon, K., Ishida, T., Lai, C., & Tyndall, M.W. (2006). The impact of unregulated single room occupancy hotels on the health status of illicit drug users in Vancouver. *International Journal of Drug Policy*, *17*(2), 107–114.

Small, W., Rhodes, T., Wood, E., & Kerr, T. (2007). Public injection settings in Vancouver: Physical environment, social context and risk. *International Journal of Drug Policy*, *18*(1), 27–36.

Tyndall, M.W., Kerr, T., Zhang, R., King, E., Montaner, J., & Wood, E. (2006). Attendance, drug use patterns, and referrals made from North America's first supervised injection facility. *Drug & Alcohol Dependence*, *83*, 193–198.

Wood, E., Kerr, T., Montaner, J.S., Strathdee, S.A., Wodak, A., Hankins, C.A., et al. (2004a). Rationale for evaluating North America's first medically supervised safer-injecting facility. *Lancet Infecious Diseases*, *4*(5), 301–306.

Wood, E., Kerr, T., Small, W., Li, K., Marsh, D.C., Montaner, J.S., et al. (2004b). Changes in public order after the opening of a medically supervised safer injecting facility for illicit injection drug users. *Canadian Medical Association Journal*, *171*(7), 731–734.

Wood, E., Montaner, J.S., Tyndall, M.W., Schechter, M.T., O'Shaughnessy, M.V., & Hogg, R.S., 2nd. (2003). Prevalence and correlates of untreated Human Immunodeficiency Virus type 1 infection among persons who have died in the era of modern antiretroviral therapy. *Journal of Infectious Diseases*, *188*(8), 1164–1170.

Wood, E., Tyndall, M., Stoltz, J.A., Small, W., Zhang, R., O'Connell, J., et al. (2005). Safer injecting education for HIV prevention in a medically supervised safer injecting facility. *International Journal of Drug Policy*, *16*, 281–284.

Wood, R.A., Zettel, P., & Stewart, W. (2003). The Dr. Peter centre. Harm reduction nursing. *Canadian Nurse*, *99*(5), 20–24.