

Examination of Safe Crack Use Kit Distribution from a Public Health Perspective

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This paper examines the policy of safer crack use kit (SCUK) distribution within the city of Winnipeg, Canada. Publicly funded, SCUK distribution policy has been a contested topic throughout Canada, despite evidence that crack users represent some of the most marginalized members of society. Using the four pillars approach to drug policy as a guideline, the balance of allocation of resources for harm reduction is critiqued. Harms associated with crack use are broadly categorized as being associated with methods of use or social harms. The effectiveness of the current SCUK policy is examined according to the guiding principles of reduced harms and cost effectiveness. Research supports SCUK distribution based on the merits of increased health contacts and harm reductions. Data indicate the SCUK distribution policy supports efforts to reduce the transmission of communicable disease, notably Hepatitis C. A cost-benefit analysis and assessment of the policy's effectiveness in reducing harms supports continuation of SCUK. Our conclusion advocates for the expansion of the current policy to emphasize further engagement and greater emphasis on working against associated social harms, but notes the need for further research on the topic. Benefits of peer-based kit distribution are discussed and potential alternatives to the current SCUK policy are explored.

KEY WORDS: crack cocaine, drug policy, harm reduction

Introduction

Canada's drug policy has been developed from the *four pillars* strategy, which is a multi-faceted approach grounded in public health principles. The four pillars approach integrates prevention, treatment, enforcement, and harm reduction in a complementary manner to address the health, safety, and societal factors associated with drug use (Alexander, 2006; Canadian Drug Policy Coalition [CDPC], 2013; Haden, 2006). This approach also acknowledges that drug prohibition itself cultivates violence, crime, disease, and black markets that present harms to drug users and the larger society (Haden, 2006). According to the CDPC, current Canadian drug policy priorities include public safety and access to services and supports for people with drug problems (Carter & MacPherson, 2013). The policy priorities are in line with public health approaches

at the macro level while dually considering the broad base of factors that impact health at the micro level of the drug users (Public Health Agency of Canada [PHAC], 2011). Since 2007 there has been a shift in Canada's national anti-drug strategy that has eliminated "harm reduction" from its policies, restricting the scope to three pillars: enforcement, prevention, and treatment (Government of Canada, 2014). However, many provincial and municipal drug strategies are based on a public health framework and continue to incorporate the four pillars approach encompassing harm reduction. Within the public-health framework, the philosophy and practice of harm reduction is considered a pragmatic approach to drug use, which seeks to reduce drug-related harms to individuals and communities.

Public health harm-reduction practices aim to foster connection with high-risk populations in addition to providing access to condoms and clean drug use paraphernalia to prevent the spread of disease (Cheung, 2000; Roe, 2005). Harm-reduction strategies are not limited to injection drug use (IDU); in Canada they apply to crack cocaine use, which is also associated with the spread of communicable diseases, injuries resulting from drug use paraphernalia, and social harms. Substantial research supports the distribution of clean injection drug use paraphernalia for harm reduction (Degenhardt et al., 2010). However, safer crack/safer smoking use kit distribution is a topic of much debate amongst both professionals and the public, and the benefits are not well understood. To date there have been few studies examining harm-reduction strategies involving the distribution of safer crack use kits (SCUK). This article examines SCUK distribution in Winnipeg, Canada and explores factors to consider for the continuation of this public health policy based on existing SCUK research. Although the CDPC prioritizes public health policies and support for people who use drugs, current Canadian federal drug policies are often in opposition to municipal and provincial health policies, thereby underscoring the divisions in policies as they pertain to public health and drug use (Carter & MacPherson, 2013).

Concerns regarding crack cocaine use trends in the Canadian city of Winnipeg led to the development and implementation of SCUK distribution in 2004 as part of the city's harm-reduction services. Although SCUK distribution occurred in other cities in Canada prior to this, the Winnipeg Regional Health Authority (WRHA) program was the first publicly funded SCUK program led by a regional public health authority in Canada (WRHA, 2015). The aims of Winnipeg's SCUK distribution program are to reduce the spread of sexually transmitted and blood-borne infections (STBBIs) and reduce other drug-related harms in Winnipeg (Backé, Bailey, Heywood, Marshall, & Plourde, 2012; Ross, 2015). Concerns regarding the use of public tax dollars for SCUK's have been accompanied by questions about whether the distribution of clean drug use paraphernalia provides any benefit or simply encourages and enables drug use (Brodbeck, 2012). Such opposition serves to reinforce public opinion that people who use drugs may be less deserving of health protection. Although this paper specifically examines harm-reduction policies associated with crack cocaine use in

Winnipeg, we also draw on data and information regarding crack cocaine use and SCUK distribution from sites across Canada.

Crack use is increasingly prevalent in Canadian cities and is most prevalent among marginalized populations (Fischer et al., 2006; Ivsins, Roth, Nakamura, Krajden, & Fischer, 2011). Although data regarding the prevalence of crack use among the general Canadian population is unclear, it is estimated that 2.3 percent of the Canadian population uses cocaine/crack (CADUMS, 2011). Crack cocaine use is also increasingly prevalent among injection drug users (IDUs); a 2006 Canadian study found that 66 percent of IDU's reported smoking crack in the previous six months (Ivsins et al., 2011). The health risks associated with crack use are two-fold and include risks related to the method of inhalation in addition to inherent risks among marginalized crack using populations. Haydon and Fischer (2005) succinctly summarize the complexities and interactions between these risks noting that the harms of crack are fuelled by a complex myriad of health and behavioral risks, amplified by forces of marginalization, poverty, and criminalization, predominant within the crack user population (Haydon & Fischer, 2005). These factors inform the broader aims of harm reduction to decrease the risks of injury and infection spread via drug use paraphernalia, in addition to minimizing social harms and economic consequences associated with drug use (Cheung, 2000).

Use of crack cocaine involves placing a pea-size amount of the drug in a device that can sustain high temperatures and transfer the heat to the drug to release vapors, which are inhaled. Due to the unique features of crack inhalation, there are some common injuries and side effects experienced by this population. Burns or cuts to the lips and oral cavity are common among crack users due to high temperatures the drug and consequently the pipe are heated to. As well, such abrasions are often attributable to cracks or sharp edges of the pipe, in particular when the pipe is constructed from found materials such as soda cans (Haydon & Fischer, 2005; Ivsins et al., 2011; Leonard et al., 2008). These burns and cuts are of particular concern because of the high incidence of pipe sharing that occurs between users. Research has found that many people who smoke crack cocaine share their equipment, which has been associated with infectious disease transmission including, but not limited to, methicillin resistant staphylococcus aureus, tuberculosis, pneumonia, hepatitis C (HCV), and HIV (Backé et al., 2012; DeBeck, Kerr, et al., 2009; Fischer, Powis, Cruz, Rudzinski, & Rehm, 2008; Fischer et al., 2006; Gyarmathy, Neaigus, Miller, Friedman, & Des Jarlais, 2002; Leonard et al., 2008; Malchy, Bungay, Johnson, & Buxton, 2011; Porter & Bonilla, 1993; Story, Bothamley, & Hayward, 2008; Tortu, McMahon, Pouget, & Hamid, 2004). Higher rates of HCV among people who use crack is not only the result of equipment sharing, but likely the harms associated with the use of the drug, such as sex work, and higher rates of incarceration (Fischer et al., 2006). Whereas HCV can be spread through multiple mechanisms of body fluid contacts (primarily blood contact), the prevalence of HCV infection in non-injection drug users (NIDUs) is higher than in the general population and HCV infection is more likely among crack cocaine users that share crack smoking equipment (Macías et al., 2008).

Poor health outcomes are also related to a variety of social factors, including socio-economic status and physical environments, known collectively as the determinants of health (PHAC, 2011). In the context of the determinants of health, it is evident that the crack-using population experiences the negative implications of most of these factors. These factors interact with risk behaviors that are linked to crack use and culminate in crack users being a marginalized and difficult-to-reach population. Because they can be a difficult-to-reach population, developing opportunities to maintain contact with these populations is also an important aim of harm reduction in the context of public health. Some experiences common to people who use crack include being more likely to live in poverty and experience homelessness (Fischer et al., 2006; Haydon & Fisher, 2005; Leonard, DeRubeis, & Birkett, 2006). Therefore, crack users are more likely to report illegal activity to support their use, which has implications related to higher rates of involvement with the criminal justice system (Ivsins et al., 2011). These socio-economic factors are further complicated by the intense high and subsequent low experienced from crack use, which contribute to the physiological and psychological addictive attributes of the drug (Leonard et al., 2006). Marginalization of this population is furthered by the stigma associated with crack use (Butters & Erickson, 2003).

Although most crack users are marginalized, the literature identifies several particular at-risk groups, which warrant additional attention, notably women and ethnic minorities. Women who use crack are at additional risk related to sexual harms and risk for violence related to the stimulant nature of crack and gender-based violence targeting women who use crack (Bungay et al., 2009; Bungay, Johnson, Varcoe, & Boyd, 2010; Rhodes & Hedrich, 2010). Crack use is also associated with high-risk sexual behaviors such as unprotected intercourse with multiple partners and sex work (often to support the associated drug use), which have negative implications for their sexual health including increases risk of STBBIs (Ivsins et al., 2011; Malchy et al., 2011).

In Canada, as in the United States and Europe, there are undertones of racial inequity that are notable when examining the demographics of crack use. In Canada, those of Aboriginal descent are over-represented in crack-using populations (Leonard et al., 2006). In the context of the present article, the term Aboriginal refers to any persons who self-identify as being of First Nations, Métis, or Inuit descent. A study conducted in Canada to assess SCUK utilization reported the crack cocaine using population as being 35–50 percent Aboriginal (Malchy et al., 2011). Aboriginal persons are more likely than most Canadians to experience many of the negative effects of marginalization, such as poverty and poorer health status, largely due to the ongoing generational effects of colonization and intergenerational trauma (Bergen-Cico, Wolf-Stanton, Filipovic, & Weisman, 2015; Frohlich, Ross, & Richmond, 2006; Timpson & O’Gorman, 2010).

Methods

This research is a case study of Winnipeg’s Safer Crack Use Kit (SCUK) distribution program, the first municipally funded harm reduction policy

designed to reduce the risk of harm associated with crack cocaine use in Canada. The study draws from extant program assessment reports, hepatitis C (HCV) prevalence data, policy analysis publications specific to Winnipeg, in addition to scholarly literature on the efficacy of similar SCUK harm-reduction programs. Literature reviews were conducted using ProQuest and MEDLINE. The ProQuest database search was limited to peer-reviewed journal articles using the search terms: harm reduction, risk reduction, HCV, crack cocaine, and cocaine. MEDLINE database was also used with the MeSH (Medical Subject Heading) terms: harm reduction, risk reduction, HCV, crack cocaine, and cocaine.

Definitions of Terms

For purposes of this study the term crack cocaine uses the MeSH heading definition of crack cocaine as the purified, alkaloidal, extra-potent form of cocaine, which can be smoked (free-based), injected intravenously, and orally ingested. Use of crack results in alterations in function of the cardiovascular system, the autonomic nervous system, the central nervous system, and the gastrointestinal system. Harm reduction is based on the MeSH heading definitions, which describes harm reduction and harm minimization as the application of methods designed to reduce the risk of harm associated with certain behaviors without reduction in frequency of those behaviors. The risk-associated behaviors include ongoing and active addictive behaviors. The term risk-reduction behavior was also included in our MEDLINE literature search and is based on the MeSH heading definition, which subsequently encompasses reference to lifestyle risk reduction, and risk reduction, all of which are defined as reduction of high-risk choices and adoption of low-risk quantity and frequency alternatives. There were 17 publications in MEDLINE that addressed harm reduction and crack cocaine use; the majority of these articles ($n = 10$, 60 percent) were based on research conducted in Canada. There were an additional 6 articles in the ProQuest literature search which yielded 23 publications, the majority ($n = 13$, 57 percent) were based on research conducted in Canada.

Setting. Winnipeg is a city located in the province of Manitoba in central Canada, approximately 100 km north of the Canadian-American border. The city is isolated, in terms of geographic placement and transportation routes, which have implications for the flow of illicit substances into the community. According to 2006 census data, the city has a population of 644,000 and approximately 10 percent of the city population identify as Aboriginal (Statistics Canada, 2006). This percentage of the population is significant as it represents the highest percentage of Aboriginal residents of all major cities in Canada.

Wylie's 2005 study demonstrated that the crack usage trends and associated harms in Winnipeg were similar to that which would later be reported in other Canadian studies (Leonard et al., 2008; Wylie, 2005). In studying injection drug users in Winnipeg, who also smoked crack, 76 percent stated they had shared drug equipment for inhalation and 31 percent had experienced oral burns or cuts

(Wylie, 2005). The primary mandate of the Winnipeg Regional Health Authority (WRHA) public health harm-reduction services are to decrease spread of STBBIs and maintain contact with high-risk drug users. Thus, in response to public health concerns that sharing of crack paraphernalia was increasing transmission of infections such as HCV, in 2004 a policy of SCUK distribution was initiated in Winnipeg. It is within this broader context that the public-health aims of the SCUK program are examined.

Indicators of Effectiveness. Assessment of the Winnipeg SCUK distribution program's ability to meet its public-health aims are measured by the program's ability to meaningfully engage and promote the health of marginalized clients. One of the driving forces of the SCUK initiative was to prevent the spread of HCV. To achieve this aim requires contact with at-risk populations, dissemination of risk-reduction information and materials, HCV testing and treatment. In support of the HCV reduction aim the following key indicators are used to monitor the program's adherence to planned goals and activities: (i) number of contacts with clientele; (ii) number of safer smoking use kit supplies distributed; (iii) safer sex and condom distribution; (iv) number and types of STBBI tests performed, and results of STBBI tests; (v) health-care services provide (other than STBBI testing); (vi) prenatal contacts; and (vii) reporting of interpersonal and/or sexual violence. In addition to the aforementioned key indicators, the SCUK distribution program aims to reduce social and fiscal costs associated with STBBIs and poor health. Therefore, cost-benefit analysis is also examined.

Results

Utilizing these key indicators and cost-benefit analysis, we quantitatively assessed the Winnipeg SCUK program in the context of HCV rate trends and their annual programmatic measures for the numbers of: (i) client contacts, (ii) SCUks distributed, (iii) safer sex materials distributed, (iv) STBBI tests performed, (v) non-STBBI health care services provided, (vi) prenatal contacts, and (vii) interpersonal and/or sexual violence cases reported. The numbers and types of SCUK outreach encounters with the target at-risk population in Winnipeg are presented in Table 1. In the context of this paper, an encounter is defined as a face-to-face interaction with an individual during which supplies or services are provided. Within this definition, an encounter could occur multiple times with the same person on the same day, if they were to return for additional supplies or services. Although difficult to quantify the efficacy of responding to these indicators based on the raw numbers listed in Table 1, it is important to note that the number of encounters represent individuals accessing care that they would likely not have otherwise. The numbers associated with these indicators do demonstrate that for a large majority of encounters, the extent of the encounter is supply distribution rather than more in-depth assistance with health-related matters.

During the 12-month WHRA evaluation period (October 1, 2013 to September 30, 2014) the WHRA had 13,816 SCUK encounters; of these one third (32 percent)

Table 1. SCUK Encounters with Street Connections Staff

Aim of SCUK Distribution Program	Harm Reduction Indicator	Numbers for 1 Year
Street Connections staff interactions with clientele for SCUks	Number of annual contacts	13,816 SCUK encounters
Distribution of clean safe smoking equipment	Numbers of SCUks distributed	20,028 SCUks distributed
Access to safer sex supplies	Safer sex supplies distribution	8,249 condoms distributed
STBBI testing	Numbers of STBBI tests conducted through SCUk point of contact	117 STBBI tests
Rapid HIV Testing Number of Positive STIs	Point of care rapid HIV test	73 rapid HIV tests 31 total; 1 HIV+; 9 HCV+; 21 Chlamydia and/or Gonorrhoea
Health-care service referrals (other than STBBI testing and prenatal)	Numbers of health-care service referrals through SCUk point of contact	60 health care and other (primary care, social services; addictions treatment, medical care, antibiotics, wound care, immunized)
Prenatal contacts	Numbers of prenatal contacts through SCUk point of contact	30 testing, care and referral
Opportunity for reporting of interpersonal and/or sexual violence	Reporting of interpersonal violence, sexual violence, sexual harms through SCUk outreach contacts	6 individuals reported aggressive sex work clientele

Data Source: Street Connections Program Monitoring Data October 1, 2013 to September 30, 2014; Ross (2015).

were solely for SCUK with no other services provided; whereas two thirds (68 percent) of all encounters resulted in other outreach (25 percent of the time this was co-current needle distribution) (Ross, 2015). In total there were 20,028 SCUks distributed during this 12-month period (Ross, 2015). These 13,816 encounters represent more than the distribution of SCUks; they also provided the opportunities for co-current needle distribution, pregnancy testing, prenatal referrals, STBBI testing, other health-care services, and the reporting of interpersonal violence. By comparison, during this same time period the same outreach program had 3,058 encounters for needle distribution (Ross, 2015). For this community SCUk distribution provided 4.5 times as many encounters than needle distribution, thereby quadrupling opportunities for public health interactions.

Analysis of the Winnipeg SCUk distribution program found that the majority of individuals who submitted to urine and serology STBBI testing were SCUk-takers; comprising a larger percentage of the outreach population than individuals engaging in clean needle programs (Ross, 2015), thus indicating that the SCUk distribution program is an effective means of engaging this population in STBBI testing, including point-of-care/rapid HIV testing. With this in mind, since the rates of positive STBBI results among street involved clients are as much as 11.5 times higher than the general population in Manitoba, STBBI testing amongst this population should remain a priority because of the high-risk sexual networks of

which they are part. SCUK distribution also provided greater opportunity for condom distribution than needle distribution; 68 percent of SCUK encounters included condom distribution compared to 56 percent of needle distribution encounters (Ross, 2015). In addition to STBBI testing and treatment, “other” health-care outreach is also an important aim of the SCUK distribution program. The SCUK distribution program was also the means by which immunizations, wound care, medical referrals, and prenatal testing and referral for care were provided through street outreach.

Hepatitis C (HCV) Rates

Government monitoring data for HCV prevalence rates in Winnipeg are available within the reporting of provincial data for Manitoba. Although data in Figure 1 represent HCV crude rates in all of Manitoba, Winnipeg constitutes more than half of the entire population of Manitoba. The Winnipeg health region experiences higher rates and numbers of STBBIs than other municipalities in Manitoba. Manitoba has had rates of HCV that are similar to the Canadian national rate; in 2011 Manitoba had among the lowest ranking rates of HCV compared to other Canadian provinces and territories. The crude rates of HCV per 100,000 in this region have declined from 37.7 in 2004 to 23.9 per 100,000 in 2013 (Manitoba, 2014).

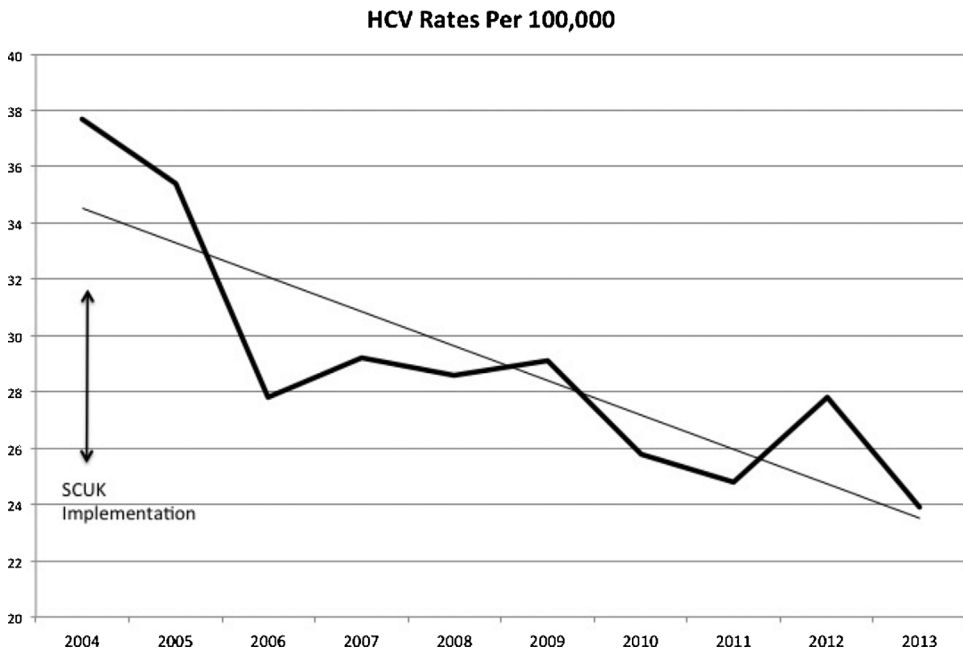


Figure 1. Regional Hepatitis C Rates Since SCUK Implementation.

Contents of Safer Crack Use Kits

The safer smoking use kits include an instructional sheet, alcohol swabs, and key pieces of drug use equipment. Each piece of equipment has been carefully selected for inclusion in the kits based on the health risks presented when people use makeshift alternatives. The following is a description of the four key components in the safer smoking use kits (smoking stems, screens, mouthpieces, and push sticks) and the public health consideration for providing each component. A key component of the kits are smoking stems made of heat resistant glass, called borosilicate (this is the generic name, this type of glass may be better known under the commercial brand name PyrexTM). The use of heat resistant stems reduces the risk of burns during use. Five screens/filters made of thin, porous brass metal sheets (similar to the small screens found inside water faucets) are also included. The screens replace the steel wool/BrilloTM, which are traditionally used. The screens permit the inhalation of drug vapor, while minimizing the inhalation of chemical residue, embers, or materials that may be dangerous to skin and tissue. Individual mouthpieces, made of non-latex food-grade vinyl or PVC tubing that fits into the end of the stem which is inserted into the mouth, are provided to further minimize risk of oral burns. The push sticks, which are wooden dowels or chopsticks that are several inches long, are intended to be used to position screens in stems (Ross, 2015). Push sticks are made available to prevent the use of makeshift equipment. The use of makeshift equipment for placement is of concern as it may cause stems to chip or crack (OHRDP, 2015). In addition to SCUK distribution, supplementary harm-reduction services provided by the public health program include needle distribution services, condom and lubricant distribution, education (at both the individual and community level), outreach and facilitation of access to health services (WRHA, 2015). Figure 2 is a photograph of a standard SCUK.

Cost Effectiveness

The Canadian Nurses Association (CNA) notes that the key principles of harm-reduction policies and programs should be based on the best evidence available and aim to be cost effective (CNA, 2011). As such, the following section examines the effectiveness and efficiency of current distribution practices utilizing the markers of best practice and cost effectiveness. In Winnipeg the funding for SCUKs is provided through the population and public health division of the WRHA. The SCUKs are then distributed by public health employees, as well as through a number of partnering community agencies. Within the public health program, SCUKs are available as part of a larger harm-reduction program called Street Connections. Street Connections services, including SCUKS, are available weekdays during office hours at a fixed location, as well as through a mobile outreach service, from 5:00 pm until 12:30 a.m., six nights a week (Backé et al., 2012). The number of SCUKs provided varies according to supply and demand (Ross, 2015).



Figure 2. Safer Crack Use Kit.

In Winnipeg, the cost of each SCUK is \$0.59 in Canadian dollars, as of 2012 (Backé et al., 2012). The total cost for SCUK supplies in the 2012–2013 fiscal year was approximately \$18,556, which can be compared to an estimated health-care cost of \$10,000 for a year of care for one individual with HCV and the estimated cost of \$100,000 for HCV treatment over their lifetime (Backé et al., 2012; Ross, 2015). Preventing a singular case of HCV or HIV infection per year through the use of safer crack use kits equates to a very cost-effective harm-reduction program and health policy. Although the conclusion that such numbers can seem to draw may seem obvious, it is important to also consider the affiliated costs to distribution, such as the wages for outreach workers and public health nurses, as well as the costs associated with mobile service provision such as vehicle maintenance.

In late 2013, the city of Vancouver put crack cocaine pipe vending machines in place in the heaviest drug-using parts of the city. The cost of each pipe is \$0.25 (Roberts & Stueck, 2014). This provides low-cost access to sterile drug-use paraphernalia with virtually no cost to the public; however, there is no contact with outreach workers or health-care providers. Ivsins et al. (2011) identified that SCUK distribution in Victoria, BC led to cost savings for the drug user as they did not need to purchase pipes, which in turn the users identified aided them to decrease their involvement in illegal activity such as theft or sex work to obtain money for purchasing pipes. This shift offers benefits on individual and

community levels. On the individual level there is potential for decreased interaction with the justice system, less potential for incarceration, and decreased sexual health harms associated with sex work. On the community level this translates to reduced criminal activity, and safer neighborhoods. Reports of cost savings for the user is provided from qualitative data and anecdotal reports, therefore more robust research is needed to quantify this as a benefit.

Discussion

The response to SCUK distribution in Ottawa by people who use crack was “immediate, high and sustained” (Leonard et al., 2006). This positive reception to SCUks by users has also been evident in Winnipeg and other cities across Canada (Backé et al., 2012; Ivsins et al., 2011). Evaluations of SCUK programs in other Canadian cities note that the introduction of SCUK distribution resulted in an observed and reported shift from injection practices to smoking practices (Leonard et al., 2006, 2008). This was also observed in the WRHA program (Backé et al., 2012). Further evaluation is needed to ascertain if this transition was only a transient change or if it represents sustained behavior change away from injection use. Benefits of drug use via inhalation rather than injection are many, including ingestion of less concentrated forms of the drug; therefore, reducing risk of overdose, decreased risk of human immuno-deficiency virus (HIV) and HCV transmission, and decreased infection rates both systemic and at the site of injection (Backé et al., 2012). In Winnipeg, over the last few years needle distribution has been noted to be increasing but pipe distribution has not dropped in response (Inkster, personal communication). The difficulty with evaluating the meaning of this trend is that multiple factors, such as the addition of community distribution partners and changes in local drug availability, impact the use and demand of harm-reduction resources. Thus, it can be difficult to confirm the cause and correlation of these trends. SCUK distribution offers the benefits as a potential means for outreach and engagement of a previously hard-to-reach population (Haydon & Fischer, 2005; O’Byrne & Holmes, 2008; Ti et al., 2011). Observations from service providers in the WRHA note that the interactions with clients requesting SCUks compared to IDU clients differ in that the SCUK interactions are very rapid, brief interactions and Street Connections staff report that it can be difficult to engage this population in further health-related interactions beyond the SCUK provision (Ross, 2015). A survey of Street Connections staff found only 17 percent of their interactions provided opportunities for providing education in conjunction with SCUK distribution (Ross, 2015). Taking this into consideration the current SCUK program appears to utilize harm-reduction personnel resources without benefit beyond kit distribution in many encounters. The CDPC notes that the important benefit of SCUK distribution is the engagement of a marginalized group so as to provide service referrals and education (CDPC, 2013). However, the issue of engagement and referral are complicated as the client must be willing to receive these services. If a client is a regular user and accesses SCUks often, they may find attempts to “engage”

repetitive and unnecessary. More important to harm-reduction services is the foundation of service provision that allows for the organic building of trust in the organization and providers over time. Many SCUK programs realize this dynamic and have adapted their programming to reflect the reality of the brief nature of these interactions. Options such as baskets or dispenser methods, such as those used for condom distribution, have been adapted in some regions to allow for access to supplies without the same expenditure of human resources. Similar to the case of safer sex supplies, should the client have questions or need assistance from staff, the staff is available to engage the client. The outreach education and referral opportunities are areas in which the current policy could benefit from improvement. Increased engagement with users, the utilization of peer-based models, and increased action on larger scale causes of social harms are recommended.

In other regions, reports of pipes being confiscated by police have been noted as a barrier to the effectiveness of SCUK programming (Ivsins et al., 2011; Leonard et al., 2006). Although the WRHA is currently trying to build a stronger relationship with law enforcement in Winnipeg, front-line workers and users report that pipes are sometimes discarded out of concern for difficulty with the police (Ross, 2015). This highlights inefficiency in service provision and reinforces the need for increased coordination of services and partnership between public health and law enforcement. Ivsins et al. (2011) notes that it is important, "to ensure that public health measures like SCUKs are not actively hindered or undermined by law enforcement." The European Monitoring Center for Drugs and Drug Addiction (EMCDDA) also advocates for the public health benefits of engaging and cooperating with law enforcement. While some progress has been made, further advancements in cooperation with law enforcement will benefit the success of SCUK distribution in Canada and elsewhere (EMCDDA, 2010).

Following the introduction of the SCUK program in 2004, a survey of street-involved clients in Winnipeg found that frequency of reported pipe sharing fell from 80 percent to 40 percent (Backé et al., 2012). Other programs in Canada have noted more modest decreases in sharing frequency (Leonard et al., 2008). In addition, although reports of oral burns and trauma were not completely eradicated, the incidence did diminish (Leonard et al., 2008). Due to the mechanism of HCV transmission it is the coupling of both decreased sharing of drug use paraphernalia as well as decreased oral trauma that offers the decreased risk of infection with SCUK distribution. Of concern are the findings of Leonard et al. (2006) that following the initiation of SCUK distribution, 60 percent of those with oral sores related to crack use were still engaging in unprotected oral sex. This highlights further need for intervention and education surrounding health behaviors of crack users beyond their drug use. One difficulty in decreasing the incidence of pipe sharing is due to the often social aspects of stimulant use, such as crack, in which sharing behaviors are often normalized and reinforced due to the settings and context in which the drug is used (Haydon & Fischer, 2005). Further to this, sharing behaviors are usually linked to the network of close or common relationships (Ross, 2015). Ivsins et al. (2011) noted that difficulty

accessing SCUUs was a factor that led to sharing. While an obvious solution might be to advocate for policy change that allows for expanded distribution, one must be cautious of the cost-benefit of such remedies.

As mentioned previously, the primary mandate of the WRHA SCUU distribution program is to reduce the spread of STBBIs. The CDPC note that provincial and health authority funding arrangements for harm-reduction services usually flow from programs to prevent the transmission of blood-borne pathogens such as HIV and HCV; therefore, they are not integrated with other substance-related programs (CDPC, 2013). This highlights one of the main points of ineffectiveness within the current policy foundation. The literature provides some, albeit limited evidence of reductions in pathogen spread and thus for the continued success of the SCUU program a re-alignment of funding and priorities may need to be directed at other areas of harms. A challenge of harm reduction programming is the balance of resources toward multiple projects and foci. Anecdotal reports from WRHA service providers suggest that although harm-reduction programming has several goals, as mentioned previously, the majority of personnel hours are consumed by SCUU distribution (Ross, 2015). This is substantiated by Backé et al. (2012), who note that in 2010, 75 percent of harm-reduction client contacts were for SCUU distribution. This raises concerns that other important harm-reduction opportunities may not be given priority as a result of the substantial demand for SCUU distribution. Therefore, although cost savings are apparent when comparing the cost of pipe supplies to health-care costs associated with blood-borne infections, labor-intensive SCUU distribution affects overall service provision, and cost effectiveness needs to be re-examined.

Although the current SCUU policy has flaws, the alternative of forgoing SCUU distribution in its entirety does not appear to be a beneficial or preferred option. Available research provides only a limited glimpse into the reductions in harms associated with crack use; the literature almost universally recognizes this population as a difficult to reach and high-risk group (Fischer et al., 2006; Ivsins et al., 2011). What is evident is the increase in health-care service contact and the development of trusting relationships between people who use crack and service providers through supply distribution outreach (Backé et al., 2012; Carter & MacPherson, 2013). Thus, the SCUU distribution policy may be most beneficial as a means by which public-health workers can cultivate connections and maintain contact with an otherwise difficult to reach, vulnerable, and high-risk population. The withdrawal of SCUU distribution would result in loss of what is in most cases the only point of contact between this population and the public-health sector. When approaching public-health services from an equities perspective, focusing efforts toward service provision to the most high-risk populations works toward decreasing the gap in health disparity and facilitates connection with difficult to reach marginalized people (PHAC, 2011). Moreover the cessation of the SCUU distribution program by trained outreach providers contrast prevailing recommendations to scale up such distribution services as part of larger public-health approaches to substance use that respects the human rights of people who use drugs (Carter & MacPherson, 2013).

Harm reduction for crack use has remained a neglected area. For SCUK distribution to be effective it is dependent on the implementation of public-health policies at the municipal and provincial level in addition to being integrated into larger socio-political drug policies (Carter & MacPherson, 2013; EMCDDA, 2010; O'Byrne & Holmes, 2008). For these reasons the findings of this paper support an alternative SCUK policy that emphasizes and prioritizes not only distribution, but more in-depth engagement with users and advocacy regarding the more structural causes of marginalization and drug use. Support for such action can be found readily in the literature. Rolles (2009) acknowledges that harm reduction and prevention programming require greater action at addressing underlying causes of use. Additionally, the EMCDDA states that "reactive harm reduction measures focused at the micro risk environment of cocaine use do little to mediate the influences in the drug's macro risk environment, upon which risk behavior and drug-related harms are contingent" (Rhodes & Hedrich, 2010). Consensus is noted in the recommendation that harm-reduction services and policies need to focus on the drug-related harms caused by health inequities, such as housing access and financial stability (CNA, 2011; CDPA, 2013; Rhodes & Hedrich, 2010). Each of these organizations recommends comprehensive offering of services within harm-reduction programs that reach beyond solely providing clean paraphernalia.

Fischer and colleagues describe people who use crack as the socioeconomically "marginalized of the marginalized" among street drug users (Fischer et al., 2006). Thus, from an equity perspective, this is a population that warrants attention and consideration in public-health and harm-reduction policies. Expanded collaboration and integration of more emphasis for additional services into the current harm-reduction framework is needed to achieve this. A process that would allow for a simple, low-threshold access for clients identified as crack users would be of benefit.

The Canadian federal government's Anti-Drug Strategy utilized the *four pillars* approach to drug policy until 2007, when it officially eliminated the pillar of harm reduction, which is still used by some provincial and municipal governments. This likely explains why, from the perspective of many in public health, the distribution of funds across these four areas is unbalanced. Enforcement receives 70 percent of funding, while prevention receives 4 percent, treatment receives 17 percent, and harm reduction receives only 2 percent (CPDC, 2013; DeBeck, Wood, et al., 2009). The CNA refers to this current national drug policy as regressive in its priorities (CNA, 2011). With the Canadian federal government offering such a funding model as an example, it is difficult for provincial or municipal jurisdictions to break this mold. A more balanced allocation of funds would provide the financial resources needed to offer more comprehensive harm-reduction services, in addition to the existing SCUK distribution. For this reason it is important at the municipal level to continue to advocate for progressive changes to drug policy at all levels of government, as well as support funding for rigorous research to demonstrate the benefits of harm-reduction services.

The EMCDDA and CNA advocate the effectiveness of experiential, peer-based outreach and distribution (CNA, 2011; Rhodes & Hedrich, 2010), such as the trained peer-to-peer network in Brazil that serves as the point of contact for safer smoking equipment and educational information developed by other drug users. Brazilian networks are NGO funded, which creates some instability (Domanico & Malta, 2012), yet, the model used in Brazil does demonstrate feasibility for training individuals who use crack to provide peer-to-peer information about the health care and social supports available through the public-health system, and may increase the connection to these services while enabling nurses and other health-care workers to increase their availability in clinical settings. However, it is not known if the crack-cocaine-using population in this community will ultimately access these services in clinical settings. Although several of the WRHA's community partners incorporate peer-based programming (Backé et al., 2012) the core WRHA public-health program does not emphasize or incorporate a peer-based approach. Despite this, SCUK users surveyed note that almost 70 percent obtained a pipe through informal distribution and that informal distribution networks are a source of support and information sharing between users (Ross, 2015).

Limitations

This paper and its analyses are situated primarily within the context of Canadian health care and public health policy, which may limit specific international applicability. The HCV rates publically available are available only for the province of Manitoba and not specifically for the city of Winnipeg. Therefore, the declines in HCV prevalence cannot be directly attributed to harm reduction and public health improvements related to SCUK distribution in Winnipeg. Additionally, it should be noted that the primary author (AL) works in the area of direct service provision within a harm-reduction program, and thus recognizes internal bias with regard to the benefit of harm-reduction services.

Conclusion

Data on the causal pathways of disease transmission associated with sharing crack pipes is limited; therefore, evaluation of SCUK distribution programs based solely on changes in disease transmission rates is incomplete (Backé et al., 2012; Canadian HIV/AIDS Legal Network, 2008; Strike et al., 2013). Regardless, engaging with individuals who use crack is a public-health priority because of the STBBI implication in sexual networks (Ross, 2015). Although many benefits can be gleaned from the 11 years that the Winnipeg SCUK distribution policy has been in practice, there are still mitigating factors that are not understood and opportunities for improvement. The CNA have called for larger-scale studies and systematic evaluations to determine the effectiveness of SCUK in reducing disease transmission and modifying risk behaviors (CNA, 2011). Evidence regarding the efficacy of SCUK distribution has been somewhat conflicted and current

programming and outreach in most cities is limited in scope and reach (Fischer et al., 2006). The harm-reduction needs of crack users, including the prevention of STBBIs, have not received the same attention as IDU programming and services (Leonard et al., 2008). Although much of the information presented in this paper is specific to one Canadian city, the general observations and recommendations are relevant to a larger Canadian and international audience. There is an urgent need for more research to be completed regarding the extent of crack-related risks and the measurable benefits of SCUk distribution. A more robust focus on both qualitative and quantitative inquiry on this topic is warranted. Longitudinal studies that examine the health impact of SCUks over time would offer valuable information. Data that would be of interest would include long-term drug-use patterns (including information regarding type, amount and frequency of usage), rates of STBBIs, patterns of connectivity with a health-care provider, and rates of incarceration. Research that focuses on subgroups, such as women or those of Aboriginal descent, would offer greater insight on which to base program foci. Qualitative examination should not be overlooked as it provides insight into the more nuanced manner in which harm reduction impacts usage and health. Further research and understanding of the implications of SCUk distribution has the potential to positively impact harm-reduction policy and programming on an international scale. Assessment of the current SCUk policy supports continuation of the policy as a means of fostering and retaining connection with people who use crack cocaine to reduce harms and promote health.

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Notes

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