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The Growing Popularity of Prescription Opioid Injection in Downtown Montréal: New Challenges for Harm Reduction

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Abstract

Starting in 2007, a 2-year study based on ethnographic methodology was carried out downtown Montréal, Canada. A thematic analysis of observational and interview-based notes was conducted. Illicit prescription opioid (PO) use was widespread among street-based participants. Injection was the main mode of PO administration observed among users. Some injection practices such as “doing a wash” could pose new challenges in terms of prevention of infections. More research is needed to examine the role of illicit PO use in the development of opiate addiction and to better understand drug-using contexts that put PO users at risk of infections. The study’s limitations are noted.

Keywords

prescription opioid; injection drug use; street-based drug user; Montréal; injection practices; ethnography

Richard and I head towards the place in the park where Marianne is lying down. She got up when we arrived. She barely opens her eyes before she starts preparing a dose of dilau [hydromorphone hydrochloride tablet] that she immediately injects. Richard, who has just made \$20, suggests to Marianne [his girlfriend] that they buy some dilaus. Marianne takes Richard’s money to go look for dilaus. Marianne comes back barely 10 minutes later and tells Richard that she can get 12-mg hydros [hydromorphone hydrochloride time-release capsules] instead. Richard does not really seem to think it is a good idea. Marianne tries to convince him by saying that the effect of hydros lasts longer than dilau. Richard still does not seem convinced. He prefers dilaus because they give him a more intense initial rush. When Marianne

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Declaration of Interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the article.

mentions they could do “washes” with the hydros, Richard pauses for a couple of seconds and finally agrees that she should buy two 12-mg hydros.

Five minutes later, Marianne is back with the two hydros. Marianne sets herself up sitting on some flattened card boxes lying on the grass. She takes a Stéricup[®], an alcohol swab, a phial of sterile water and a new syringe that is in Richard’s bag. She pries open the orange hydro capsule and empties all the tiny time-release beads into the cup. Holding her syringe upside-down, she crushes the tiny beads with the thumb pad of the plunger. She adds a little water, heats the bottom of the cup with her lighter and crushes the beads some more (I am always surprised to see that they will inject themselves with the pasty substance produced by crushing small hydro beads in water). She puts the filter in the mixture and draws an initial dose. She rolls up the sleeve of her sweater and injects directly into a scabbed sore. Using the same syringe, she plunges the needle back into the mixture, draws another dose and injects it into the same spot. She again plunges the needle into the cup, where all that is left is the dregs of a pasty substance; she once more draws a small amount of solution, this time injecting it into her calf. She then takes the cup, with the filter still inside, and puts it in a small bag for safekeeping. All in all, Marianne has injected herself three times in a row from the same hydro. Only some twenty minutes earlier, she had also injected a dilau.

(Fieldnotes, September 2008)

INTRODUCTION

Recent years have seen a significant increase in the nonmedical use of prescription opioids (POs) throughout North American populations (Brands, Paglia-Boak, Sproule, Leslie, & Adlaf, 2010; Center for Substance Abuse Research, 2004; Manchikanti, 2006; McCarthy, 2007; Strassels, 2009). A growing number of studies are beginning to analyze illicit PO use among street-based drug users (Davis & Johnson, 2008; Firestone & Fischer, 2008; Inciardi, Surratt, Kurtz, & Cicero, 2007; Surratt, Inciardi, & Kurtz, 2006). In a Canadian survey of street opioid users, up to 90% of participants reported nonmedical PO use. It was more prevalent than heroin use in three of the five cities sampled (Popova, Patra, Mohapatra, Fischer, & Rehm, 2009).

In Montréal, time trend analyses of the collaborative Québec (Canada) HIV and hepatitis C virus (HCV) surveillance network for injection drug users (SurvUDI; Hankins et al., 2002) reveal that nonmedical PO use in the previous 6 months was highly prevalent and that PO injection increased from 25% in 2003 to 42% in 2007 (Leclerc, Morissette, & Roy, 2010). This trend corresponds to a concurrent overall increase in crack smoking with the proportion of injection drug users (IDUs) who also smoke crack rising from 58% to 73%. Furthermore, trend analyses document that cocaine injection (the main drug injected by SurvUDI participants) remained high between 2003 and 2007 with approximately 85% of IDUs reporting cocaine injection (Leclerc et al., 2010). Although the proportion of participants reporting heroin injection (mostly white or beige/brown powder) decreased from 53% to 32%, the increase of PO injectors stabilized the total proportion of opioid injectors at approximately 60%.

Ethnographic studies have provided detailed description of the risky practices of opiate injectors, namely, injectors of heroin or homemade opiates prepared from poppy seeds (Abdala, Grund, Tolstov, Kozlov, & Heimer, 2006; Bourgois, 1998; Bourgois & Schonberg, 2009; Grund et al., 1996; Koester, Glanz, & Barón, 2005). The various stages of the injection preparation process have been described in detail to highlight the risks of infection through the sharing of drug paraphernalia. These studies underscore the risky practices that

occur through the logistics of dividing the heroin solution once it has been prepared (Bourgois, 1998; Grund et al., 1996; Koester et al., 2005; Maher, 2002; Needle et al., 1998).

To date, the risky practices associated with the nonmedical use of POs remain understudied with respect to the logistics of the injection preparation process in its sociocultural context. The current article reports unexpected findings from an ongoing ethnographic study on changing patterns of drug use among street-based cocaine users. It documents the illicit PO market at the street level and describes in detail the injection practices among street-based PO users in Montréal, a major Canadian urban center with a long history of cocaine and heroin injection drug use that experienced a rise in crack smoking among IDUs in the mid-2000s (Leclerc et al., 2010).

METHODS

The study was conducted by an interdisciplinary team consisting of two anthropologists and a public health scientist with a long-term history of research among street-based drug users in Montréal and elsewhere (Bourgois, 1998, 2003; Bourgois & Bruneau, 2000; Roy, Boivin, Haley, & Lemire, 1998; Roy, Haley, Leclerc, Cédra, & Boivin, 2002). The methodology included 2 years of intensive participant observation in downtown Montréal carried out by the principle ethnographer (NA) from November 2007 through December 2009 and supplemented by periodic short fieldwork visits by the senior ethnographer (PB). The ethnographic data consisted of (1) direct observations of the behaviors of drug users in their natural street-based environment at all hours of the day and night and (2) interviews steered toward the subject of drug use patterns, income-generating strategies, drug acquisition strategies, the accessibility of substances on the street, and routinized risk-taking practices. To reduce the distortions caused by socially desirable responses, interviews were conducted in a conversational format while drug users were actively engaged in their routine activities of seeking, purchasing, and using drugs. This classical anthropological strategy of participant observation allowed us to triangulate responses to conversational prompts with in vivo observations of behaviors unfolding in real time in their natural environment (Bourgois et al., 2006). The periodic visits by the senior ethnographer allowed for further triangulation of data from a comparative and historical perspective to reduce observational and sampling biases and diminish the effects of researcher subjectivity.

The recruitment of participants was done in a non-probabilistic way: a targeted sample was selected using the *snowball* technique (Biernacki & Waldorf, 1981). Recruitment started in community-based organizations where the ethnographer sought out cocaine users in compliance with the objectives of the main study relating to HIV and HCV risks and patterns of cocaine use. Thereafter, to obtain a wider sample and reduce the idiosyncratic effects of snowball selection biases, the ethnographer continued a more strategically selected purposeful recruitment on the street through opportunistic engagement with the acquaintances of his initial contacts who reflected the wider distribution of profiles and patterns of street-based drug users.

Observational and interview-based notes were transcribed in full by the principle ethnographer. To ensure anonymity, all names of participants and specific locations were changed. The principle ethnographer conducted a preliminary coding of the notes and conversational interviews. The first step allowed to organize the data according to preestablished themes related to the original study objectives pertaining to patterns in cocaine use. The content of the observational notes and interviews was discussed among the multidisciplinary members of the research team on a bimonthly basis in face-to-face meetings and conference calls to obtain a consensus regarding the principle factors affecting risk-taking patterns and drug preference trends. These sessions provided a forum to reflect

on emerging findings and redirect priorities for data collection and analyses. Through an inductive technique of iterative analysis (Glaser & Strauss, 1967), the fieldwork notes and conversations were then rereviewed that brought out emergent unexpected themes and subthemes, most notably (1) PO injection in a polydrug use context, (2) PO street drug market, and (3) PO preparation process. Ethical approval for the project was provided by the *Le comité d'éthique de la recherche en santé chez l'humain du CHUS et de l'Université de Sherbrooke*. Monetary compensation was not offered to participants because participant observation requires establishing long-term voluntary relationships of trust and friendship free from ulterior financial motivations.

RESULTS

The final ethnographic sample consisted of more than 60 individuals including some 20 core participants from overlapping social networks that were only loosely bounded by age, ethnic identity/language preferences, income-generating strategies, drug consumption preferences, access to drug suppliers, intimate partnerships, and housing arrangements.

Despite our efforts to recruit participants in diversified social networks, the fluidity of social interactions across groups prevents us from stratifying results formally by social network. Almost all participants recognized one another as acquaintances, and many had consumed drugs with one another at some point in time. The frequent bridging of boundaries between networks appears to have been facilitated by the geographic concentration of the drug users in an approximately 20-square-block neighborhood of downtown Montréal where panhandling, sex work, and drug sales predominate, and outreach services for indigent drug users are concentrated. As a result, study participants were not part of well-organized and clearly delimited social networks. Instead, most are part of a larger unstructured social network characterized by indigence, social exclusion, and mobility. Owing to frequent movements including in and out of prison, rehab and hospitals, regional and seasonal migration, etc., interactions between members of this large social group are often of a utilitarian and temporary nature. Daily activities and conversations revolve around drug consumption and the means to obtain drugs.

Intensity of contacts with participants fluctuated during the 2 years of fieldwork, as individuals left or returned to the scene due to arrest, treatment, relapse, mobility, illness, and death. The majority was male and they ranged in age from approximately 18 to 60. Most were White, Canadian born, and French speaking, although approximately a fifth were English-speaking Canadians (mostly from other Canadian provinces), and a sixth were of Afro-Canadian or Caribbean Canadian descent. Almost everyone was homeless or survived in precarious housing status (illegal squats, rented rooms in cheap hotels or in slumlord apartments). Most participants were social welfare recipients but pursued additional income-generating strategies in the informal street economy (petty theft, panhandling, sex work, street drug sales, etc.). Except for a few participants, all were regular cocaine users, either smoking crack, injecting powder cocaine, or both. None consumed powder cocaine intranasally.

Street-Level Market and Drug Use Patterns

The easy accessibility of a variety of POs in downtown Montréal is well highlighted by the opening fieldnote. The fact that Marianne was able to find some for her and her boyfriend in less than 10 minutes demonstrates how relatively easy it is to buy POs in downtown Montréal. PO sales occur directly on the street in a relatively relaxed environment. PO sales do not appear to be controlled by the criminal groups traditionally responsible for the sale of cocaine and heroin. Unlike these traditional suppliers of drugs, violence is not a crucial mechanism for controlling drug territories and markets among street-level PO suppliers and

sellers. The majority of PO dealers encountered were independent operators who sold a portion of their personal PO prescriptions or who bought POs from people who had access to large medical prescriptions. They congregated primarily on one specific block in downtown Montréal that is well known to users. They were present at all hours of the day but drug deals were most active in the morning, as “pill junkies” often wake up with withdrawal symptoms. Compared with the powder cocaine and heroin markets, such a system of “easy going” and open drug sales is advantageous for users. They do not need any special personal contacts to obtain the substance; they do not need to pass through intermediaries to access the sellers; and they do not fear violence and rip-off. This lessens traveling and waiting time and commission costs are reduced to a minimum. In contrast, special contacts are necessary to buy heroin and powder cocaine, and the process is often fraught with anxiety over the quantity and quality of the product. Purchasers with no insider contacts must pay a commission to an intermediary to make the purchase (often in the form of a share of the drug purchased).

The POs most commonly sold on downtown streets are hydromorphone hydrochloride tablets (HHT; referred to as “dilaus” by users) and hydromorphone hydrochloride time-release capsules (HHC; referred to as “hydros” by users). The former is sold in formats of 1, 2, 4, or 8 mg, and the second in formats of 3, 6, 12, 18, 24, or 30 mg. HHT and HHC are easy to find, inexpensive, and their quality is uniform, allowing users to better manage and control their consumption. Users can buy a dose costing \$5 (CAN)¹ or even less. This facilitates access for new users eager to test the effects of POs without risking a large expense. It also allows dependent users to purchase a small standardized dose to ward off withdrawal symptoms. The low price also makes it possible for individual users to buy small quantities for their own personal use without needing to share.

Even though HHT and HHC are designed to be administered orally, all PO users in our street scene injected them. Injected quantities varied from one user to the next but average regular users generally spent \$50–60 per day (e.g., 50–60 mg of HHT or 60–72 mg of HHC). Despite the fact that nonmedical PO use comprises certain advantages for users, the injection of POs appears to generate new patterns of risk taking. Most notable is the high number of daily injection episodes observed among PO injectors caused by their urgent desire for repeated doses of the drug:

Matt, who was squeegeeing on the other side of the road, comes up to us: “Christ, I’m cold. I don’t know what’s wrong with me.” I ask him if he is coming down with a cold: “I don’t know. Maybe I’m starting to be dope sick, but I’ve done three 8-mg dilaus today. I don’t understand it.” Richard tells him he might have “cotton fever.” Mulling this over, Matt goes back to squeegeeing...

... The next day, I see Matt at his squeegeeing spot. Taking a break, he comes to speak to me. I ask him how he feels today and if he is still shivering like yesterday. “No, it’s okay. I took an 8-mg dilau not long after I saw you and afterwards I felt better. But Christ, I don’t understand how I could have started being dope sick. It’s not like I hadn’t done any during the day. I had done three 8s [mg].” I ask him if he did his three 8s all at once. He glances at me as if I am an idiot: “Of course not, I did them separately, a few hours apart.” I continue, asking him: “Is that because three 8s is too much for you to do at once?” Matt seems insulted by this last question and answers: “Hey, of course not, I am perfectly capable of doing 3, and even 4 at once. It’s just that I’m squeegeeing; when I’ve made \$10, I go buy one

¹Price chart (CDN). Dilaudid®: 1 mg = \$1.25, 2 mg = \$2.50, 4 mg = \$5, and 8 mg = \$10; Hydromorph Contin®: 3 mg = \$2.50, 6 mg = \$5, 12 mg = \$10, 24 mg = \$20, and 30 mg = \$25.

and do it. I come back to make myself another \$10 and start over again. I don't feel like waiting to make \$30 or \$40 before going to get some."

(Fieldnotes, February 2010)

This excerpt is a good reflection of the experience of a large number of PO users encountered during participant observation. As it is relatively easy and inexpensive to obtain POs, many users do not wait until they have amassed enough money to buy a sufficient amount to provide them with the full, lasting effect they need to stave off withdrawal symptoms for more than a few hours. This mode of drug use (in small frequent doses) creates a sort of vicious circle that causes users to inject themselves more frequently at shorter intervals than heroin injectors. The principle ethnographer often spoke with users who had injected themselves up to 8–10 times a day.

Injection Preparation Techniques

When we get inside, Francis invites me to sit down on his blankets. He picks up a syringe, some water and a new Stéricup[®] stored in the boxes beside the bed. He takes out a 12-mg hydro and empties the contents in the cup. He crushes the little beads with the bottom of his lighter as much as he can. He then adds some water and crushes them some more. He unwraps the syringe and puts a filter on the tip of the needle and dips it into the cup. He slowly draws a first dose, attentively watching as the contents fills the barrel of his syringe. He removes the filter on the end of his needle and injects himself a first time. He then takes the syringe he has just used and pokes it back into the filter that has remained in the cup. He adds a bit more water and remixes it with the filter on the end of his needle. He draws out another dose, leaving a semi-solid white substance in the bottom of the cup. He injects himself again in the same arm. He then drops his syringe in the recycling bin and throws the rest in the garbage except for the cup (which still contains the filter). He carefully puts it in the bottom of his bag.

(Fieldnotes, July 2009)

This excerpt describes PO preparation during a single injection episode. PO preparation entails more numerous and complex procedures than the preparation of powder cocaine or powder heroin. In downtown Montréal, cocaine is generally sold in small plastic bags containing a minimum of a quarter of a gram, while heroin is sold in little folded paper packets containing a minimum of half a "point" (0.05 g). IDUs often liquefy their cocaine directly in the plastic bag, but for heroin, since it is sold in small pieces of folded paper, they must first pour the powder into a cup and add water. Users who pool resources to buy these drugs carefully share them once they have been dissolved, dividing them up either by filling up an individual syringe from another syringe (backloading) or by filling up a separate syringe for each user straight from the same cup. They rely on the gradations on the syringe barrel to ensure that participants receive their fair share. Sometimes, users filter and heat the liquefied drug but these operations are not always necessary when the powder is fine and easily soluble. For POs, however, dividing up drugs during the injection preparation stage occurs only on rare occasions. When users pool resources to buy larger quantities, the substance is generally divided up before dilution, either by cutting the scored tablet of predetermined dosage or by carefully transferring the time-release beads from one large capsule into two smaller ones.

As we were able to observe in the preceding fieldnote excerpt, a single PO injection episode does not necessarily correspond to a single injection. The physical composition of POs complicates their preparation and injection. In fact, dissolving them into solution is difficult and can require a great deal of water. Some users even add water several times to extract as

much opioid substance as possible. This obliges them to inject themselves repeatedly during the preparation process, simply because the cup and, most notably, the syringe are unable to hold all the water required (especially for capsules or multiple tablets). Thus, even if PO injectors buy a large dose that will provide them with a longer lasting effect and reduce the number of injection episodes per day, they will be obliged to inject themselves several times during a single episode, which still results in a high total number of injections they engage in per day.

One of the techniques used to dissolve HHT consists of crushing the tablet into a fine powder in a cup by using the bottom of a hard object (e.g., lighter, pen, or thumb pad of a syringe plunger). Another technique involves placing the tablet in the fold of a piece of cardboard (the size of a business card), folding the cardboard, and pressing on it with a hard object. Users then unfold the cardboard and pour the crushed tablet into a cup to liquefy it. Filters are not always used for tablet injection, but when multiple tablets are prepared simultaneously, filters become necessary to prevent syringe clogging.

HHC preparation is even more complicated due to the time-release packaging of hydromorphone. HHC are filled with miniscule beads. The material encasing these beads complicates and prolongs the crushing phase. The same crushing technique is used as for tablets, with the substance being crushed directly in the cup by using a hard object or the syringe plunger, but the final result is not the same. Users are never able to obtain a fine powder when they crush the beads and are often obliged to add more water during the preparation process as well as heat it to facilitate dissolution. Unlike the tablets that, once crushed and mixed with water, are transformed into a relatively homogeneous liquid solution, the beads produce a thicker white liquid (pasty at the bottom), which often contains mushy lumps requiring filtration. The complexity of HHC preparation, especially dissolution, makes some users reluctant to buy them.

As soon as she arrives, Élie immediately wants to know who has dilaud. Francis tells her he does not have any, but that he has hydros. Élie starts swearing. She's angry because she hates preparing hydros. Seeing that hydros are her only option, she buys two 12-mg capsules for \$10 each on condition that he prepares them for her; in exchange she promises him her two washes. Francis agrees. Another girl in the group overhears this deal and turns to Richard to negotiate the exact same deal with him. He immediately agrees. She then buys a 12-mg capsule from Francis.

(Fieldnotes, June 2009)

“Washes”

This fieldnote excerpt introduces a key element related to the risky practices associated with PO injection: the sharing of “washes” containing residue that adheres to previously used cotton filters and to the sides of the previously used cups. Contrary to powder cocaine or white or beige/brown powder heroin preparation, PO injection leaves a large amount of residue on the paraphernalia used to prepare it. Very often, this residue contains a sufficient concentration of opioid substance to produce a minimal high or at least to stem withdrawal symptoms. Users, consequently, store their containers and filters in order to rinse them with water later in the day. They refer to this as “doing a wash.” The strength of a “wash” is directly associated with the quantity of PO previously prepared with the paraphernalia. The preparation of two or three 8-mg HHT or one 24-mg HHC produces enough residues for a satisfactory dose. The “wash” from a 4-mg HHT, however, is insufficient to even stave off withdrawal symptoms. Several “washes” of small doses consequently are sometimes combined to produce a single dose, increasing the potential for transmitting impurities from multiple preparation settings:

René decides to do a wash. As his used cups had only been used to prepare small doses of dilau, he does 5 washes that he had been carrying around with him all day. He lays out five used cups in front of him. He begins by putting water in the first one. He mixes it a little bit with the thumb pad of his syringe. He draws all the liquid from his first rinse into his syringe. He then expels all that liquid into the second used cup, mixes it all again and redraws the liquid back up into his syringe once again. He repeats this process with each previously used cup. This pooling of washes into a single dose increases the concentration of the residue with each transfer of the same water from one cup to another. After rinsing out all five cups, he finally injects.

(Fieldnotes, July 2009)

From a public health perspective, the injection of PO “washes” is problematic due to the risks of skin or soft tissue infections associated with the reuse of injection materials and may be even transmission of HIV or HCV when “washes” are exchanged between users, a practice we frequently observed. As we have mentioned, a single session of PO preparation sometimes necessitates several injections and repeated handling increasing the possibility of soiling the cup and the filter with a user’s blood.

To understand the practice of gifting “washes,” one must understand certain particularities of the social relations of the individuals with whom we work. The street-based IDU subculture is characterized by paradoxical social relations of betrayal and mutual assistance. While users sometimes swindle one another, it is also common for them to share or offer one another material goods. “Washes” are one of the goods exchanged as a favor between users. The following excerpt describes a drug use episode involving the gift of a “wash” between two users who know each other well and who often help one another with resources and drugs.

When I arrive, René was sharing his food with Richard. After eating, René takes a plastic pack of candies out of his pocket. The pack of candies contains several dilau tablets. He shakes the pack to show me he has a lot. Richard immediately responds to the sound made by the tablets. He says: “Oh yeah, can I have your wash?” René asks him: “Are you dope sick?” Richard answers yes. René takes a 2-mg tablet out of the pack and gives it to him along with three old washes he has stored at the bottom of his backpack.

(Fieldnotes, July 2009)

Like food, clothes, blankets, and drugs, “washes” have an economic value on the street. They are often offered to help out a user who starts to experience withdrawal symptoms. They can also be exchanged for a favor or something else of value. They are sometimes simply given as a token of good faith, implying a moral debt that obliges the recipient to return the favor in the future.

“Washes,” consequently, play a particularly powerful symbolic role in the economic system that structures the lives of street-based drug users. One might even talk of the “second life” of the cup and the filter. Significantly, we almost never saw users ask, upon receiving a “wash,” whether the syringe that originated the “wash” was sterile. In fact, our observations suggest that “wash” exchanges are not considered to be in the same category as ancillary “paraphernalia sharing.” “Washes,” like HHT or HHC, are simply viewed as independent drugs that can produce a high or stem withdrawal symptoms. Health-conscious users may worry about the sterility of a new syringe they are using to prepare a “wash,” but they do not consider the cleanliness of the original syringe or the associated paraphernalia that produced the residue for the “wash”:

A friend of Francis joins us. He asks us if it would bother us if he does a hit and proceeds to take out all the necessary materials. He begins by crushing and dissolving a 4-mg dilau. While preparing his hit, he brags about how he is careful to always inject safely. He repeats several times how he has never taken or given away any previously used injection equipment. Finally, he completes his first injection. So far, so good.... His technique does indeed look good. However, he takes out a second tablet, puts it in the same cup, and draws the solution up using the same syringe and the same cup. After finishing his second injection, he then offers his wash to Francis who turns it down, because he has hydros.

After the friend left, I look at Francis and ask him if he realizes what had happened. Francis does not seem to understand my question. I explain to him that the friend had offered him a wash into which he had immersed a syringe that had been in his arm—a wash, consequently, that could potentially have been infected. Francis is surprised and admits he has never even thought of that level of risk. Moreover, the person who wanted to give him his wash did not have bad intentions. On the contrary, he was being generous in offering the gift of a free wash. Furthermore, he thought of himself as a model harm reduction user. Francis explains that people do not always pay attention to such intricate details. Indeed, I have seen people accept someone else's washes, but I have never heard them ask about the cleanliness of their origin.

(Fieldnotes, May 2009)

DISCUSSION

This is one of the first articles reporting participant observation findings on the risky practices associated with PO injection in street-based settings. POs are readily accessible on the streets of downtown Montréal, and the widespread illicit use of POs that we observed among street-based drug users is consistent with local surveillance data and with newly published studies throughout North America (Davis & Johnson, 2008; Firestone & Fischer, 2008; Fischer, Rehm, Patra, & Firestone Cruz, 2006; Inciardi et al., 2007; Substance Abuse and Mental Health Services Administration, 2010; Surrat et al., 2006). For many study participants, PO use was part of a pattern of polydrug use that included the use of cocaine, smoked and/or injected. Multiple studies note that cocaine users frequently take opioids to manage the sometimes unpleasant anxiety-inducing effects of consuming high doses of cocaine during binges (Chitwood, Comerford, & Weatherby, 1998; Firestone & Fischer, 2008; Inciardi et al., 2007; Leri, Bruneau, & Stewart, 2003). POs also provide a euphoric effect on their own when other street-based drugs are unavailable (Davis & Johnson, 2008; Inciardi et al., 2007). The rise in street-based PO consumption is of special concern for public health in Montréal because it is primarily injection based. In fact, the principle ethnographer only witnessed a single episode of oral consumption in sharp contrast to the senior ethnographer who has almost exclusively observed oral consumption among street-based users in Philadelphia over the past 2 years. Similarly, a study of street-based PO users in New York reported that only 4.4% injected POs (Davis & Johnson, 2008). Our results of high rates of PO injection, however, are consistent with studies that reveal that ecological factors influence local routes of drug administration (De la Fuente, Barrio, Royuela, Bravo, & The Spanish Group for the Study of the Route of Heroin Administration, 1997; Stimson & Choopanya, 1998). The prevalence of PO injection among Montréal study participants may reflect the predominance of injection as the preferred mode of consumption of most drugs (mainly cocaine and heroin) among users in the downtown Montréal street scene (Bourgois, 2003; Bourgois & Bruneau, 2000; Roy et al., 2003; Roy, Boivin, & Leclerc, 2010).

Our observations show that some of the logistics of the PO street-level market may decrease risky injection behaviors, while other logistical aspects of the preparation process may simultaneously increase them. The low cost, small dose unit size and safer sales environment of POs allow users to purchase doses alone. Furthermore, when they do pool resources to buy larger quantities, they find it easier to divide up the pills prior to dissolving them in water, reducing the need for the kinds of risky injection practices described in the ethnographic literature on black tar and powder heroin that is divided up after dissolution in order to calibrate shares more accurately when money is pooled by several users (Bourgois, 1998; Grund et al., 1996; Koester et al., 2005; Needle et al., 1998). On the other hand, the physiological effects of POs, their small doses, and the constraints imposed by the materials from which they are made (especially the casings of the time release beads) promote more frequent injections. Furthermore, the addictive power of POs may cause the development of physical dependence even among users who primarily identify themselves as cocaine or crack users and who solely use POs to calm themselves down on binges (Compton & Volkow, 2006). The resulting physical tolerance accompanied by withdrawal symptoms creates an urge for users to reinject themselves several times a day (numerous episodes) particularly when only small doses are used. Furthermore, when bigger doses are used, the large amount of water necessary to dissolve the pills requires multiple injections during a single episode. Increased handling augments the possibility of contaminating the injection paraphernalia (cup and filter) that later become “washes” that can be exchanged as gifts. In other words, while PO users rarely share injection solution among themselves, the practice of sharing “washes” implicates the reuse of cups and filters that can transmit infectious diseases (Gordon & Lowy, 2005; Hope, Kimber, Vickerman, Hickman, & Ncube, 2008). It seems especially worrisome in the case of HCV, where studies indicate that it can be transmitted via the sharing of injection paraphernalia other than syringes (Hagan et al., 2001, 2010; Hahn et al., 2002; Maher et al., 2006; Thorpe et al., 2002). This risky practice of sharing “washes” has been previously reported (under different terms such as “*beating a cotton*,” “*pounding a cotton*,” and “*doing a cotton shot*”) in the ethnographic literature on black tar heroin injection in other North American cities. (Bourgois, 1998; Bourgois & Schonberg, 2009; Koester et al., 2005).

In downtown Montréal, offering one’s “wash” appears to be a common practice and even health-conscious users appear to be oblivious to the risks involved. The gifting of “washes” forms part of a moral economy of “gift-giving” that prevents users from recognizing the health risks involved in these routine expressions of generosity (Bourgois, 1998; Bourgois & Schonberg, 2009; Mauss, 1923–1924). By sharing, giving, or exchanging materials or human resources, particularly in a resource-poor context fraught with frequent acts of betrayal, street-based users build and solidify relationships of trust that facilitate their survival on the streets. (Bourgois, 1998, 1999; Grund et al., 1996; Grund, Stern, Kaplan, Adriaans, & Drucker, 1992; McKeganey, Friedman, & Mesquita, 1998). Indigent street-based drug users, such as our study participants, cannot refuse to participate in this gift-giving system for fear of being ostracized by their peers. The giving or exchanging of “washes” raises important questions for public health regarding culturally appropriate and feasible intervention strategies and messages in the context of indigence. How can harm reduction interface helpfully with street-based IDUs who stave off withdrawal symptoms by building communities of fellow addicts willing to share their meager resources in times of need or craving?

Given these results, it is imperative that we take another look at public health messages alerting IDUs to the risks of sharing injection paraphernalia. While the message *one hit, one needle* may still be an ideal, it is important to recognize the limited feasibility of its implementation in the context of street-based PO injection. In addition to the previously distributed 1-cc syringes and 3-cc vials of water, Montréal’s public health officials have also

made available sterile Stéricups since 2004. Users are encouraged to use a new Stéricup to prepare each injection. Our observations reveal that it is often impossible to put the entire amount of water necessary to dissolve and inject POs into a single container and syringe. This raises a series of questions for appropriate public health interventions. For example, if larger syringes and cups were provided, would that increase the risk of overdoses? Should the filters distributed by public health be changed so that they retain less residue? How acceptable would such a filter be to users given the important role of reciprocal gift giving for staving off withdrawal symptoms and for building community solidarity in indigent street scenes? Once again, we observe the necessity of developing prevention interventions that take into account the pragmatic and social/symbolic meaning users give to their practices (Bourgois, 1999; Rhodes & Treloar, 2008). The significant value of “washes” in an environment characterized by extreme precariousness could delegitimize public health messages admonishing users not to share “washes.”

Before concluding, it is important to mention that the results of this study cannot be generalized to all street-based PO users. Nevertheless, ethnographic field observations and conversational interviews drawn from snowball samples, supplemented by purposeful strategic recruitment within and across social networks, provide a good opportunity to increase the generalizability of participant observation data that are limited to small nonrandom samples. Moreover, the combination of direct observations and informal conversational interviews in the natural environment makes it possible to cross-check information, ensuring better internal validity of the data. Finally, throughout the study, enduring relationships have developed between the principle ethnographer and some participants who have become key informants able to provide additional critical and self-reflexive information when queried. Furthermore, during the analytical phase, our multidisciplinary iterative discussion of the contents of the observational notes and conversational interviews allowed for the triangulation of data in order to reduce the potential for subjective interpretation.

In conclusion, the rising use of illicit POs in North America poses new challenges for risk prevention among IDUs. We need documentation on the effects of the increased accessibility of POs. We also need a better understanding of drug-using contexts to explain local differences in modes of consumption. For example, why are POs predominantly injected even among crack smokers in Montréal when they are primarily consumed orally in New York, Miami, and Philadelphia? Studies are needed to verify (1) the association between the risky practices tied to PO consumption and HCV, HIV, and soft tissue infections and (2) the importance of PO use as an initiation vector into injection and future long-term dependence. The ready availability of POs in the context of the rise in crack smoking occurring in Montréal may initiate a new generation of street-based drug users to opiate injection despite the fact that they do not identify themselves as “heroin addicts” or injectors.

Biographies

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GLOSSARY

Cup	Container included in the Stéricup kit used to dissolve and heat the drug (see Stéricup).
Dilau	Street name for hydromorphone hydrochloride tablets.
Dope sick	Suffering from opioid withdrawal.
Hydro	Street name for hydromorphone hydrochloride time-release capsules.
Pill junkie	Street expression used to designate a prescription opioid addict.
Stéricup	Sterile injection equipment package including a 3-cc cooker (cup), a plastic handle, a filter, and a dry swab.
Wash (to do a)	An injection prepared by rinsing the prescription opioid residue from a cup and a filter previously used.
Wash	Previously used cup and filter containing prescription opioid residue.

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