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'It's more about the heroin': Injection drug users' response to an overdose warning campaign in a Canadian setting

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Abstract

Aims—To assess heroin injectors' perceptions of and responses to a warning issued by public health officials regarding high-potency heroin and increases in fatal overdoses.

Design—Semi-structured qualitative interviews

Setting—Vancouver, Canada.

Participants—Eighteen active heroin injectors

Measurements—Semi-structured interview guide focussing on heroin injectors' perceptions of and responses to the overdose warning, including reasons for failing to adhere to risk reduction recommendations.

Findings—Although nearly all participants were aware of the warning, their recollections of the message and the timing of its release were obscured by on-going social interactions within the drug scene focussed on heroin quality. Many injection drug users reported seeking the high potency heroin and nearly all reported no change in overdose risk behaviours. Responses to the warning were shaped by various social, economic and structural forces that interacted with individual behaviour and undermined efforts to promote behavioural change, including sales tactics employed by dealers, poverty, the high cost and shifting quality of available heroin, and risks associated with income-generating activities. Individual-level factors, including emotional suffering, withdrawal, entrenched injecting routines, perceived invincibility and the desire for intense intoxication also undermined risk reduction messages.

Conclusions—Among heroin injectors in British Columbia, a 2011 overdose warning campaign appeared to be of limited effectiveness and also produced unintended negative consequences that exacerbated overdose risk.

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Declarations of interest

None.

Keywords

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Introduction

The health sequelae of heroin use are severe, and include fatal and non-fatal overdose [1]. In most settings, the primary public health response to heroin overdose has been individually-focussed interventions that seek to educate drug users about risks for overdose and promote changes in behaviour [2]. This over-reliance on individually-focussed interventions persists despite the known limitations of these approaches and growing awareness that drug-related harm is shaped by an array of physical, social and structural forces operating within the broader risk environment surrounding drug use [3, 4].

One commonly applied, but understudied, overdose prevention intervention involves issuing warnings to drug users about adulterated or potent heroin, or increases in fatal overdose [5–7]. Although many municipalities issue overdose warnings, we know of only one in-depth qualitative evaluation of this form of intervention. Miller studied injection drug user (IDU) responses to media stories about increases in heroin overdoses in Geelong, Australia [8]. He found that none of the 60 IDU interviewed had communicated messages contained in the stories to their peers, and that none had changed their injecting practices or reduced the amount of heroin they were injecting. Importantly, a small minority of IDU reported actively seeking out the strong heroin described in the stories, leading Miller to conclude that ‘media reporting of killer batches of heroin has little value as a public health strategy’. This latter finding is also consistent with a quantitative study by Freeman *et al.* [6], which found that 21% of drug users in New Jersey, USA, had sought out fentanyl despite warnings of a spike in overdoses associated with use of the drug.

Vancouver, Canada, has long been home to dual epidemics of heroin injection and heroin-related overdose [9]. In May 2011, local health authorities issued a warning that there had been a recent increase in heroin-related overdoses in Vancouver associated with ‘higher potency heroin’ circulating within the province of British Columbia [10, 11]. As indicated in Fig. 1, local IDU were encouraged not to use drugs alone, to call 911 (emergency response services) in the event of an overdose and to use local services, including the supervised injection site.

We undertook a qualitative evaluation of this overdose warning initiative to examine IDU’s awareness of the warning, their reactions to it and the impact of contextual factors on overdose prevention behaviours. In doing so, we have endeavoured to complement and build upon past work on this topic by exploring the reasons why some IDU ignore such warnings and fail to modify their drug use behaviour, as well as why many seek out potent heroin despite the risks this may pose.

Methods

In May 2011, 2 weeks after the overdose warning was issued, we conducted 18 in-depth qualitative interviews over a 10-day period with regular heroin injectors recruited from Vancouver’s Downtown Eastside—a neighbourhood characterised by a large open drug and sex-work scene, a network of single-room occupancy hotels, and longstanding epidemics of HIV infection and fatal overdose [9]. A research assistant, who was a member of the Vancouver Area Network of Drug Users, approached IDU known to be regular heroin injectors. Efforts were made to ensure adequate representation of women, and, in order to

assess potential changes in established behaviours, we sought to recruit experienced, rather than novice, heroin injectors.

Potential participants were invited to visit the study office, where the project was explained to them and where they provided written informed consent to participate in the study. Details concerning the age, gender and length of injecting were self-reported by participants and are presented in the following. A semi-structured interview guide was used to facilitate discussion of the overdose warning, including behavioural responses and the impact of contextual factors on overdose prevention behaviours. The guide was adapted from previous qualitative work on overdose among IDU in Vancouver [12], and was modified to include a number of questions and related prompts specific to the objectives of our study. After the first two interviews, the interview team met to discuss ways of improving upon the existing guide, although no changes were deemed necessary. After 16 interviews, no new information was forthcoming. Therefore, two more interviews were conducted to confirm that data saturation had been reached. Interviews lasted 30–80 minutes, were audio-recorded and transcribed verbatim. There were no refusals to participate and no dropouts during the interview process. All participants received a CA\$20 honorarium. The study received institutional ethical approval from the Providence Health Care/University of British Columbia Research Ethics Board.

Our analysis was informed by Rhodes' Risk Environment framework [4, 13, 14], which posits that drug-related harm is shaped by forces operating within the physical, social, political and economic environments. Analysis began early in the data collection process and continued as interviews were completed. Emergent thematic analyses of early interviews were discussed among the three interviewers (TK, WS and EH) and served to inform the focus of subsequent interviews, as well as ongoing analyses. The coding framework employed a priori codes derived from the topics used to structure the interview guide, as well as emergent codes based upon the content of the transcripts. All interview data were reviewed, and text segments related to each individual code were categorised/classified. Subsequent coding passes (i.e. continued efforts to apply our coding framework) were used to refine and expand code categories, and to identify instances of negative evidence.

Results

Qualitative interviewees

The 18 individuals participating in qualitative interviews included 8 female and 10 male IDU. The median age of participants was 45 years (range: 26–60 years), the median length of injecting career was 21 years, and all participants confirmed that they were regular heroin injectors upon recruitment.

Awareness and timing

Although many of participants were aware of the overdose warning that had been issued 2 weeks prior to the interviews, some reported first hearing about it in the last 2 days, while others reported hearing about it weeks or months earlier.

The disparity in responses regarding the timing of the warning appeared to reflect ongoing discussions among IDU regarding the quality of drugs within an unregulated market. In a context of variable heroin quality, a warning concerning strong heroin appeared to get lost in on-going social interactions focussed on the quality of the heroin:

[What were people saying?] That there was some strong heroin. But there's always, there's always messages going around.

(Respondent #7: male, age 46, injecting for approximately 20 years)

When asked to describe the warning, many participants noted that discussions on the street among IDU were focussed first and foremost on heroin quality and not the recent rise in overdose deaths:

I mean, there's not really a lot to discuss, you know. Whether if it's good [heroin] or not, you know? ... It's more about the heroin.

(Respondent #2: male, age 44, injecting for over 20 years)

Other participants pointed out that dealers were constantly telling IDU that the heroin they were selling was particularly strong. This 'selling tactic' was said to be so pervasive that most IDU simply ignored it:

[P]eople say "That's really good stuff, be careful." So many people say that so you'll buy it. That, that's bullshit. Nobody even listens to that any more.

(Respondent #9: female, age 43, injecting for approximately 20 years)

The Reaction: People don't go "warning, warning". They go "good dope!"

(Respondent #11: male, age 48, injecting for approximately 30 years)

Given the variable quality of heroin and the need to avoid opiate withdrawal on a daily basis in the context of long-term dependency, some participants welcomed the news that strong heroin was available. These factors appeared to contribute to IDU's desire to seek the potent heroin described in the warning:

It would probably make me think ... I do a point [a tenth of a gram, 0.1µg] now, and I barely feel it so yeah ... maybe I will look for this stuff ... maybe it will be better ... you know, better high ...

(Respondent #14: male, age 46, injecting for 32 years)

The positive response in relation to the arrival of stronger heroin also appeared to be grounded in the cultural logics of street-based heroin injectors. Within a context where scarce resources, engagement in high-risk income-generating activities and violence are part of daily life, the purchase of low-quality heroin may precipitate opiate withdrawal:

They're glad that there's something out there worth buying. Yeah, you know how disappointed someone is when they're sick [experiencing opiate withdrawal], they go out there, they spend their hard-earned money on dope and they're sick after that?

(Respondent #11: male, age 48, injecting for approximately 30 years)

Nearly all participants noted that information about strong heroin travelled very quickly among local IDU, and suggested that many heroin users would actively and repeatedly seek the strong heroin once aware of it:

I know a lot people that would turn around and go from here to the ... far reaches of the earth to try and find it ... the better it is the less that they do, but the better it is the more they want it.

(Respondent #4: male, age 39, injecting for 23 years)

Injecting Routines: "I just pretty much do like I do every day"

(Respondent 12: female, age 43, injecting for 20 years)

Although the warning contained specific messages about various strategies to minimise risks (e.g. don't inject alone, etc.), nearly all participants reported that they injected heroin according to established routines. Many also offered the view that this was the case for others as well:

A lot of times they just, they just fix like it's their usual, you know what I mean, like as if it was the usual hit they did. A lot of people they don't ... take precautions.

(Respondent #14: male, age 46, injecting for 32 years)

Some noted that these routines have been established for years and are not particularly amenable to change:

[O]nce they get into a routine and they get used to the routine that they do, they do it every day for years and years on end. They won't, it won't change the way they do it.

(Respondent #4: male, age 39, injecting for 23 years)

Invincibility: "Yeah, there's no nervousness ... it does not bother me."

(Respondent #2: male, age 44, injecting for over 20 years)

As indicated above, several individuals reported that while they actively sought the potent heroin, they did not alter their injecting behaviour in accordance with overdose risk reduction messages. Within the accounts of these participants was a narrative about a lack of fear and a sense of invincibility:

[People are a little bit sceptical about the warning?] Yeah. [And why do you think that is?] I don't know, they think they're invincible I guess ... they think they can handle it.

(Respondent #1: female, age 44, injecting for 15 years)

Some participants reported that continued survival and the relative infrequency of severe overdose events in the face of ongoing injecting rendered fatal overdose an unlikely and remote risk to many IDU:

A lot of these people have been doing this for years and if one day they say "well, now the heroin is supposed to be strong ... You do a point [a tenth of a gram] and you might just drop to your knees and that'll be the end of it". A lot of the times that never happens ... [I]n five years I've been injecting, I think it happened once that I did a little bit too much and not that I was dying but I was kind of on a nod ... You figure well, if it's gonna happen, then what are my chances, right? ... So these people are probably thinking, "Well you know, I've been shooting this long for this many years and I'm still here today ..."

(Respondent #12: female, age 43, injecting for 20 years)

"Everyone wants to get high": the desire for intense intoxication

Another prominent narrative in participants' accounts was the desire for intense heroin intoxication. This desire was offered as an explanation for both the eagerness to acquire strong heroin and the avoidance of recommended overdose prevention strategies:

Sometimes they're just pigs and they like to get that nod. I know a fistful of people that that's what their goal is.

(Respondent #15: female, age 42, injecting for 15 years)

I hear from kids every day, right ... they're always asking if it's really strong and so you know that tells you that ... they're looking for the ultimate high.

(Respondent #12: female, age 43, injecting for 20 years)

Some individuals linked the desire for intense intoxication to the emotional suffering experienced by many heroin users. For these individuals, accessing strong heroin was a means to escaping painful memories and the everyday suffering experienced by IDU within the local drug scene, and overdose risks are likely to be a secondary consideration when seeking to get 'out of it':

[E]veryone wants to get high and they want to get out of it. Like they want to get, as much as they can, out of their life. You know everybody's here to escape reality.

(Respondent #9: female, age 51, injecting for 35 years)

Other barriers to the adoption of overdose prevention strategies included the pervasive poverty experienced by many IDU and the high cost of illegal drugs. Although nearly all participants expressed awareness that it was safer to inject with someone else, most said that their heavy dependence and limited financial resources meant they were unable to adhere to cultural norms dictating that one should share their drugs when with others:

... People aren't gonna sit there and watch you do a hit without you sharing, ok? It's really difficult to watch someone get high and not use.

(Respondent #9: female, age 51, injecting for 35 years)

Opiate withdrawal was also said to serve as a barrier to adopting overdose prevention strategies, including recommendations to inject in smaller amounts:

When you're sick, though, you just want to get it in you.

(Respondent #15: female, age 42, injecting for 15 years)

Regular dealers as overdose prevention

Finally, a few participants stated that they did not need to engage in any overdose prevention behaviours as they did not perceive themselves to be at risk because they always purchased heroin from the same source:

I only deal with two people for heroin, right, and I've been dealing with them for so long I don't deal with anybody else. And that's because they don't ... screw around with their heroin the way everybody else does.

(Respondent #4: male, age 39, injecting for 23 years)

Discussion

This examination of an overdose warning initiative revealed that although authorities were able to reach many local IDU with messages about potent heroin, this warning had limited impact in terms of mitigating overdose risks, as well as some unintended negative effects. Consistent with the risk environment framework [14], a diverse set of social, economic and structural forces appeared to interact with individual perceptions and behaviours to overwhelm the messages advocating risk reduction contained in the warning.

Previous research has generated mixed results concerning how quickly overdose warnings penetrate IDU networks [6, 8]. In the present study, while the overdose warning reached nearly all of the participants interviewed, perceptions of the warning and its content were obscured by ongoing social interactions within the drug scene that focussed on heroin

quality. A growing body of literature has highlighted how social relations and norms within drug scenes shape understandings of risk and associated practices among IDU [4, 15, 16]. Although many IDU in this study were talking about the warning, these discussions focussed primarily on the quality of the heroin that was available and where it could be purchased, rather than the elevated risk of overdose it presented. Further, common sales tactics of dealers promoting purportedly potent heroin were reported to have led at least a small number of IDU to ignore messages about overdose risks.

Consistent with the work of Miller and Freeman *et al.* [6, 8], many heroin injectors interviewed viewed the arrival of potent heroin on the local scene as a positive development, and many reported seeking and finding it. However, unique to this study are findings that shed light on why individual IDU seek potent heroin when they are encouraged to avoid it, and why they do not employ risk reduction recommendations promoted by public health officials. Considered within the broader criminalised risk environment and alongside the situated risk perceptions of IDU, the opportunity to obtain potent heroin appeared to outweigh concerns regarding overdose risks. Ethnographic research suggests that IDU's risk perceptions are based upon socially and culturally situated knowledge [15, 17]. Health risks, such as overdose, are understood in relation to other 'everyday risks' that characterise the daily lives of injectors, including the potential for arrest or incarceration, losing drugs to police, opiate withdrawal and interpersonal violence [15, 17]. The opportunity to acquire higher quality heroin could, therefore, be construed as advantageous, as it mediates these other competing forms of risk [18]. The data presented herein also suggest that efforts to acquire higher potency heroin can also be understood as active responses to variations in heroin availability, quality and price, which are determined largely by macro-level structural forces (e.g. policies and laws) aimed at reducing the supply of illicit drugs [19, 20].

Also unique to our study is the identification of a number of individual-level factors that appear to shape responses to overdose warnings. For example, the warning recommended reducing the risk of overdose by altering individual behaviour, including avoiding injecting alone. However, consistent with the work of Miller [8], while some participants reported reductions in overdose risk behaviour, upon further questioning about specific practices it became apparent that nearly all respondents continued to inject heroin in the same way as they had for years. As in the present study, previous research has emphasised the importance of drug-using routines and the meanings ascribed to such routines [21, 22], although this has not been studied widely in relation to overdose risks. Efforts to alter risk behaviour through education efforts appear to reflect a fundamental misunderstanding of the drug user as 'capable of rational decision-making and self-regulation in keeping with risk-avoidance campaigns' [15].

Consistent with the work of Moore [15], we found that many individuals sought the potent heroin out of a desire for intense intoxication. This desire was linked frequently to emotional suffering and the desire to 'escape reality'. These findings further underscore a flawed assumption underlying conventional overdose interventions [15], which assume that IDU will minimise risk at the expense of a stronger 'high'. While previous research has highlighted the relationship between overdose risk-taking and ambivalence towards death [15], unique to our study was the finding that, because of a perceived sense of invincibility, some participants viewed fatal overdose as something that would not happen to them.

It should be noted that a small number of participants reported efforts to manage their risk of overdose. Among the strategies most commonly cited by this group was buying drugs from the same dealer. It is important to understand drug users' everyday practices as 'productive' [14, 23] and active responses to real contextual constraints [14]. Although accessing heroin via the same dealer was viewed by our participants as a way of managing overdose risk, the

effectiveness of this strategy is unknown, and it is unlikely that street-level dealers provide a consistent, unadulterated product, given the complexity of supply chains and the unregulated nature of illicit drug markets [24].

Our findings have implications for public health policy and interventions. Dietze *et al.* have urged caution when implementing strategies focussed on individual overdose risk behaviours [25], as these may produce unintended negative effects. Indeed, they suggest that strategies should focus on informing drug users about responses that reduce the likelihood of fatal overdose. The findings of the present study resonate with these suggestions. Other authors working in our setting have called for the implementation of elaborate overdose warning strategies that include use of peer networks to disseminate such warnings [7]. However, given the findings presented here and by others, the true value of such a system is unclear, and, if implemented, it should be subjected to rigorous evaluation. Also potentially problematic is the focus on potent and adulterated heroin contained in such warnings, as past evidence suggests that these factors may not contribute greatly to heroin-related overdose [1, 26].

Our findings also point to the need to address the social, structural, economic and physical dimensions of the broader risk environment that produce overdose risk. Supervised injection facilities have been shown to be effective in reducing overdose fatalities [12, 27]. However, these interventions tend to be limited by low coverage resulting from limited opening hours, political constraints, and restrictive operating policies [28, 29]. Other approaches include creating low-threshold employment opportunities as a means of addressing poverty and the reliance on high-risk income-generating activities, such as drug dealing and sex for drugs exchanges [30, 31] among IDU. Evidence concerning the positive impacts of take-home naloxone for the reversal of opiate overdose is increasing [32, 33], and the potential of this approach merits further implementation and evaluation. Lastly, there is growing consensus that the criminalisation of drug use has produced an array of unintended negative consequences, including dramatically inflating the price of drugs [34]. A growing number of countries are experimenting with alternative models of decriminalisation and regulation [34, 35], and our data suggest that these models should be further explored and evaluated in the North American context and elsewhere.

This study identifies important limitations and significant unintended consequences of a public health warning regarding high potency heroin and increases in overdose, and documents how a diverse set of individual, social, structural and economic factors undermined the impact of this public health intervention. While additional research is needed to inform the development of novel overdose interventions, efforts to move beyond individually-focussed strategies towards interventions that address the contextual drivers of overdose risk are urgently needed.

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INFORMATION BULLETIN

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Ministry of Public Safety and Solicitor General
BC Coroners Service

BC Coroners Service warns of rise in heroin-related deaths

VANCOUVER — A recent spike in the number of heroin-related fatalities in the Lower Mainland has prompted the BC Coroners Service to issue this public safety warning that higher potency heroin is circulating in the province.

In the first four months of 2011, the BC Coroners Service has seen over 20 cases of heroin-related overdoses, which is more than double the same period in 2010. The BC Coroners Service believes heroin to be a likely factor in several other recent cases throughout the province that are pending toxicology results.

The RCMP has confirmed that heroin being dealt to users in some areas is at least twice as potent as usual. Drug users are at an increased risk of respiratory depression, health complications, overdose and death when they are unaware of this higher potency and ingest their usual amount. Drug users should never be alone when ingesting drugs, and, where possible, should use available community services such as INSITE or needle exchanges where access to medical care is available.

The BC Coroner's Service warns the public that if you see someone who appears to be in medical distress, or if you are in the presence of a drug user who is feeling unwell after using, you should call 9-1-1 immediately. Drug users feeling unwell after using should seek immediate medical help.

The BC Coroners Service is responsible for the investigation of all unnatural, sudden and unexpected, unexplained or unattended deaths in the province. Coroners make recommendations to improve public safety and prevent future deaths.

Contact: Media Relations
Ministry of Public Safety and Solicitor General
250 356-6961

Connect with the Province of B.C. at: www.gov.bc.ca/connect

Figure 1.
The overdose warning flyer circulated by the British Columbia Coroners Service in May 2011