
Staying Safe From Hepatitis C: Engaging With Multiple Priorities

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Abstract

Hepatitis C virus (HCV) infection is a significant global public health problem. In developed countries, 90% of new infections occur among people who inject drugs (PWID), with seroprevalence increasing rapidly among new injectors. Staying Safe is an international, qualitative, social research project, the aim of which is to draw on the experiences of long-term PWID to inform a new generation of HCV prevention strategies. The Sydney project team employed life history interviews and computer-generated timelines to elicit detailed data about unexposed participants' ($n = 13$) injecting practices, circumstances, and social networks over time. The motivations and strategies that enabled participants to avoid risk situations, and which might have helped them to “stay safe,” appeared not to be directly related to harm-reduction messages or HCV avoidance. These included the ability and inclination to maintain social and structural resources, to mainly inject alone, to manage withdrawal, and to avoid injecting-related scars. These findings point to the multiple priorities that facilitate viral avoidance among PWID and the potential efficacy of nonspecific HCV harm-reduction interventions for HCV prevention.

Keywords

addiction / substance use; hepatitis C; illness and disease, prevention; life history; risk, behaviors

Hepatitis C virus (HCV) is a public health problem of increasing global significance. The burden of disease is concentrated among people who inject drugs (PWID), with HCV prevalence rates of more than 50% among PWID reported in 49 countries (Palmateer et al., 2010). Current harm-reduction initiatives have limited HCV prevention efficacy (Palmateer et al.), illustrating the need for a new generation of HCV prevention research and interventions. Staying Safe is a collaborative international project in which a positive-deviance, life history methodology (Friedman, Mateu-Gelabert, Sandoval, Hagan, & Des Jarlais, 2008) is employed to learn about viral avoidance from the experts: people who have been injecting drugs for the long term and who have not contracted HCV. The project team's aim, to learn from the successful adaptations and social conditions of HCV-negative injectors, reverses the epidemiological focus on viral acquisition predominant in contemporary harm-reduction research. The Staying Safe study sites are situated in Australia, Canada, England, Russia, Spain, and the United States. In this article we draw on formative findings from the ongoing Sydney project to explore the motivations and strategies connected with viral avoidance for 13 HCV-negative long-term injectors.

Background

Worldwide, an estimated 170 million people live with chronic HCV, and three to four million people are newly infected each year (Lavanchy, 2008). In industrialized countries the most common route of HCV transmission is through unsterile illicit drug injecting practices, with 90% of new infections occurring among PWID (Health Protection Agency, 2009; National Centre in HIV Epidemiology and Clinical Research, 2009). As epidemiological research has illustrated, new injectors are particularly susceptible to HCV infection. HCV incidence in Australia is reported as 98.2, 52.2, and 31.4 per 100 person years in PWID injecting for less than 1 year, 1 to 3 years, and 3 to 6 years, respectively (Maher, Li, Jalaludin, Chant, & Kaldor, 2007). In the United States, HCV incidence

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in young PWID varies from 17.2 (Hagan et al., 2010) to 26.7 per 100 person years (Page et al., 2009). Data from the United Kingdom indicate that among PWID who have been injecting for less than 3 years, antibody HCV prevalence is 23% (Health Protection Agency). Modeling studies also suggest that PWID are at greatest risk of HCV infection in their first 2 years of injecting (Vickerman, Hickman, & Judd, 2007). These findings highlight a critical need for harm-reduction interventions to be tailored to reach PWID early in their injecting careers.

A number of factors have contributed to the high prevalence of HCV among PWID. These include the high infectivity of the virus, high background prevalence of HCV infection, and the efficacy of parenteral transmission (Thomas et al., 2000). In countries such as Australia and England, where early and widespread harm-reduction measures were implemented, HCV prevalence and incidence remain high (Maher et al., 2007; Vickerman et al., 2007). Indeed, a systemic review of injecting equipment interventions found insufficient evidence to conclude that sterile equipment provision alone is effective in preventing HCV transmission (Palmateer et al., 2010). To augment the provision of clean injecting equipment, health-promotion messages have evolved to focus on the notion of “blood awareness” as a key prevention strategy (Treloar & Fraser, 2004). The efficacy of these messages is also limited, as demonstrated by continuing high rates of incident infection.

Social research has highlighted some of the complexities involved in designing effective HCV prevention strategies. The ability of PWID to implement prevention strategies is limited by the illegal and stigmatized nature of drug injection, and the nature of the social settings, or “risk environments” (Rhodes, 2002) in which drug preparation and injection takes place. Risks of legal intervention and arrest, concerns about overdose, violence, drug withdrawal, access to money, and stigma are factors that compete with HCV prevention for priority in the lives of PWID (Grund et al., 1996; Maher, 2002). For example, PWID often have little or no awareness of or contact with services at initiation (Treloar & Abelson, 2005), and some will not attend health services because of fear of stigma and discrimination (Harris, 2005; Treloar & Rhodes, 2009). Rhodes, Davis, and Judd (2004) found that PWID describe varying levels of knowledge about HCV (cf. Heimer et al., 2002), perceive HCV through an HIV “master status” lens, view HCV as ubiquitous (and therefore difficult to avoid), and experience generational differences in cultures of risk. Other research has elucidated the social and cultural meanings of equipment “sharing” (Bourgois, Prince, & Moss, 2004; Maher) and blood awareness (Treloar & Fraser, 2004), as well as the importance of models of habitual behavior (Treloar et al., 2008)

and moral taxonomies (user, addict, junkie) relating to, among other things, pervasive notions of being a clean and virtuous user (Boeri, 2004). It is also important to understand and explore the impact of social attitudes toward PWID and the individualizing imperatives often present in health-promotion messages (Fraser, 2004; Harris, 2010). These varying levels of influence, from health and risk discourses through to habituation and the negotiation of risk environments, highlight the complex relationships between individual actions and social-structural contexts that harm-reduction initiatives need to take into account.

To date, epidemiological research has primarily focused on identifying the various risk factors associated with incident and prevalent HCV infection. The Staying Safe study reverses this focus by examining the individual, social, and environmental factors associated with long-term HCV avoidance. Long-term injectors who have avoided HCV are, in this schema, the “cases,” whereas HCV-positive individuals, with a comparable injecting history, are the “controls.” This “positive deviance” methodology derives from childhood nutrition studies that were focused on the relative health of some children in settings of widespread malnutrition (Lapping et al., 2002). Successful application of this method in other areas suggests that learning from the strategies and practices of at-risk populations is a key tool for public health research (Stuckey et al., 2010; Walker, Sterling, Hoke, & Dearden, 2007).

Methods

Life History

The Staying Safe study team employed qualitative life history interviews and computer-generated timelines to elicit detailed retrospective knowledge about trajectories of individuals’ practices, circumstances, and social networks over time. The life history approach is useful for placing the individual in a social, economic, and historical context, and is effective in elucidating the practical, physical, and emotional dimensions of learning and practice (Hubbard, 2000). It can also reveal how the practices and strategies of PWID alter over time, as a result of changes in life circumstances, risk environments, drug networks, and HCV-related knowledge, for example. The life history method has been extensively employed in studies of drug use “careers” or trajectories (Hunt, 1997). These studies were primarily focused on individual life trajectories after drug use commencement, with particular attention to patterns of drug use, treatment, and cessation, as well as related trajectories of criminality and incarceration. Individual life histories before drug use commencement

and social roles other than those connected with drug use have, to date, received minimal attention (Boeri, 2004).

Ethical Considerations

Approval for this research was obtained from the University of New South Wales Human Research Ethics Committee. Participants provided written informed consent and were remunerated \$50AUD for the first interview and \$60AUD for the second interview. All participant names used in the article are pseudonyms.

Recruitment

A total of 13 participants were recruited through an ongoing, prospective observational study, The Hepatitis Incidence and Transmission Study-community (HITS-c), which serologically confirmed participants' HCV antibody negative status. The HITS-c study was designed to inform future trials of candidate HCV vaccines in Sydney, Australia. Following 10 months of formative ethnographic fieldwork, field sites were established in several Sydney neighborhoods (Maher et al., 2010) using a purpose built study van. Participants were recruited using a combination of respondent-driven sampling (Heckathorn, 1997) and direct approaches. Eligibility criteria for the study included injecting drugs in the previous 12 months, being 16 years of age or older, and HCV-antibody-negative or not known to be HCV positive. Screening procedures involved the completion of a brief risk behavior interview, pretest counseling, and the collection of specimens for serological testing. Individuals were eligible for enrollment if they screened anti-HCV negative and were willing to provide written informed consent and contact details. Eligible participants were invited to complete a baseline assessment covering the following domains: demographic characteristics, drug use, risk behavior, health service access (including needle and syringe procurement and opioid substitution therapy), and attitudes toward immunization. Participants were remunerated \$50 cash for completion of the baseline procedure.

The eligibility criteria for the Staying Safe study specified HCV-antibody-negative individuals who had injected drugs in the previous 12 months and had been injecting between 8 and 15 years. This period was chosen because it corresponds with the plateau of HCV prevalence among Australian PWID at around 67% (National Centre in HIV Epidemiology and Clinical Research, 2008) and is long enough for most, but not all, PWID to have been exposed to and infected with HCV. Once data collection commenced it became evident that a minority of the participants fell outside of the duration of the injecting criteria, with four individuals reporting injecting histories of 6,

7, 17, and 20 years, respectively. These participants were retained in the study because of the richness of their data.

Participant Characteristics

Twelve of the 13 participants were men, with only one woman available and willing to participate. Participants ranged in age from 25 to 37 years, with a mean age of 31 years. The number of years since first injection ranged from 6 to 20 years. Nine participants had been injecting for 8 to 15 years, 2 participants had been injecting for 6 and 7 years, respectively, and 2 had an injecting history of 17 and 20 years, respectively. All participants had injected drugs in the previous month and their (then) current primary drug was heroin. One participant had injected methamphetamine for the majority of his injecting trajectory before shifting to heroin, and 2 participants had previously injected methamphetamine. Nine participants identified as Anglo Australian, 2 as Vietnamese, 1 as Laotian, and 1 as New Zealand Samoan. Eleven participants had experience of opiate substitution therapies (OST) such as methadone, with 9 currently receiving OST. Eight participants had spent time in jail and 7 had previously attended a residential drug detoxification or rehabilitation program. The majority of participants came from low socioeconomic backgrounds, and 7 of the 13 participants had divorced or separated parents. All of the participants had extensive work histories; however, at the time of the interview, 10 of the 13 participants were unemployed and receiving income support benefits. All of the participants had relatively stable accommodation at the time of the interview; 8 lived with a member of their family: 3 alone with their mother, 2 with both parents, 2 in flats attached to sibling's homes, and 1 with his uncle. The other 5 participants lived in rented accommodation: 2 living alone, 2 with a sexual partner, and 1 with a friend. All but 2 of the participants identified as single, and 1 participant had a child in her sole care.

Data Collection

Interviews for the Sydney project were carried out in South Western Sydney in 2009. Twelve HCV-negative participants were interviewed twice (one man was lost to follow up). Baseline interviews were conducted within 1 to 2 weeks of recruitment and follow-up interviews were conducted within 2 to 4 weeks of the first interview. The area from which participants were recruited did not contain accessible private space (such as private rooms in drug and alcohol services) to conduct interviews. The first five interviews took place in a quiet local park, with the following 20 conducted in a secluded area of the local library. Interviews were audio recorded with the consent

of participants. Detailed field notes were made immediately after each interview.

The first interview comprised a detailed exploration of the participant's life history, with open-ended questions asked about the participant's upbringing, education, and work history; drug use and treatment trajectory; changes in economic and residential situations; and changes in patterns of interaction with social networks, drug using peers, families, medical institutions, and authorities. Within this format there was space for new topics to emerge and for the participant to take the lead, bringing up issues of importance to him or her. As the interview progressed a rough timeline was mapped out by hand by the researcher. This process was visible to participants, who often gestured to areas of the timeline as they spoke and pointed out where notations should be made. Participants were able to make notes and create the rough draft of the timeline themselves if they wished. This coconstructed mapping of the life history helped to facilitate trust and rapport in the interview context, as well as aid participant recall, with the recording of significant events—such as leaving school, first drug use, births, deaths, and jail sentences—helping to prompt memories of drug-using networks, contexts, and practices. After the interview the interviewer entered these dates and events into Timeline Maker Professional (2009) computer software to produce a detailed visual representation of the subject's life history (for an example of a TimeLine Maker Professional timeline see Friedman et al., 2008).

A copy of the graphic computer-generated timeline was taken to the second interview, where it was used to help explore the connections between significant events in the participant's life, his or her social networks, and the strategies he or she employed to "stay safe." The second interview allowed for clarification of issues from the first interview and exploration of prevention tactics. Greater detail was elicited about the participant's drug use trajectories over time; his or her changing strategies to safely acquire and use drugs and injecting equipment; beliefs about how to remain safe; the obstacles he or she encountered in risk avoidance efforts; how he or she overcame or succumbed to these obstacles; as well as the patterns and social settings of his or her drug use behaviors, practices, and peer networks. The computer-generated timeline was frequently referred to in the second interview, providing a valuable tool for aiding participant recall as well as highlighting the interrelationship between significant events in participants' lives and providing a structure for examining drug-using practices over time.

Eliciting retrospective data and compiling this in a timeline format posed unique challenges for the researchers and participants. A number of participants initially expressed reservations about their recall ability, and occasionally provided conflicting information about the

dates, locations, and contexts of events in their first interview. This data was challenging for the researchers to unravel and map out in a linear format, yet the process allowed for contradictions and anomalies to be explored and worked through in the second interview. All participants were given two copies of the computer-generated color timeline to keep, and were enthusiastic about having this coconstructed graphic notation of their life history to take away with them. Reflection on the timeline often caused participants to see aspects of their lives in a new light, with some expressing surprise at how long they had been on methadone, for example. The viewing of a life mapped out in this way could also be challenging for some participants, provoking feelings of loss and regret; these feelings were explored at the start of the second interview. Care was taken to ensure that participants were not left in an emotionally precarious state at the conclusion of either interview.

Analysis

Participant interviews were transcribed verbatim and entered into a qualitative computer software program. Transcripts were checked against the audio recordings for accuracy. Transcripts were coded to inform the direction of subsequent interviews, coding, and case selection. The detailed field notes provided a format for initial analytic memos and were referred back to in the coding and analysis process. Patterns in and across the interviews were coded thematically. Individual interviews and timelines were studied with attention to the interrelationships between viral avoidance; life trajectory; drug-use patterns; network dynamics; and risk context, drawing upon previous scholarship examining the risk environment (Rhodes, 2002). In line with grounded theory analytic techniques (Glaser & Strauss, 1967), initial inductive or in vivo codes were broken down into smaller, more concept-driven categories and used to inform emerging hypotheses. Data saturation was not reached with the data presented here; however, insights from this first tranche of data are of value in informing approaches to HCV prevention. In collaboration with the Staying Safe international partners, the study aim is to generate a fully grounded understanding of the positive deviance process over time and its relationship to HCV avoidance, thus contributing to theoretical development in this area.

Results

A number of participants described a considerable degree of agency in maintaining a safe injecting practice, as well as avoiding situations of potential risk. For the majority of participants, however, the factors that motivated and enabled them to avoid risk situations, and which might

have helped them to stay safe, were not directly related to harm-reduction messages or HCV transmission avoidance (cf. Rhodes et al., 2004). These included the ability and inclination to maintain social and family supports, to “present well” in social networks, to mainly inject alone, to manage opioid withdrawal, and to avoid injecting-related scars or track marks. In this article we explore these findings under the rubric of four interconnected themes: image management, family, managing drug withdrawal, and peers.

Image Management

Nearly all of the participants spoke of the importance of not appearing as an injecting drug user or “junkie.” They often referred to not having “crossed a line” or having gone to another “level,” as Tristan illustrated:

I never, you know, went like that. You know what I mean? That’s levels like the bloke drinking the vomit [containing methadone], you know, like that’s just too far; you can’t do that, you know. Maybe it’s them sort of people taking the risks with the needles, you know. Because they’re out there. There’s a shit load of them. They don’t have that care factor. They’ve got balls of steel. They just don’t give a fuck. Where if I’ve taken something from a shop I’ll do it inconspicuously and hide it, walk out. Where there’s other people that walk in, go and grab the basket, and just walk out with it beeping. You know what I mean? There’s levels, you know. I just wouldn’t do that. I don’t want to be seen doing that. I want to be sneaky, you know. I want to go under the radar. I don’t want to be known.

Tristan’s narrative slid from risk situations involving drug taking to shoplifting, relating other people’s tolerance for extreme risk practices to their “care factor.” He differentiated himself from his injecting peers, stating that he wanted to “go under the radar” or not be noticed as a drug user, a common theme in participants’ narratives.

This narrative demarcation between the responsible drug user Self and the irresponsible “junkie” Other is a common finding in qualitative research involving PWID (Fraser, 2004; Harris, 2009; Radcliffe & Stevens, 2008; Rhodes et al., 2007). Less often reported, however, are the strategies that individuals employ to establish and maintain this sense of self and the potentially protective role these play in regard to viral avoidance and other drug-related harms. Participants’ active constructions of an identity counter to that of the “irresponsible” drug user stereotype were often tied to strategies of image management, of presenting well and being able to adapt to certain social situations. Evan said,

I’ve always been one to take care of myself and like put some gel in my hair and wear, you know, nice clothes, the best clothes that I can get my hands on, and stuff like that. . . . Even though I was using heavily, I still kept a sense of doesn’t look like a drug addict, doesn’t act like one . . . knowing [that] I could walk into anywhere and sort of be who I am without people saying, “Oh, this guy’s a drug addict,” you know, “He’s a dealer.” . . . I’d draw better people, a type of crowd. So you know, or I could easily blend into that crowd.

Specific image-management strategies referred to by participants that enabled them to “go under the radar” or “pass” as “normal” in society (Goffman, 1963) included avoiding the stigma of visible track (injection) marks, maintaining their weight, dressing well, using at home or in private (especially when they anticipated becoming “messy”), keeping their word, and paying their debts. Matt, like the majority of participants, stressed how important it was for him not to be perceived as a person who injected drugs. When asked if he had any strategies for achieving this, he replied,

Eat. Eat. Eat, eat, eat. Eat everything that’s not nailed down. Yeah, just look after yourself. Shower. . . . People just think, well if you don’t care about yourself they’re not gonna care about you either, you know. So, I think I don’t want to be that person, you know.

Weight maintenance was also prioritized by Jonny, who stated,

Some of my mates are real skinny and didn’t eat. I would want to eat and not be so skinny. I would look after my weight, yeah. . . . Probably living at home and with my mum [mother], got to see people and relatives, you know what I mean. “Why’s your son so skinny?” I couldn’t get that bad, even though I won’t hear them say it. It’s sort of my conscience, you know what I mean? I wouldn’t let that happen to myself.

Although participants generally reported taking precautions against using other people’s injecting equipment, many also spoke of how they minimized the reuse of their own needles and syringes. This was apparently not to do with avoiding possible infection, a “dirty hit,” or maintaining venous access, but in all accounts was primarily motivated by wanting to avoid track marks or injecting-related scars. Track marks constituted a visible reminder of the injecting practice, an anathema for participants

concerned with image management and a source of shame for some, even when unseen by others:

Even when I'm in bed by myself . . . I'll put the blanket over my arm just so I don't have to look at it [the injecting scar], you know. I always do that. I always put the sheet or the blanket over my arm. Just, just that part of my arm. My hand sticking out with the [remote] control, you know. So I can't see it. (Tristan)

For Lisa, the importance of avoiding track marks might have inadvertently prevented her from contracting HCV. This was the primary reason she did not share needles with others when she first began injecting, in a street-based drug scene, 17 years previously. She said,

[I didn't share] because I didn't want scars to start off with, and blunt needles give you scars. . . . And that was a massive thing to me, 'cause I didn't want to go home and embarrass my family.

Avoiding injecting scars was also important for Evan. He procured injecting equipment in bulk and displayed considerable foresight in leaving boxes of sterile syringes at places he was likely to inject. This was to ensure he never had to share equipment with others, but also to minimize the chances of reusing his own supplies. He commented, "I like new stuff and, you know, it's good to have those new ones there. . . . And it doesn't leave as big a mark as it does, I think, with the blunt ones."

Although reusing one's own needles and syringes does not, in itself, constitute a HCV risk, it can lead to the unintended sharing of syringes if, for example, another person's syringe is mistaken for one's own. A number of participants mitigated this risk by marking their syringes and/or putting them in a particular place, but this did not guarantee that the syringes would not be discovered, used, and returned by another PWID. Awareness of the damage caused to veins, and in particular the likelihood of scars from reusing needles, motivated participants such as Evan, Phil, and Rhys to use a clean syringe every time. Phil said, "Yeah, [needles] getting blunt mainly, and just leaves scars. Also that picture in the clinics and all that. Once, twice, three, five times used, and you see it wear down." When asked why he did not reuse his own needles, Rhys replied,

From reading things and going to NSPs [needle and syringe programs], you'd see like these pictures on the walls, that show before using it [the needle] how sharp it is; it's under a magnifying glass, so 10 or 100 times [actual size]. After the first time how

blunt it gets, then after two, and then so on. I know that like the blunter it is, (a) it's going to hurt, (b) it's going to cause scarring.

Phil and Rhys both referred to a poster displayed at some needle and syringe programs [NSPs] which showed magnified photographs of a needle reused once, twice, and three times. This poster can be seen as an effective example of health promotion in that it was spontaneously mentioned by a number of participants and appeared to motivate them to use sterile needles and syringes, thereby inadvertently minimizing their chances of contracting HCV and other blood-borne infections.

Family

All participants reported stable accommodation at the time of the interview; 7 of the 13 participants had lived with their mother, parents, or siblings for a number of years. Living in the family home facilitated the maintenance of image-management strategies, such as eating regularly, but the ability to live at home was also enabled by the maintenance of these strategies. As Jonny stated, one of the reasons he prioritized weight management was so that he did not worry his relatives or alert them to the extent of his drug use. This "care factor" enabled him to live at home, which provided him with the resources he needed to maintain his image-management strategies as well as a safe injecting environment:

I don't use on the street or in the car; I use at home and it's always there. . . . I hate to rush and I take my time. Like anyway if you was to use it on the street I reckon I would get busted, 'cause like I need my time. Yeah, I'm that type of person I can't rush it.

Some participants explicitly referred to the ability to live at home as a factor in their viral avoidance. Jake said,

And they [parents] have given me that many chances it's not funny. And anybody else would have just kicked me out like 10 years ago. But I mean I respect them for that. It's kept me safe . . . that's probably why I haven't got hep [hepatitis] C and stuff like that, because I've known I could go home and use and all that. I think, you know, don't really use on the street or with anybody else.

Participants who were living with one or both parents acknowledged that their parents knew about their drug use. Notably, 7 of the 13 participants had mothers who

were nurses and 1 additional participant had nurse and doctor cousins; this was mentioned as significant by many of these participants. For some, their mothers had provided them with safe injecting information:

Well, when mum found out [I was using], you know, she started telling me everything. I knew most of it anyway, but there was things that I didn't know. . . . I didn't know about the spoon; she told me about the spoon, to make sure that [I used] a clean spoon. If she wasn't a nurse, I probably would have shared [spoons]. (Dylan)

However, for many participants, both those who had nurses in the family and those who did not, general messages when they were growing up about “cleanliness” appeared to have impacted on their injecting practice:

Just being a clean person, always wash my hands after going to the toilet, stuff like that. . . . If I wouldn't eat from that spoon why would I shoot from it sort of thing. That's my attitude. . . . More because of my mother, you know, being a clean person. So it was just the cleanliness factor more than, you know, contracting disease factor, I would think. (Evan)

All of the participants stated that they did the majority of their injecting alone. This generally took place in their own or the family home, in their bedroom or a locked bathroom. Injecting alone minimizes the chances of HCV transmission; yet, where opioids and other central nervous system depressants are involved, it presents a risk of overdose (Hagan et al., 2007). Few participants, however, expressed concern about this risk. Participants' motivations for using at home did not involve avoiding HCV or maintaining safe injecting practices, but generally were to do with avoiding police attention and possible arrest/drug confiscation, not having to rush the drug preparation and injecting process, not having to share drugs or be intimidated to share, and being able to relax and enjoy the drug effects. For Dylan, who lived with his mother and injected at home, being able to relax and not interact with other PWID was important: “I usually do it [inject] on my own. . . . I don't like doing it with blokes really, to be honest; they talk too much shit, you know.”

Managing Withdrawal

Injecting alone and at home connects to a recurring theme in participants narratives, that of being able to wait. Many participants spoke at length about how they were able to wait until they got home before injecting, even if they were experiencing heroin withdrawal:

Even when I've been sick, like for a couple of days, and haven't had [metha]done or whatever, I'll still wait until I get home. I don't know what it is. I think it's just because I don't want to get caught. . . . Once when I was first doing it and the police came, and I had to squirt it out, so that was a waste of money. (Dylan)

Jonny also spoke of being able to tolerate heroin withdrawal until he got home, again using this opportunity to differentiate himself from his injecting peers:

Even when I was hanging out [withdrawing], like some people that they'd probably just say they'll score it [buy drugs] from this house, they'd have a shot in the car. Me, I have to get home. Yeah, I was just like that, that's just me, yeah. I could wait.

Living in the family home was described by a number of participants as protective in that it was a safe environment, separate from the influence of drug-using peers and the pressures of the drug scene. Jake, who was living with both parents, spoke with pride of how he could withstand a couple of days of heroin withdrawal, both to bring his heroin tolerance down and so that he would not buy drugs until he had the correct amount of money. This meant that he could avoid potentially risky situations involving the pooling of money and resources, which might have led to sharing drugs and injecting equipment with others:

It [heroin] wasn't around me unless I actually went and got it . . . because I used a lot of the time at home and not with mates; it wasn't around me as much as it should have been. So that's another reason why [I was able to wait].

Tristan, who lived with his mother and primarily injected alone, also stressed the importance of not pooling money with peers to buy heroin, even if this meant going through withdrawal:

Look, I never, ever threw in with anyone because—it's like this: If you know you can't get the money, you'll suffer at home. You know what I mean? When you, when you get the money together, then you go out and get it.

Tristan's approach was informed by the one time he felt himself to be at risk for HCV. In withdrawal and with not enough money he went to his dealer's house, where he was given a deal of heroin to share with a user he had not previously met. He recounted how the other person had mixed the drugs and his concern that the equipment the

person used was not clean. After this experience, Tristan vowed never to put himself in a similar situation, even if it meant going into heroin withdrawal.

A number of participants were not prepared or able to tolerate heroin withdrawal, and cultivated other strategies and relationships to maintain a regular supply of drugs and/or money. Phuoc invested considerable energy in maintaining family relationships, paying his debts, and ensuring he had a good reputation with his drug-using peers. This was protective in that it helped him to avoid heroin withdrawal and potentially risky injecting situations when he ran out of money or drugs. When asked what he did in these situations, Phuoc replied, "Family. I'd ring up [telephone] friends, see if they can help me out, like with gear. . . . When it came down I could always get money or drugs from somewhere if I really had to." Other participants, such as Kai and Dylan, also spoke of the importance of maintaining a good reputation with peers and family, specifically in regard to paying debts, being well liked, and keeping their word. Kai said, "It is important to maintain a good reputation, to not owe money. . . . Yeah, I'm not in debt or nothing like that." Dylan said, "When you're a drug user that's all you've got left is your word, that's it. You got nothing else left. So you have to keep it. It's the only thing you got left."

Peers

The results presented so far emphasize the individuation of participants' practices and circumstances. A life history approach provides the opportunity to examine practices and circumstances over time. Although participants generally stated that they did the majority of their injecting alone, this was not always the case. A number of participants learned about safe injecting practices from peers, by observing others inject or being explicitly instructed about safe practices when injecting together. For example, Phil said,

I think the first time, he mixed up everything clean and . . . he done me. He was telling me all the steps, like you've gotta be clean, this and that. And it was all wrappers there and that. And he's always been clean; he hasn't got it.

Tied into information exchange during the early stages of injecting was the provision of equipment by peers. Participants commented that it was generally easy to access injecting equipment later in their injecting careers, and most used a mix of NSP, pharmacies, and vending machines. In reflecting on the early years of injecting, participants noted the important role of peers in providing equipment and establishing norms of injecting practice. Kai spoke of his dealer: "In his house he's obviously got

like everything in bulk, so everyone [is given] their own equipment. And he's pretty fussy on that sharing shit, as well."

Discussion

Our research is consistent with previous research in drawing out the complex relationships between individual actions and social, economic, and physical contexts. What is notable and accords with the findings of the New York Staying Safe study (Friedman et al., 2008; Mateu-Gelabert, Sandoval, Meylaks, Wendel & Friedman, 2010; Mateu-Gelabert et al., 2007) are the multiple intentionalities that informed participants' abilities to avoid viral risk situations and the agency demonstrated in their use of available social and structural supports to establish and maintain safe living and injecting environments. Image-management tactics such as maintaining weight, dressing well, using at home or in private, avoiding track marks, keeping a good reputation, and paying debts were also strategically deployed by the Sydney participants to help them avoid stigma, maintain social supports, and thereby preserve safe living and injecting environments, drug supplies, and people to borrow money from.

The family home was described as a protective space, somewhere away from injecting peers, where unhurried injecting and, if necessary, heroin withdrawal could take place. Injecting spaces are bound up with notions of identity (Rhodes et al., 2007). A lack of control over the injecting environment can exacerbate feelings that HCV transmission is inevitable and unavoidable (Rhodes et al., 2004), and diminish PWID belief in their ability to avoid infection. These findings regarding the use of the family home as an injecting space indicate the relevance of macro structural approaches to HCV harm-reduction interventions, such as the provision of safe spaces for people to inject, either in the form of subsidized accommodation where injecting is permitted, supervised injecting locations, or modifications to existing injecting environments (Rhodes et al., 2006). However, for many participants the family home provided more than a safe injecting and heroin withdrawal location; it also facilitated the provision of social support, food, and amenities, as well as accommodation. These were, in turn, important for and facilitative of image management.

Our results suggest that an epidemiological focus on risk factors can obviate accounts of the supports and practices that might inadvertently be protective, but are not consciously tied to maintaining safe injecting practices. We draw on and add to risk environment theory (Rhodes, 2002) to illustrate the potentially enabling interplay of supportive environments, personal pragmatic motivations, and social ties on safe injecting practice. "Staying safe" from HCV infection can be seen in the participants'

narratives as an often unintentional effect of strategies aimed at managing image, drug supply, and effects, as well as social and family supports. The presence of social, family, and employment supports and obligations have been associated with the “controlled” or occasional use of drugs such as heroin or cocaine (Blackwell, 1983; Cohen & Sas, 1994; Zinberg, 1984). Although the participants in this study were regular rather than occasional drug users, aspects of drug use that were controlled by some participants included management of withdrawal, money (that is, paying debts), and drug-using environment. Just as the controlled drug use literature refutes a causal link between the pharmacological properties of drugs and inevitable dependency, our findings lead us to reject stereotypes of dependent heroin users as invariably being out of control or chaotic.

Family resources and relationships, including other relationships of care, operated as protective social resources in many participants’ narratives. Radcliffe and Stevens (2008) stated that it is essential that drug users are enabled to build social networks that support recovery rather than being enclosed within a world where their only contacts are with drug workers, users, and dealers. It is important to note, however, that the establishment and maintenance of social networks outside of drug use, such as supportive family ties, can be linked not only to moving out of drug use, but to sustaining safer practices while using. For the potentially protective benefits of supportive non-drug-using networks to be extended there needs to be a cultural shift in attitudes toward injecting drug use and PWID (Jackson, Parker, Dykeman, Gahagan, & Karabanow, 2010). A pervasive cultural stigmatization of PWID (Harris, 2009) perpetuates the withdrawal of PWID from many of their wider social relationships, contributing to diminished avenues of social support and a sole reliance on potentially risky peer relationships (Jackson et al.).

The frequency with which participants reported injecting alone and at home, and their lack of concern regarding overdose, also indicate a need for innovative overdose-prevention strategies, both for users and their families. As illustrated by participants’ narratives, overdose prevention advice to never inject alone might not be congruent with the desire of some PWID to relax and enjoy their drug use away from the company and pressures of injecting peers. Similarly, advice to test heroin first might be unrealistic when faced with the realities of needing to alleviate opiate withdrawal and/or the desire to gain the maximum drug effect (Miller, 2009; Moore, 2004). The provision of take-home naloxone is currently prohibited in Australia, despite international evidence demonstrating that this drug can be safely and effectively administered by PWID, their family members, and outreach workers to counteract the overdose (Kim, Irwin, & Khoshnood, 2009; Lenton, Dietze, Darke, & Butler, 2009).

Although injecting alone and at home featured strongly in the participants’ narratives, all injected with peers at various stages of their drug-use trajectory, especially in their first years of injecting. It was in these contexts that participants learned about injecting practices, either from being explicitly instructed by peers or by copying the practices of individuals they trusted. The valuable role of peers in harm-reduction interventions is widely recognized (Treloar & Abelson, 2005), but efforts to incorporate peer education training with syringe provision are hampered by current laws in Australia that prohibit anyone who is not an authorized NSP or pharmacy worker to distribute injecting equipment (Australian Injecting and Illicit Drug Users League, 2010). As illustrated by the data presented here, a tension exists between the enabling and constraining relationship of drug-using peers to injecting safety. Although peers can be a valuable source of harm-reduction information, sterile equipment provision, and overdose protection (Treloar & Abelson), the reticence that many of the Staying Safe participants displayed regarding injecting with peers illustrates the potential risk that can be embodied in these relationships (Jackson et al., 2010).

Our study has limitations. The analysis presented here was based on a small sample which included only one woman, and most (69%) of our participants were enrolled in opiate-substitution treatment. Although 25% of the HITS-c participants were women, reflecting the gender distribution of PWID in Australia (National Centre in HIV Epidemiology and Clinical Research, 2009), it appeared that women were less willing to participate in the Staying Safe qualitative interviews, possibly because of competing demands including childcare responsibilities. Ongoing recruitment will purposively sample women and, if possible, injectors who are not enrolled in opiate-substitution treatment programs. The ongoing nature of this study means that the data presented had not reached saturation. The themes emerging from the data do, however, provide direction for future harm-reduction messages and provide an important contribution to the prevention landscape.

Our findings highlight the potential for innovative messages for PWID who are at different stages of their drug use. Our primary interest here is the prevention of HCV; hence, people new to injecting are the primary audience. In the early stages of injecting, avoiding withdrawal or managing dependency might not be relevant. What will be relevant, typically, are messages and strategies for PWID that enable them, if desired, to “pass” as “normal” in society and to avoid attracting the “spoiled identity” of a drug user (Fraser & Treloar, 2006; Goffman, 1963). Information about hygiene and vein care might be more relevant and appealing to people who are relatively new to injecting drug use. Previous work

has shown that hygiene is an important influence on people with longer periods of injecting drug use (Treloar et al., 2008). However, a focus on vein care for the management of image or family and social relationships might require a significant shift for harm-reduction services and funders which have been structured, governed, and evaluated by an emphasis on a disease model, rather than an emphasis on broader notions such as maintenance of social well-being. Those who have been injecting for longer periods and more frequently might be more appropriately targeted with withdrawal-management messages for HCV prevention. Our data suggest that innovative HCV-prevention strategies not only necessitate a shift from a sole focus on “blood awareness” but also require better targeting and more sophisticated messaging based on issues that are beyond the gaze of typical HCV health-promotion initiatives.

In conclusion, our results illustrate the way in which strategically fulfilling needs for privacy, social support, and drug and money access can inadvertently create situations that support blood-borne virus risk avoidance. The risk-avoidance strategies employed by the participants were not necessarily HCV-focused, but linked to a network of other strategies that revolved around “passing” in society (Goffman, 1963), maintaining good social relationships (with families, dealers, and using peers), avoiding arrest, maintaining control in the drug-using situation, and being able to enjoy the drug effects without feeling rushed or pressured. These findings point to the need for health promotion to consider “non health orientated interventions” (Rhodes, 2002) such as housing, social inclusion, and other social support provision for PWID, as well as targeted interventions that address the needs of PWID at different stages of their injecting trajectories. The Staying Safe positive-deviance framework, in operating from a strengths- rather than a deficit-based approach, highlights the way in which long-term injectors exercise agency and control in their lives. By unpacking the multiple intentionalities at play in the protective strategies PWID employ, harm-reduction interventions can more appropriately harness and engage with the strengths exhibited by PWID to devise nonstigmatizing interventions grounded in the realities of their daily lives.

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