

Information exchange among injecting drug users: a role for an expanded peer education workforce

Carla Treloar*, Jeanne Abelson

National Centre in HIV Social Research, Level 2, Webster Building, University of New South Wales, NSW 2052, Australia

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Abstract

Hepatitis C incidence continues to be high among people who use injecting drugs (IDUs), particularly those in late teenage years, which corresponds with the typical age of initiation of injecting. Initiates are rarely, if ever, in touch with services supplying safe injecting information. Alternative ways of providing this information are needed. This study included a quantitative survey of 336 young IDUs (<25 years) from three sites in Australia. A sample of 24 young IDUs also participated in in-depth qualitative interviews. Quantitative results indicated that the majority of participants acquired information from formal sources such as pamphlets and NSPs. However, interview data suggest that information acquisition occurred well after initiation: initiates possessed at best “common sense” knowledge about injecting. The majority of survey participants passed on information to their peers. However, the qualitative data show that many issues were discussed among injectors, not only safe injecting, and that inaccuracy of information from some IDUs could result in perpetuation of myths and misinformation. These findings suggest a need to expand the scope and content of peer education activities by building on the demonstrated culture of information exchange between IDUs. Particularly useful may be a workforce model of peer education managed by non-government organisations.
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Introduction

Recent reports indicate a doubling of hepatitis C incidence among 15–19 year olds in Australia (Dore et al., 2003). This age bracket corresponds with the age at which initiation to injecting drug use typically occurs (Swift, Maher, & Sunjic, 1999). People new to injecting drug use, or near-initiates, need information about safe injecting relevant to prevention of hepatitis C transmission. This includes information about possibilities of transmission through sharing of needles and syringes as well as other equipment and injecting paraphernalia (Crofts, Aitken, & Kaldor, 1999). However, initiates are unlikely to be in contact with services which provide this information. This scenario suggests a need to examine alternative ways to deliver information about safe injecting practice to this high risk age group.

New injectors often know little about injecting, what to expect during injection, or how to engage in it safely (Claire, 1995). New users are less likely than more experienced users to have knowledge that might motivate them to protect themselves from drug-related harm. There may be a tendency on the part of new injectors to reject messages from official sources as ‘scare tactics’ (Kleinman, Goldsmith, Friedman, Hopkins, & Des Jarlais, 1990).

However, in some cases, novice injectors may have witnessed previous injections, and therefore have gained some vicarious knowledge, or explicit tuition, in injecting technique and the consequences of injecting, both good and bad (Claire, 1995; Swift, Maher, & Sunjic, 1999). If initiates possess any other types of knowledge about health issues around injecting, use of particular drugs, amounts, combinations, and the basic survival skills needed to be a safe drug injector, these are also likely to have been obtained from more experienced injectors (Claire, 1995; Power, Jones, Kearns, Ward, & Perera, 1995).

* Corresponding author. Tel.: +61 2 9385 6959; fax: +61 2 9385 6455.
E-mail address: c.treloar@unsw.edu.au (C. Treloar).

It is unusual for the first injection to be taken alone. Claire (1995) reported that initiation of injection usually takes place in the presence of a more experienced injector who oversees the injection process and teaches the novice injector how to prepare a safe drug mixture. Most studies reveal that injectors were initiated by a sexual partner (Pierce, 1999; Power, 1989; Powis, Griffiths, Gossop, & Strang, 1996; Rhodes & Quirk, 1998), friend (Louie, Krouslos, Gonzalez, & Crofts, 1998; Pierce, 1999; Power, 1989; Stephens, 1991), or acquaintance (Stephens, 1991); it is rare to be initiated by a stranger. Most people who inject drugs (IDUs) report that their first injection occurred in social circumstances and, for many, their first injection appears to have been largely spontaneous in nature (Stephens, 1991). The novice injector may be quite unprepared for injecting (Claire, 1995). Crofts, Louie, Rosenthal, and Jolley (1996) suggest that the way in which a person is first initiated into injecting is likely to influence that person's future injecting practice and risk-taking behaviour.

Access to safer injecting information is vital for the prevention of hepatitis C transmission among people who inject drugs. As initiation to injecting drug use typically occurs in a social setting and as the initiation experience is likely to influence subsequent injecting practices, the networks formed around injecting may have significant impact on information exchange within these networks. This paper examines knowledge levels and information exchange among young injectors in relation to key variables such as location, drug of choice, age of initiation, HCV status and risk practice. Quantitative survey data are used to report patterns of information exchange and qualitative interview data to illustrate and extend understanding of information access and exchange at initiation and later in injecting drug use.

Method

Quantitative survey

All participants were required to be between 16 and 25 years of age, to report an injecting history of four years or less and to have injected illicit drugs in the past six months. Data for calculating response rates were not collected.

Participants were recruited between December 2000 and February 2002 by convenience sampling from three sites on east coast Australia: urban Sydney, urban Brisbane, and the rural Northern Rivers area of New South Wales (NSW). Recruitment fliers were posted in youth shelters, treatment centres, emergency rooms, public health clinics, and needle and syringe programs (NSPs). The study was also advertised in a wide range of local subcultural press. Participants were offered A\$ 20 at the completion of the interview for travel expenses and as acknowledgement of the time required for participation.

Peer interviewers were recruited through drug user organisations, NSPs, and subcultural press and trained to screen

participants for eligibility, obtain informed consent, administer the structured questionnaire and provide referrals. Peer interviewers were used in Brisbane and Sydney to conduct interviews. The interviewer in the Northern Rivers area was not a peer interviewer.

The structured questionnaire contained approximately 140 questions and was developed from the literature and by consultation with key informants. The topics covered in the questionnaire included: sociodemographics; self-reported hepatitis C status; first injecting experience; factors associated with initial injecting; knowledge about acquisition and treatment of blood-borne viruses (BBVs), namely, hepatitis B, hepatitis C, and HIV, and of sexually transmitted infections; information exchange; and, current and past patterns of drug use and injecting practice. The questionnaire was administered in a face-to-face structured interview and took approximately 30 min to complete.

For the purpose of analysis, participants were grouped according to whether or not they nominated 'formal' information sources (pamphlets, NSPs, youth services, drug treatment venues, doctors and nurses, fit packs, and school teachers) or 'informal' information sources (partner, family, schoolmates, workmates, club buddies, friends, acquaintances, and dealers).

To classify participants into one of two main drug classes, participants were asked "which drug did you most frequently inject". Participants who most frequently injected heroin or methadone, or combinations of drugs including heroin or methadone, were categorised as 'opioid users'; and those who most frequently injected (meth)amphetamine, cocaine, or combinations of drugs including (meth)amphetamine, but excluding heroin and methadone, were categorised as 'stimulant users'. Participants using both heroin/methadone and (meth)amphetamine were classified as opioid users. The measure of severity of dependence was based, with slight modifications, on the SDS (Gossop et al., 1995).

The injecting risk practice variable consisted of a combination of responses to two questions: 'In the last 6 months how many times have you reused someone else's fit, even if it was cleaned?' and 'In the last 6 months have you used any of the following after someone else—spoon, swab, filter, tourniquet?'. Only those who stated that they *never* re-used or borrowed 'fits' or equipment from others were included in the non-risk-taking category.

Participants were grouped as either early or late initiators by their self-reported age at initiation of injecting drug use. Early initiators were those reporting initiation between 12 and 18 years of age and late initiators were those reporting initiation between 19 and 24 years of age.

The knowledge scale was formed from 16 items concerning knowledge about prevention, acquisition and treatment of HBV, HCV, HIV, and STIs (see Appendix A). Items were coded so that high scores on the scale reflected a greater degree of knowledge about BBVs and STIs. Scores on this scale ranged from 0 to 16, with a mean of 11.9. Coefficient alpha in the sample was 0.79.

The summary statistics are presented mainly as counts and proportions. Chi-square tests of association were used to examine statistical significance between categorical variables. Means were compared using analysis of variance (SPSS Inc., 1999).

Qualitative interviews

Interview participants were mostly drawn from those who completed the quantitative survey. A small number of additional participants were recruited for the Sydney sample who were identified and recruited through snowball sampling with participants from another project. Similar to above, participants were offered A\$ 20 at the completion of the interview.

Participants were asked to provide retrospective accounts of transition and initiation to injecting. Information was also requested about: drug use career; contexts of use; past and current membership of IDU networks; mobility between networks; the initiation process, including the role of the initiator (where applicable); factors influencing transition to injecting; barriers to use of non-injecting routes of administration; current pattern of drug use; knowledge of risk and HCV transmission; information exchange; and, past and present sources of knowledge.

Interviews were audio-tape recorded with participants' consent and recordings were transcribed. All identifying information was removed and each participant was assigned a pseudonym. A summary was made of the context, practices and stated knowledge at the time of first injection and subsequent injecting practices. Close reading of these summaries produced themes and associations between experiences. Quotes were selected on the basis of clarity of expression to describe main themes emerging from the data. Quotes are attributed by pseudonym, age of first injection and current age, drug of initiation and current drug most frequently injected, e.g. James, 17–23, 'speed'-'heroin'.

Results

Quantitative sample

The sample comprised 336 participants: 165 (49%) in Sydney, 119 (35%) in Brisbane and 52 (15%) in Northern Rivers. Participants were 16–25 years of age, with a mean age of 21.2 years. Forty-one percent of the sample was female, and 58 percent male. Three participants described themselves as 'transgender'. Most participants were born in Australia (86%) and identified as heterosexual (73%) (Table 1). Most participants had completed up to and including year 10 schooling (64%) and relied on government benefits as their main source of income (58%). Twenty-eight percent of the sample reported employment as their main source of income. Most participants (67%) lived in a rented house or unit, or a boarding house or caravan and lived with one or more persons (83%).

Table 1
Categorical demographic variables for survey participants ($N = 336$)

	<i>n</i>	%
Gender		
Male	196	58.3
Female	137	40.8
Transgender	3	0.9
Country of birth		
Australia	288	85.7
Overseas	44	13.1
NR	4	1.2
Ethnicity		
Aboriginal/Torres Strait Islander	55	16.4
Other	272	81.0
NR	9	2.7
Sexual identity		
Heterosexual	244	72.6
Gay	27	8.0
Bisexual	51	15.2
NR	14	4.2
Highest level of education		
Over year 10	119	35.4
NR	2	0.6
Age at leaving school		
<16	144	42.9
16 and over/still at school	192	57.1
Current housing situation		
Rent/boarding/caravan	225	67.0
Squat/shelter/homeless	60	17.9
Privately owned house/flat	50	14.9
NR	1	0.3
Current main source of income		
Full-time employment	54	16.1
Part-time employment	41	12.2
Government benefits	196	58.3
Other	44	13.1
NR	1	0.3
Current living situation		
With others	278	82.7
Alone	57	17.0
NR	1	0.3
Family who currently inject		
Immediate family	66	19.6
Extended family only	13	3.9
Neither	257	76.5
Current partner who injects		
Yes	135	40.2
No	59	17.6
NR	142	42.3

NR—no response/don't know/missing data.

At the time of interview, 20% of respondents reported having immediate family who currently injected and 4% had extended but no immediate family who currently injected. Forty percent had a current partner who injected.

The average age at initiation was 18.5 years. About half the sample (50.3%, $n = 169$) were 'early initiators'. Forty-three percent of the sample was HCV negative, 24% HCV positive and 33% did not know their HCV status (by self-

report). Almost half the sample (46%) reported having re-used someone else's injecting equipment of some kind in the past 6 months.

Fifty-six percent of the sample had been injecting for over 24 months, and frequency of injecting was on average once a day. Severity of dependency, as reported by participants, was not particularly high (mean = 5.5, on a scale with range 0–15). Just over half (52%) had injected opioids rather than stimulants most frequently in the past six months. Knowledge of BBVs and STIs was, on average, quite high (mean = 11.9, on a scale with range 0–16).

Qualitative sample

A total of 24 interviews were conducted: 11 in Brisbane and 13 in Sydney. More than half the participants were male ($n = 15$), aged from 16 to 25 years and were not employed ($n = 12$ unemployed, $n = 4$ employed, $n = 2$ student, $n = 6$ not recorded). Twelve participants were living in rented accommodation and eight in transient accommodation (homeless, squat, refuge or hotel): data were not recorded for four participants. Fifteen participants described opioids and eight stimulants as their drug of choice (i.e., drug most frequently used). One participant could not differentiate between opioids and stimulants as drug of choice. Length of time since first injection ranged from less than one year to more than 5 years, with most having injected for 3–5 years. Six of the 24 participants self-reported a positive HCV status. One of these participants stated that she had intentionally re-used someone else's injection equipment so as to infect herself with HCV. Two other participants stated that they had acquired HCV through accidents which did not involve injecting drugs. Fourteen participants self-reported as having HCV negative status, while four did not know their status or had not been tested.

Quantitative results

Overall, respondents' most common sources of information about HCV and safe injecting practices were: pamphlets (64%), NSPs (63%), friends (47%) and doctors or nurses (34%) (Table 2).

A majority of respondents (89%) reported having obtained at least some of their information from formal sources. Ten percent reported obtaining information only from informal sources.

The topic of information passed on to other injectors is shown in Table 2. Although information about BBVs was passed on by 20–35% of participants, other topics were discussed to an equal or greater extent, including NSPs, disposal issues and the law relating to injecting drug use. Forty-five percent of participants claimed not to have passed on any information.

There were no significant differences between recruitment locations in terms of BBV knowledge scores or use of formal and informal sources of information (Table 3). However,

Table 2
Information handling as reported by survey participants: affirmative responses only ($N = 336$)

Information source	<i>n</i>	%
Formal source		
Pamphlets	214	63.7
NSP	210	62.5
Youth services	103	30.7
Drug treatment centres	80	23.8
Doctors or nurses	114	33.9
Fit packs	90	26.8
School teachers	41	12.2
Informal source		
Partner/s	55	16.4
Family	46	13.7
Schoolmates	24	7.1
Workmates	14	4.2
Club buddies	38	11.3
Friends	157	46.7
Acquaintances	72	21.4
Dealer/s	29	8.6
Other	28	8.3
Used formal information sources +/-other sources	298	88.7
Used less formal sources only	32	9.5
Topic of information passed on		
Hepatitis B	75	22.3
Hepatitis C	119	35.4
HIV	99	29.5
NSP	153	45.5
Needle disposal	162	48.2
Law	85	25.3

participants from the smaller, regional recruitment centre of Northern Rivers, reported significantly higher rates of passing on information to other people who inject drugs than participants from other locations ($P < 0.01$).

Drug most frequently used was related to sources of information accessed. Participants who most frequently injected opioids (as opposed to stimulants) were significantly more likely to have accessed formal sources of information and less likely to have accessed informal sources of information about safer injecting practices ($P < 0.05$). There were no significant differences between opioid and stimulant users in terms of knowledge scores or information exchange with others who inject drugs. Also, there were no differences between early and late initiators in relation to knowledge levels, reported sources of information about BBVs, or in relation to the passing on of information to other IDUs.

The experiences of being tested for hepatitis C and also receiving a positive diagnosis may influence knowledge levels, information access and information exchange. When length of injecting career was controlled for, those participants who had been tested for hepatitis C reported significantly higher BBV knowledge scores than those who did not know their HCV status ($P < 0.001$) and reported greater use of formal information sources ($P < 0.05$). Those with hepatitis C were more likely than others to report passing on information to others IDUs about BBVs ($P < 0.001$).

Table 3
Information handling by survey sample characteristics: affirmative responses only ($N = 336$)

	Knowledge score	Used formal sources of information +/- other sources		Used informal sources only		Passed on information about BBV +/- other information	
		<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Recruitment location							
Sydney	11.7	149	90.3	14	8.5	66	40.0**
Brisbane	12.0	102	85.7	13	10.9	34	28.6
Northern Rivers	12.5	47	90.4	5	9.6	30	57.7
Total	11.9	298	88.7	32	9.5	130	38.7
Current Drug Injected							
Opioids	11.9	162	92.0*	11	6.5*	70	39.8
Stimulants	12.0	136	85.0	21	13.1	60	37.5
Total	11.9	298	88.7	32	9.5	130	38.7
Age at initiation							
Early	11.7	155	91.7	11	6.6	62	36.7
Later	12.2	143	85.6	21	12.6	68	40.7
Total	11.9	298	88.7	32	9.5	130	38.7
HCV status							
Negative	12.5***	130	90.3*	13	9.0	56	38.9***
Positive	12.5	76	95.0	4	5.0	48	60.0
Status unknown	10.8	92	82.1	15	13.4	26	23.2
Total	11.9	298	88.7	32	9.5	130	38.7
Risk-taking status							
Not borrowed	11.7	159	87.4	19	10.4	57	31.3**
Borrowed	12.2	139	90.3	13	8.4	73	47.4
Total	11.9	298	88.7	32	9.5	130	38.7

* $P < 0.05$ (significant differences are by comparison with non-affirmative responses).

** $P < 0.01$ (significant differences are by comparison with non-affirmative responses).

*** $P < 0.001$ (significant differences are by comparison with non-affirmative responses).

Current injecting risk practice was not related to knowledge scores or information sources. However, those with riskier practices were more likely to have passed on information about BBVs to their peers ($P < 0.01$).

These quantitative data provide a snapshot of knowledge levels and information access and exchange at the time of interview. These data cannot provide insights into the level of knowledge or access at the time of initiation or the quality of the data passed on by participants in the present. The qualitative interviews with young injectors provide some additional data to expand our understandings of these processes.

Qualitative results

Although the survey data suggest good levels of knowledge overall, most interview participants described a low level of knowledge about HCV and safe injecting at the time of initiation beyond “common sense” knowledge around “AIDS and never to share needles”. This knowledge was gained from school or media and did not include specific details about HCV prevention or other issues of safe injecting.

There were few reported incidents of detailed information being passed on at initiation. Typically participants stated that awareness of safety issues around injecting “comes later on as you find out” (Jon, 18–24, ‘speed’-‘speed’) and was acquired gradually after initiation. Participants who were supplied with their injecting equipment by someone else at time of initiation appeared to have less knowledge about safe injecting practices than those who were actively involved in obtaining their own equipment.

A minority of participants did seek information or advice prior to initiation. Usually they acquired this information through other activities such as body piercing, “being on the streets”, accessing youth services or the information sought was concerned with the effects of drugs such as “the effects of it, the health risk” (Jill, 18–23, ‘speed’-‘heroin’), not issues of injecting safety and BBV.

Information obtained prior to initiation was unlikely to have been sufficient to ensure safe injecting practices and in some cases may have reinforced a misleading emphasis on *who* was involved, rather than risk behaviours. For example, Garth (17–25, heroin-heroin) recalled that the initiation equipment with which he was supplied probably had come

out of a packet, as he would recognise it now. He claimed that he discussed injecting safety issues before initiation and was assured by a friend that he would be safe if he was initiated by someone “decent and reliable”.

Few participants reported being given information at initiation that went beyond “common sense” notions of not sharing needles and syringes to include the use of other equipment. For example, Beth (22–23, ‘speed’-‘speed’) was one of the few participants who was given more detailed information. Beth was initiated by her partner who told her about “hep C and . . . what you can contract and clean needles and how to swab and tournie and I wouldn’t have known that”. Also, Josephine’s initiator told her “not to share equipment” (19–20, ‘heroin’-‘heroin’).

Some participants spoke of their role in passing on information, and of the need to make this information specific to HCV prevention. For example, Kerrie (15–23, ‘speed’-‘heroin’) stated “I think us older ones educate the younger ones a lot” and that she passes on information such as “don’t pass on tourniquets . . . that could have the tiniest speck of blood on it”. However, only a minority of interview participants reported passing on information about safe injecting and BBVs. Similar to the quantitative data, numerous other topics were discussed by interview participants including: warnings against injecting into hands, warnings against “shooting up dodgy stuff”, descriptions of the effects of different drugs and details about drug filtering. Other information passed on included adverse effects of drug use such as blood poisoning, abscesses, air bubbles and the risk of developing a drug “habit”.

A number of sources of information were used by participants once they had begun injecting more frequently, such as: services, friends, magazines for drug users or street culture, word of mouth and courses. However, information was not generally sought prior to initiation. Thus, one participant claimed that he did not know “anything about hep C until [he] was diagnosed” with it (Clint, 15–19, ‘speed’-‘heroin’).

Discussion

This quantitative and qualitative study with young IDUs shows that the majority of participants had passed on some information to other injectors concerning safe injecting, prevention of blood-borne viruses and related issues. However, this information was rarely discussed or made available at the time of initiation or prior to initiation. Instead, it was accumulated gradually by participants after initiation and with subsequent exposure to injecting networks. Typically initiates possessed at best “common sense” knowledge about blood-borne viruses and blood awareness which is not sufficient for hepatitis C prevention. From interviews with injecting drug users in London, [Davis, Rhodes and Martin \(in press\)](#) also described the “common sense” notions of hepatitis C risk and the difficulties this poses for further behaviour change (especially when compared

to HIV) and in energising social action for hepatitis C prevention.

The quantitative findings showed differences in information levels and exchange patterns depending on recruitment location and drug most frequently used. Age at initiation on the other hand appeared unrelated to levels of knowledge, source of information and rates of information exchange. Young injectors were more likely to pass on information if they lived in small, regional centres (i.e., Northern Rivers) or use opioids most frequently, rather than stimulants.

The fact that survey participants from the Northern Rivers area of NSW were more likely than those from Sydney or Brisbane to pass on information may be related to differences in drug networks and subcultures. Relatively small centres such as the Northern Rivers area, while they may have limited access to formal resources, also have a smaller injecting community, which may facilitate informal exchange of information.

Stimulant users were less likely than opioid users to access formal sources of information. This result supports previous claims that the reach of health promotion messages into networks of stimulant users is inferior to that achieved with opioid injectors ([Crofts et al., 1994](#)).

HCV testing was associated with higher knowledge of BBV transmission and safe injecting. Those young injectors who did not know their HCV status were more likely to have lower knowledge scores. However, these results could be interpreted in two ways. Greater BBV knowledge may have provided the impetus for testing, or may result from exposure to the test environment.

These results can be interpreted as suggesting a need for expansion in the scope and content of peer education activities in hepatitis C prevention. Initiates or near-initiates are typically not in touch with services which can provide safe injecting information but are in touch with and are usually guided by their peers. As we have demonstrated, although most IDUs pass on some information to others, this does not usually occur at the time of initiation to injecting. Also, there is potential for misinformation to be reproduced, including notions such as injection is safe if the initiator is “decent and reliable”. Further, those with risky practices are more likely than others to pass on information. Without training and education, the information passed on may be of questionable value or even harmful.

These findings (a) suggest that the peer group is a natural source of information and (b) show the importance of equipping the peer group to pass on accurate information. It may be possible for peer education programs to build on the role of more experienced peers to provide information, model safe injecting practices or even discourage injection ([Hunt, Stillwell, Taylor, & Griffiths, 1998](#)). Previous research has shown an existing culture within drug using networks that accords particular individuals a special status whereby these individuals are sought out by others to provide knowledge and care around drug use. “Network nannies” native to a drug use network are argued to be afforded greater credibility by

IDUs than peer educators from outside a network (Southgate & Hopwood, 2001). Social network analyses conducted in the USA provide some further insight into the operation of groups of injectors (Neaigus, Friedman, Kottiri, & Des Jarlais, 2001). However, the organisation and functions of social networks may be dependent on the social, legal and political context in which drug use occurs. There is little work done on social network analyses in Australia, and we would be reluctant to draw strong inferences from the US context to the Australian where health services are committed to a harm minimisation approach to drug use.

Arguably, the main site for an expanded peer education program should be shifted to the drug use scene where government-funded services do not currently operate or seek to operate. Non-government services can adopt a more flexible approach to education and service delivery and may be better placed to conduct education and training for peer educators. This would require adequate funding and resourcing. Large numbers of especially trained peer educators would be required to access small groups within drug use networks. This would be a shift away from print-based resources to an investment in a large peer education workforce equipped with specialised training and up-to-date risk and prevention messages. For optimal effect, the workforce would target individuals and small groups and would work in conjunction with strategies and responsibilities at broader levels, such as ongoing and enhanced access to harm minimisation services including needle and syringe programs and supervised injecting centres.

Australian models of peer education and drug user group involvement are arguably some of the most developed in the world (Crofts & Herkt, 1995). However, peer education is the target of a range of criticisms including: that it appeals to lay principles and assumptions rather than practical application of theory (Turner & Shepherd, 1999), that it generally lacks clear aims and objectives (Walker & Avis, 1999) and attention to issues of process (Backett-Milburn & Wilson, 2000). One author goes so far as to describe the discourse around peer education in 'religious' terms, claiming that its practice has spread without evaluation or reflection on the educational principles or social premises on which it is based (Frankham, 1998). Nevertheless, peer education is seen as integral to the operations of the Australian drug and alcohol sector in hepatitis C prevention (Dowsett, 1999), even though tensions remain with regard to the definition and operationalisation of peer education (Kelsall & Kerger, 2001).

Our qualitative and quantitative self-report data come from a convenience sample of young injectors in three sites. As such, the findings cannot be taken as representative of all drug user networks across Australia. However, the triangulation of qualitative and quantitative data and the inclusion of more than one study site strengthens the claims made and hypotheses drawn from the findings (Table 3).

Hepatitis C transmission among IDUs remains at alarming levels especially among those in the late teenage years. New, innovative efforts to stem this epidemic are needed. These

data show that information exchange between IDUs is relatively common. However, the quality of that information is currently unknown. Given the low levels of knowledge at initiation, misinformation and myths around injecting are likely to be perpetuated in injecting networks. The inability of public services to access sites and scenes of drug use makes it timely, appropriate and necessary for non-government, user-based organisations to be properly equipped and resourced to build upon the existing culture of information sharing. These findings point to the need to mobilise large segments of the target population into an education workforce in order to provide interventions at and around drug using scenes. Any such interventions should be evaluated and form part of on-going studies of the context, nature and content of information exchange in peer networks.

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Appendix A. Appendix

Knowledge scale

1. You can get hepatitis C from tattooing and body piercing
2. Apart from HIV, all STDs can be cured
3. You can get hepatitis B from having sex
4. You can get hep C from sharing razors or toothbrushes
5. You can get vaccinated against hep B
6. You can get vaccinated against hep C
7. You can get hep B more than once
8. You can get hep C more than once
9. You can get hep C from sharing filters
10. It's safe to share fits with your partner
11. The only people who need to worry about hep C are those who inject drugs
12. It's safe to share tourniquets and spoons
13. There's no treatment for hep C
14. Flushing your fit with tap water makes it safe for others to reuse
15. You can get more than one type of hep C
16. Sharing equipment is safe as long as it's with people you know

References

- Backett-Milburn, K., & Wilson, S. (2000). Understanding peer education: insight from a process evaluation. *Health Education Research*, 15, 85–96.

- Claire, M. (1995). *Rituals of risk: The experience and interpretation of injecting drug use rituals and its implications for HIV/AIDS prevention*. Unpublished Honours, University of Newcastle, Callaghan.
- Crofts, N., Aitken, C., & Kaldor, J. M. (1999). The force of numbers: Why hepatitis C is spreading among Australian injecting drug users while HIV is not. *Medical Journal of Australia*, *170*, 220–221.
- Crofts, N., Hopper, J. L., Milner, R., Breshckin, A. M., Bowden, D. S., & Locarnini, S. A. (1994). Blood-borne virus infections among Australian injecting drug users: Implications for spread of HIV. *European Journal of Epidemiology*, *10*, 687–694.
- Crofts, N., & Kerkt, D. (1995). A history of peer-based drug-user groups in Australia. *The Journal of Drug Issues*, *25*(3), 599–616.
- Crofts, N., Louie, R., Rosenthal, D., & Jolley, D. (1996). The first hit: Circumstances surrounding initiation into injecting. *Addiction*, *91*, 1187–1196.
- Curtis, R., Friedman, S. R., Neaigus, A., Jose, B., Goldstein, M., & Idefonso, G. (1995). Street-level drug markets: Network structure and HIV risk. *Social Networks*, *17*, 229–249.
- Davis, M., Rhodes, T., & Martin, A. (2004). Preventing hepatitis C: ‘Common sense’, ‘the bug’ and other perspectives from the risk narratives of people who inject drugs. *Social Science and Medicine*, in press.
- Dore, G., Law, M. G., MacDonald, M., & Kaldor, J. (2003). Epidemiology of hepatitis C virus infection in Australia. *Journal of Clinical Virology*, *26*, 171–184.
- Dowsett, G. (1999). *Hepatitis C prevention education for injecting drug users in Australia*. Australian Research Centre in Sex, Health & Society, La Trobe University, Melbourne.
- Frankham, J. (1998). Peer education: The unauthorised version. *British Educational Research Journal*, *24*, 179–193.
- Gossop, M., Darke, S., Griffiths, P., Hando, J., Powis, B., Hall, W., et al. (1995). The Severity of Dependence Scale (SDS): Psychometric properties of the SDS in English and Australian samples of heroin, cocaine and amphetamine users. *Addiction*, *90*, 607–614.
- Hunt, N., Stillwell, G., Taylor, C., & Griffiths, P. (1998). Evaluation of a brief intervention to prevent initiation into injecting. *Drugs: Education, Prevention and Policy*, *5*, 185–194.
- Kelsall, J., & Kerger, M. (2001). Hepatitis C peer education. In S. Locarnini (Ed.), *Hepatitis C: An Australian Perspective*. Melbourne: IP Communications.
- Kleinman, P. H., Goldsmith, D. S., Friedman, S. R., Hopkins, W., & Des Jarlais, D. C. (1990). Knowledge about and behaviors affecting the spread of AIDS: A street survey of intravenous drug users and their associates in New York City. *The International Journal of the Addictions*, *25*, 345–361.
- Louie, R., Krouslos, D., Gonzalez, M., & Crofts, N. (1998). Vietnamese-speaking injecting drug users in Melbourne: The need for harm reduction programs. *Australian and New Zealand Journal of Public Health*, *22*, 481–484.
- Neaigus, A., Friedman, S. R., Kottiri, B. J., & Des Jarlais, D. C. (2001). HIV risk networks and HIV transmission among injecting drug users. *Evaluation and Program Planning*, *24*, 221–226.
- Pierce, T. G. (1999). Gen-X junkie: Ethnographic research with young, white heroin users in Washington, DC. *Substance Use and Misuse*, *42*, 2095–2114.
- Power, R. (1989). Methods of drug use: injecting and sharing. In P. Davies (Ed.), *AIDS: Social representations, social practices*. Basingstoke: Taylor and Francis.
- Power, R., Jones, S., Kearns, G., Ward, J., & Perera, J. (1995). Drug user networks, coping strategies, and HIV prevention in the community. *The Journal of Drug Issues*, *25*, 565–581.
- Powis, B., Griffiths, P., Gossop, M., & Strang, J. (1996). The differences between male and female drug users: Community samples of heroin and cocaine users compared. *Substance Use and Misuse*, *31*, 529–543.
- Rhodes, T., & Quirk, A. (1998). Drug users’ sexual relationships and the social organisation of risk: The sexual relationship as a site of risk management. *Social Science and Medicine*, *46*, 157–169.
- Southgate, E., & Hopwood, M. (2001). The role of folk pharmacology and lay experts in harm reduction: Sydney gay drug using networks. *International Journal of Drug Policy*, *12*, 321–335.
- SPSS Inc. (1999). *SPSS 10.0 Syntax reference guide*. Chicago: SPSS Inc.
- Stephens, R. C. (1991). *The street addict role: A theory of heroin addiction*. New York: State University of New York Press.
- Swift, W., Maher, L., & Sunjic, S. (1999). Transitions between routes of heroin administration: A study of Caucasian and Indochinese heroin users in south-western Sydney, Australia. *Addiction*, *94*, 71–82.
- Turner, G., & Shepherd, J. (1999). A method in search of a theory: peer education and health promotion. *Health Education Research*, *14*, 23–247.
- Walker, S. A., & Avis, M. (1999). Common reasons why peer education fails. *Journal of Adolescence*, *22*, 573–577.