

Drug use, hepatitis C and exposure to injecting among young people in New South Wales: The Big Day Out Survey 2006–2009

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Contents

Acknowledgments	ii
List of tables	iii
List of figures	iv
Key findings	1
Introduction	3
Method and sample	4
Findings	5
Licit drug use: alcohol and tobacco	5
Illicit drug use: cannabis, ecstasy, amphetamine and other drugs	6
Knowledge of hepatitis C: transmission risk, consequences of infection and available health services	9
Attitudes towards people who inject drugs and people with hepatitis C	10
Exposure to injecting among attendees of the Big Day Out: young people at risk for hepatitis C	10
Conclusion	14
References	15

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List of tables

Table 1: Proportion of attendees of the Big Day Out in Sydney who were New South Wales residents, 2006–09	4
Table 2: Demographic profile of attendees of the Big Day Out who were New South Wales residents, 2009	4
Table 3: Trends in alcohol and tobacco use in the previous 12 months, 2006–09	5
Table 4: Alcohol use in the previous 12 months and associated level of risk, 2009	5
Table 5: Trends in illicit drug use in the previous 12 months, 2006–09	6
Table 6: Drugs used by respondents who reported using more than one drug in the previous 12 months, 2009	7
Table 7: Involvement in drug-using network, by various demographic and drug-use variables, 2009	8
Table 8: Trends in injecting drug use in the previous 12 months, 2006–09	8
Table 9: Source of information about hepatitis C, 2009	9
Table 10: Knowledge of transmission routes of hepatitis C, 2009	9
Table 11: Knowledge of transmission routes of hepatitis C, by age, gender and level of drug use, 2009	9
Table 12: Knowledge and beliefs about the consequences of having hepatitis C, 2009	9
Table 13: Knowledge of health services available to those who inject drugs, 2009	10
Table 14: Attitudes towards people who inject drugs and people with hepatitis C, 2009	10
Table 15: Attitudes towards people who inject drugs and people with hepatitis C, by age, gender and level of drug use, 2009	10
Table 16: Risk behaviour for the transmission of hepatitis C in the previous 12 months, 2009	11
Table 17: How young people were exposed to injecting, 2009	11
Table 18: Demographic profile of young people exposed and not exposed to injecting, 2009	11
Table 19: Licit and illicit drug use in the previous 12 months among young people exposed and not exposed to injecting, 2009	11
Table 20: Knowledge about hepatitis C transmission, among young people exposed and not exposed to injecting, 2009	12
Table 21: Knowledge about health services for those who inject drugs, among young people exposed and not exposed to injecting, 2009	13

List of figures

Figure 1: Reported use of cannabis, amphetamine and ecstasy, 2006–09	6
Figure 2: Perceived ease of access to various drugs, 2006–09	7
Figure 3: Frequency of use of selected drugs and quantity used by respondents in the previous 12 months, 2009	8

Key findings

- Illicit drug use was common among attendees of the Big Day Out who resided in New South Wales, with 55.4% of respondents in 2009 reporting that they had used at least one illicit drug in the previous 12 months.
- The most common drugs recently used were cannabis (by 43.5%), ecstasy (by 34.8%) and amphetamine (by 28.6%).
- There was a significant decline in the use of cannabis, ecstasy and amphetamine between 2006 and 2008, followed by an increase in 2009. The fluctuating but high rate of illicit drug use among Big Day Out respondents does not reflect trends reported by other sources which show that illicit drug use has generally declined since 2004.
- Respondents generally had poor knowledge of how hepatitis C was transmitted. While it was generally known that a person could get hepatitis C from sharing needles (69.5% knew this) or from unsterile tattooing or body piercing (66.1%), fewer than half the respondents knew that a person could *not* get hepatitis C from sharing toilets and showers (46.3%) or sharing food, drinks, cups or cutlery (41.1%).
- Injecting drug use was rare, with 3.8% of respondents in 2009 reporting that they had injected a drug in the previous 12 months. However, being exposed to injecting by other young people who engaged in it was much more common, with 26% of respondents reporting that in the previous 12 months they had had a friend or boyfriend/girlfriend who had injected, or that they had been offered drugs to inject.
- Respondents who had been exposed to injecting generally had a poor understanding of how hepatitis C was transmitted, with for example only 63.5% knowing that a person could get hepatitis C from sharing needles. Further, they had poor knowledge about health services available to those who injected drugs, with only 11.9% being able to correctly identify a place to obtain sterile needles and syringes.
- Respondents who could identify places to obtain sterile needles and syringes mostly identified pharmacies, which highlights an important role for pharmacies in providing harm reduction services for young people who have recently started injecting or who may start injecting soon.
- The findings identify a need to improve knowledge about hepatitis C and safe injecting among young people in New South Wales. Importantly, any education messages should capitalise on the finding that a considerable proportion of young people know others who inject, and suggest to young people that they could help their friends and partners by acquiring and passing on quality information about injecting and hepatitis C.

Introduction

National and state strategies identify the need for interventions to minimise harm associated with drug use among youth, including programs aimed at delaying or preventing initiation into drug use or injecting drug use. In order to contribute to the goals of national and state strategies, a number of surveillance projects collect data about drug use among young Australians. The survey Australian Secondary Students' Use of Over-the-Counter and Illicit Substances (ASSS) (White & Hayman, 2006) is conducted periodically and surveys students aged 12 to 17 years. Data

... existing surveillance systems do not identify young people who have been exposed to injecting and who are thereby at risk of transitioning to injecting drug use and acquiring hepatitis C.

collected in 2005 indicated that a small proportion (18%) of secondary students had ever used cannabis and considerably fewer had used amphetamines (7%) or ecstasy (4%), suggesting that drug use is generally uncommon among school-aged young people. The National Drug Strategy (NDS) Household Survey (Australian Institute of Health and Welfare [AIHW], 2008) periodically collects population data using random-digit telephone dialling or door-knocking. The most recent round of data collection in 2007 suggested that the prevalence of recent drug use (i.e. within the previous 12 months) has been declining among Australians, but reveals that drug use occurs most commonly among Australians aged 20 to 29 years, among whom 20.8% reported having used cannabis, 11.2% ecstasy and 7.3% methamphetamine (AIHW, 2008). Together these surveillance surveys suggest that drug use may not be prevalent among school-aged young people, but becomes more so among those aged in their twenties.

Surveillance data is generally not available by jurisdiction, except from drug trends data such as the Ecstasy and Related Drugs Reporting System (EDRS). This system routinely collects data from a small group of regular ecstasy users (those

who used ecstasy six times or more in the previous six months). Data from New South Wales indicates that respondents are relatively young, on average 28 years old, and that a high proportion engage in the regular use of multiple illicit drugs (Scott & Burns, 2009). For example, respondents had used on average six types of drugs over the six months prior to the survey. Almost three-quarters had used cannabis during this time and about half had used speed or methamphetamine powder (Scott & Burns, 2009). In comparison with data collected by the NDS Household Survey, the New South Wales EDRS suggests that for a certain subgroup of young people drug use is very common.

While the existing surveillance systems provide useful information about drug use among young people, the design of each tends to exclude particular groups of young people. The ASSS excludes young people who have left school before their final year or who have completed school. Similarly, the NDS Household Survey is biased against young people, who tend not to have land-based telephone lines and tend to be in more transient accommodation, or who may decline to participate for fear of disclosing their drug use to parents. The EDRS, by focusing on young people who already regularly use illicit drugs, provides an understanding of drug use among a certain subgroup of young people but not among young people in general. In addition to their tendency to exclude particular groups of young people, the existing surveillance systems do not identify young people who have been exposed to injecting and who are thereby at risk of transitioning to injecting drug use and acquiring hepatitis C. This means that, despite the identified need to develop education and/or intervention programs aimed at delaying or preventing transition to injecting drug use, there is no Australian data that monitors the drug-use practices and knowledge of young people who are exposed to injecting. By recruiting people who attend youth-oriented music festivals, specifically the Big Day Out, the current survey provides a source of information about both young people in general and those who have been exposed to injecting.

Method and sample

This study used a cross-sectional design to survey people who attended the annual Big Day Out music festival in Sydney, New South Wales, from 2006 to 2009. The project was piloted at the Big Day Out in Sydney in 2004 and additional data were collected at another music festival, Splendour in the Grass, at Byron Bay in 2004 and 2005. Since 2006, data have been collected annually at the Big Day Out in Sydney. The Big Day Out is a one-day festival attended by an estimated 30,000 people. The National Centre in HIV Social Research (NCHSR) hired a stall and participants were recruited via this stall. Festival patrons 16 years of age and older either were approached by researchers or volunteered to participate. Once recruited, participants completed a 10- to 15-minute survey at the stall. The survey collected data about recent licit and illicit drug use, drug injecting and injecting practices, knowledge

of hepatitis C and attitudes towards people who inject drugs and people with hepatitis C.

The data presented in this report are the data collected from attendees of the Sydney Big Day Out (2006–09) who reported residing in New South Wales. In 2009, 451 surveys were collected, with 93.9% ($n = 419$) of respondents reporting having a New South Wales postcode (see Table 1).

The demographic profile of the 2009 sample was very similar to that of respondents in previous years. The median age of respondents was 20 years; half reported that they were aged between 18 and 24 years (see Table 2). Most respondents (82.3%) reported that they were heterosexual and a small proportion (6%) identified as Aboriginal or Torres Strait Islander. Nearly two-thirds of the respondents (60.9%) said they were students and a majority (86.2%) reported that they worked full or part time (see Table 2).

Table 1: Proportion of attendees of the Big Day Out in Sydney who were New South Wales residents, 2006–09

	2006*	2007	2008	2009
Number of valid surveys collected	346	465	324	451
Number of NSW residents	–	403	321	419
Percentage who were NSW residents	–	86.0%	96.1%	92.9%

* The 2006 survey did not ask participants for their postcodes.

Table 2: Demographic profile of attendees of the Big Day Out who were New South Wales residents, 2009 ($n = 419$)

	<i>n</i>	%
Age	Median 20 (IQR 18–24)	–
Female	250	68.7
Heterosexual	345	82.3
Aboriginal or Torres Strait Islander	25	6.0
Education:		
up to but not including Year 12	55	20.3
completed Year 12	127	30.3
started or completed degree or diploma	232	49.2
Currently a student	255	60.9
Currently employed full or part time	361	86.2
Currently living:		
alone	37	8.8
with a partner (including children)	94	22.4
with parents/relatives	227	54.2
with flatmates/friends	55	13.5

IQR – interquartile range

Findings

Licit drug use: alcohol and tobacco

Use of alcohol was almost universal among attendees of the Big Day Out who resided in New South Wales, with 96.2% of respondents in 2009 reporting that they had drunk alcohol at least once in the previous 12 months; similar results were found over the four-year period (see Table 3). This is consistent with data from the similar-aged cohort in the NDS Household Survey in which 97% of people aged 20 to 29 reported recent alcohol use (AIHW, 2008). However, attendees of the Big Day Out reported higher risk drinking behaviours, with over half (51.1%) reporting that they drank at levels considered 'risky' or 'high risk' (see Table 4) compared with 20% of respondents to the NDS Household Survey (AIHW, 2008). This comparison, however, is not age-adjusted. Furthermore, women were significantly more likely than men to report high-risk drinking (31.6% versus 17%, $p < .01$) (see Table 4). This was a similar pattern to that found among New South Wales respondents to the 2008 survey, in which 15.3% of women reported drinking at a high-risk level compared with only 7.5% of men. This contradicts findings from the NDS Household Survey

which reports that, among 20 to 29 year olds, men are more likely to engage in high-risk drinking than women (AIHW, 2008). These findings can be understood from a sociological perspective by drawing on research showing that young women are using liberal concepts of equality and a 'same as men' sensibility to gain a sense of feminine identity (Henwood, 1998; Richardson & Turner, 2001; Bryant, 2006). Here, women use what have traditionally been understood as masculine norms—such as risk taking—to define what it is to be a 'modern' young woman. In this way, high-risk drinking can create a sense of belonging and trust in groups of young women in much the same way it does among young men.

About a quarter of respondents (26.8%) reported having smoked tobacco in the previous year (see Table 3), which is consistent with data from the similar-aged cohort in the NDS Household Survey. Generally speaking, attendees of the Big Day Out appear to engage in similar rates of alcohol and tobacco use to their similar-aged peers in other surveys. However, when comparing rates of alcohol use by gender, attendees of the Big Day Out differ from their similar-aged peers.

Table 3: Trends in alcohol and tobacco use in the previous 12 months, 2006–09

	2006 (n = 345)		2007 (n = 403)		2008 (n = 321)		2009 (n = 419)	
	n	%	n	%	n	%	n	%
Drank alcohol	336	97.4	396	98.8	306	95.6	401	96.2
Smoked tobacco	99	28.9	120	29.8	65	21.4	107	26.8

Table 4: Alcohol use in the previous 12 months and associated level of risk, 2009 (n = 419)

	Total		Male		Female	
	n	%	n	%	n	%
Number surveyed	419		165		250	
Drank no alcohol	16	3.8	10	6.1	6	2.4
Low-risk drinking	162	38.7	76	46.1	86	34.4
Risky drinking	108	25.8	43	26.1	65	26.0
High-risk drinking	107	25.5	28	17.0	79	31.6

Note: The risk level was calculated using NHMRC (2001), *Australian alcohol guidelines: health risks and benefits*. Short-term risk of harm, such as injury or death, associated with given levels of drinking on a single day: for males up to 6 standard drinks on a single day is considered 'low risk', 7–10 per day 'risky' and ≥ 11 per day 'high risk'; for females up to 4 standard drinks on a single day is considered 'low risk', 5–6 per day 'risky' and ≥ 7 per day 'high risk'. Percentages do not add to 100% due to missing data.

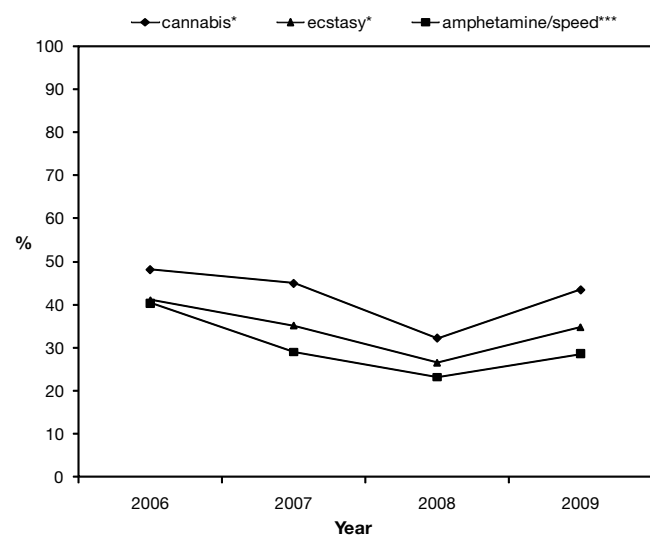
Illicit drug use: cannabis, ecstasy, amphetamine and other drugs

Illicit drug use was common among attendees of the Big Day Out who lived in New South Wales. Over half (55.4%) of respondents in 2009 reported having used at least one illicit drug in the previous 12 months, which is twice the proportion of the similar-aged cohort in the NDS Household Survey (AIHW, 2008) who reported an equivalent level of drug use. The proportion of Big Day Out attendees who reported using at least one drug changed significantly over the four years, with a considerable decline between 2006 and 2008, followed by an increase in 2009 (see Table 5).

The most commonly used drugs in each year of the study period were cannabis, ecstasy and amphetamine (see Figure 1). In 2009 almost half (43.5%) of respondents reported having used cannabis in the previous 12 months, over a third (34.8%) reported having used ecstasy and over a quarter (28.6%) amphetamine. These are much higher levels of use than among similar-aged peers in the NDS Household Survey, in which 22% of people aged 20 to 29 years reported having used cannabis, 11% ecstasy and 7% amphetamine (AIHW, 2008). This supports the findings of other surveys of attendees of the Big Day Out (Lim et al., 2008, in press), in which respondents were found to have used illicit drugs at a rate higher than that of their similar-aged population cohort.

There was a significant decline in the use of cannabis, ecstasy and amphetamine among attendees of the Big Day Out between 2006 and 2008, followed by an

increase in 2009. These fluctuating but high rates of illicit drug use among respondents do not reflect the trend observed in the NDS Household Survey data, which show that illicit drug use generally has declined since 2004 (AIHW, 2008), with the use of cannabis in particular declining by about a quarter. This suggests that attendees of the Big Day Out may be a subgroup of young people among whom drug use is not only common, but resistant to the trends shown among other groups of Australians.



* $p < .05$
*** $p < .001$

Figure 1: Reported use of cannabis, amphetamine and ecstasy, 2006–09

Table 5: Trends in illicit drug use in the previous 12 months, 2006–09

	2006 (<i>n</i> = 345)		2007 (<i>n</i> = 403)		2008 (<i>n</i> = 321)		2009 (<i>n</i> = 419)	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Cannabis*	165	48.2	179	45.0	103	32.3	178	43.5
Amphetamine/Speed***	137	40.4	113	29.0	73	23.2	114	28.6
Ecstasy*	138	41.1	137	35.2	82	26.5	137	34.8
Cocaine*	34	11.4	27	8.5	12	4.3	65	17.6
Heroin	3	1.1	4	1.3	0	0.0	8	2.2
LSD/Acid	25	8.7	14	4.4	13	4.6	44	11.9
Ketamine	20	6.9	7	2.2	10	3.5	27	7.3
Benzodiazepine	8	2.9	1	0.3	0	0.0	9	2.4
Used at least one drug*	207	60.0	222	55.1	136	42.2	232	55.4
Used more than one drug	143	41.4	141	35.0	79	24.6	154	36.8

* $p < .05$

*** $p < .001$

In our survey of Big Day Out attendees, following a gradual decline in the use of cocaine from 2006, there was a marked increase in its use from 2008 to 2009 (see Table 5). In 2009, 17.6% of respondents reported having used cocaine in the previous 12 months, compared with only 4.3% in the previous year (see Table 5). The EDRS (Sindicich et al., 2009), which provides information on trends in the use of ecstasy and related drugs, reported an increase in the use of cocaine in New South Wales from 51% in 2008 to 64% in 2009. However, even though the EDRS collects data from similar-aged young people, it is not wholly comparable to the Big Day Out Survey since it is based on data collected from regular ecstasy users such as those who attend parties and raves. The sharp increase in the use of cocaine among attendees of the Big Day Out has potential implications for the transmission of hepatitis C because a common method of taking cocaine is to breathe it in through the nostrils (known as 'intranasal administration'). Research suggests that sharing straws or currency notes for intranasal administration may be implicated in the transmission of hepatitis C (Aaron et al., 2008; Conry-Cantilena et al., 1996). Thus young people may be at risk of acquiring hepatitis C infection from cocaine use.

The proportion of respondents who reported having used more than one drug in the previous 12 months did not change significantly over the four-year study period, with over a third of respondents having used two or more drugs (not necessarily on the same occasion) in 2009 (see Table 5). The drugs most commonly used by this group were ecstasy and cannabis (by 24.2%), ecstasy and speed (22%) and cannabis and speed (21.1%) (see Table 6).

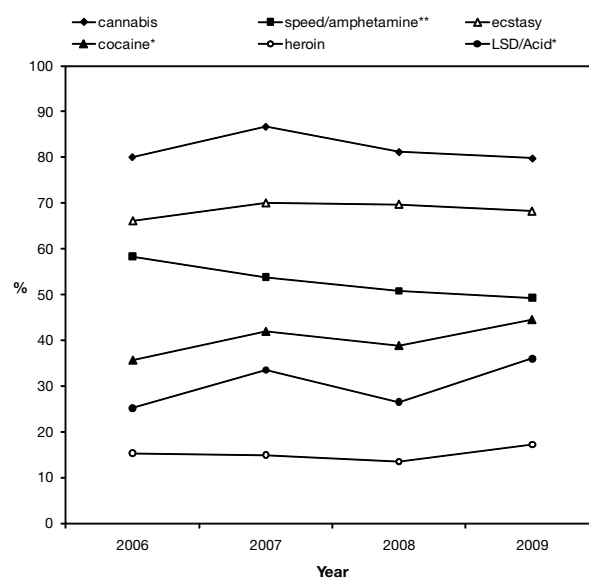
A large proportion of respondents reported that they considered drugs easy to obtain. Notably, over each of the four years of the study period, at least 80% of respondents perceived that cannabis was easy to obtain and more than

Table 6: Drugs used by respondents who reported using more than one drug in the previous 12 months, 2009 (n = 419)

	n	%
Ecstasy and cannabis	95	24.2
Ecstasy and speed	85	22.0
Cannabis and speed	84	21.1
Ecstasy and cocaine	56	19.3
Speed and acid	46	15.8
Cannabis and cocaine	45	15.4
Ecstasy and acid	37	13.8
Cannabis and acid	36	13.2
Speed and cocaine	35	12.8
Acid and cocaine	24	9.4

Note: Valid percentages

half that ecstasy and amphetamine were easy to obtain (see Figure 2). Perceived ease of access to cannabis and ecstasy remained stable over the four-year period. In the cases of cocaine and LSD perceived ease of access fluctuated during the study period but, ultimately, was significantly higher in 2009 than in 2006. The only drug to follow a significant and steady decline in perceived ease of access was amphetamine; 58.3% of respondents in 2006, compared with 49.3% in 2009, reported that it was easy to obtain.

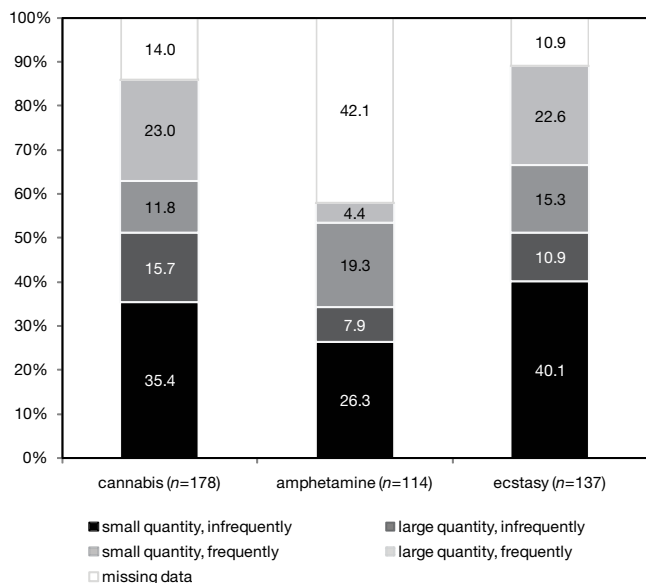


* $p < .05$

** $p < .01$

Figure 2: Perceived ease of access to various drugs, 2006-09

While illicit drug use was common, respondents reported that for the most part they used drugs infrequently and in smaller quantities (see Figure 3). Of the respondents who had used ecstasy in the previous 12 months, 40.1% had done so infrequently (every few months or less often) and had used smaller quantities (≤ 2 tablets of ecstasy per occasion). Similarly just over a third (35.4%) of cannabis users and about a quarter (25.3%) of those who used amphetamine also reported using infrequently and in smaller quantities (cannabis < 3 joints, bongs, cones; amphetamine ≤ 1 gram). Data about the frequency of use of amphetamine and quantity used are limited given a high proportion of missing data. However, in the cases of cannabis and ecstasy, the findings suggest that a considerable proportion of young people using these drugs do so in ways that may not be problematic.



*Small quantity': cannabis < 3 joints, bongs, cones; amphetamine ≤ 1 gram; ecstasy ≤ 2 tablets
 *Large quantity': cannabis ≥ 3 joints, bongs, cones; amphetamine > 1 gram; ecstasy > 2 tablets
 *Infrequently': every few months or less often
 *Frequently': once per month to daily

Figure 3: Frequency of use of selected drugs and quantity used by respondents in the previous 12 months, 2009 (n = 419)

To gauge the degree of their involvement with drug-using networks, respondents were asked how many of their friends used drugs and how much of their time was spent

with people who used drugs. Scores from each question were added to give a range from zero to eight which represented the level of involvement a respondent had with a drug network. The drug-network involvement scale was then divided equally into three levels of involvement. Over a third of respondents (35.3%) reported having a low level of involvement with drug-using networks, just under half (45.6%) reported a medium level of involvement and 16% reported a high level of involvement. Those who reported a high level of involvement were significantly more likely to have reported using at least one drug (85.1%) and more than one drug (62.7%) in the previous 12 months (see Table 7). This suggests that young people who know a lot of other drug users and spend time with them are themselves more likely to use drugs, and concurs with the notion that illicit drug use is often confined to certain groups or subcultures of young people (Lim et al., 2008).

The incidence of injecting drug use was low among Big Day Out attendees who lived in New South Wales. In 2009 less than 4% of respondents reported that they had injected a drug in the previous 12 months and this proportion was smaller in earlier years (see Table 8). Although the rates of injecting drug use were low and stable over the four-year study period, they were generally higher than among the similar-aged sample of the NDS Household Survey, which reports that 1% of 20 to 29 year olds had injected drugs in the previous 12 months (AIHW, 2008).

Table 7: Involvement in drug-using network, by various demographic and drug-use variables, 2009 (n = 419)

	Low (n = 148)		Medium (n = 191)		High (n = 67)	
	n	%	n	%	n	%
Female	94	63.9	118	62.4	33	49.3
Age (mean)	22	–	21.5	–	21	–
Heterosexual	129	88.4	154	81.1	53	79.1
Aboriginal or Torres Strait Islander	4	2.7	15	8.0	5	7.5
Started or completed tertiary education	79	54.1	99	52.4	21	31.8
Currently employed full or part time	125	85.6	166	88.3	62	92.5
Used at least one drug***	46	31.1	119	62.3	57	85.1
Used more than one drug***	25	16.9	83	43.5	42	62.7

***p < .001

Note: Valid percentages

Table 8: Trends in injecting drug use in the previous 12 months, 2006–09

	2006 (n = 345)		2007 (n = 403)		2008 (n = 321)		2009 (n = 419)	
	n	%	n	%	n	%	n	%
Meth/amphetamine	5	1.4	4	1	0	0.0	12	2.9
Heroin	4	1.2	1	0.2	2	0.6	3	0.7
Other	6	1.7	1	0.2	1	0.3	5	1.2
Injected any drug	7	2.0	6	1.5	2	0.6	16	3.8

Knowledge of hepatitis C: transmission risk, consequences of infection and available health services

Most respondents (81.6%) said they had heard of hepatitis C, and 61.8% believed they had learnt about it at school (see Table 9). This identifies the importance of school-based health education, which has been found in other research to be particularly important for teaching young people about sensitive health issues such as safe sex (Agius et al., 2006; Sales et al., 2006) because it ensures that young people receive accurate information in a largely non-judgmental way.

Table 9: Source of information about hepatitis C, 2009 (n = 419)

	n	%
Never heard of hepatitis C	61	14.6
Ever heard of hepatitis C	342	81.6
If ever heard of hepatitis C, found out from:		
school	259	61.8
health service	72	17.2
work	43	10.3
friends/family	88	21.0
television	55	13.1
newspaper	42	10.0
poster	27	6.4
pamphlet	32	7.6
website	35	8.4
other	18	4.3
don't know	21	5.0

While most respondents in 2009 had heard of hepatitis C, they generally had a poor understanding of how it was transmitted. While it was generally known that a person could get hepatitis C from sharing needles (by 69.5%) or from unsterile tattooing or body piercing (66.1%), fewer than half the respondents knew that a person could get hepatitis C from sharing spoons, water or other drug preparation equipment while injecting (37.2%), or that they could not get hepatitis C from sharing toilets and showers (46.3%) or sharing food, drinks, cups or cutlery (41.1%) (see Table 10).

A knowledge scale from zero to seven was created by adding up the number of correct answers given by each respondent in the seven categories used to measure their knowledge (see Table 10). It indicated that the level of knowledge of hepatitis C transmission routes was similar both for men and women and for respondents who had or had not reported the use of more than one drug in the previous 12 months. Although respondents 25 years and

older did have better knowledge of transmission routes than younger respondents, this did not reach significance (4.3 versus 3.7, $p = .06$) (see Table 11).

Table 10: Knowledge of transmission routes of hepatitis C, 2009 (n = 419)

	n	%
Respondents who correctly identified that a person could not get hepatitis C from:		
kissing	210	50.1
sharing toilets and showers	194	46.3
sharing food, drinks, cups or cutlery	172	41.1
Respondents who correctly identified that a person could get hepatitis C from:		
injecting with a needle someone else had already used	291	69.5
sharing spoons, water or other drug preparation equipment while injecting drugs	156	37.2
sharing a razor	190	45.3
unsterile tattooing or body piercing	277	66.1

Table 11: Knowledge of transmission routes of hepatitis C, by age, gender and level of drug use, 2009 (n = 419)

	Age		Gender		Used > 1 drug		
	Total	≤ 25	> 25	Male	Female	Yes	No
Knowledge score (mean)*	3.8	3.7	4.3	3.8	3.8	3.8	3.8

*Knowledge score is the number of correct answers out of 7.

Although knowledge of transmission routes was poor, most respondents believed that having hepatitis C had serious consequences. Most believed it was a serious condition (77.1%) that had a major impact on a person's life (75.2%). Just over one in ten respondents (10.7%) thought that hepatitis C could be cured and just under half (47.5%) were aware that hepatitis C could be fatal (see Table 12).

Table 12: Knowledge and beliefs about the consequences of having hepatitis C, 2009 (n = 419)

	n	%
Respondents who correctly identified that:		
hepatitis C could be cured	45	10.7
a person could die from having hepatitis C	199	47.5
Respondents who agreed that hepatitis C:		
was a serious condition	323	77.1
had a major impact on a person's life	315	75.2

Knowledge of health services available to those who injected drugs was also poor. Over a quarter of respondents (27%) reported that they knew where to obtain sterile needles and syringes; however, when asked to name a specific place where needles and syringes could be obtained, only 12.9% could correctly identify such a place (see Table 13). Likewise, about two-fifths (43%) of respondents said that they knew where to get a test for hepatitis C but only 36.3% could correctly identify such a place (see Table 13).

Table 13: Knowledge of health services available to those who inject drugs, 2009 (n = 419)

	n	%
Respondents who believed that they knew where to obtain sterile needles and syringes	113	27.0
Respondents who correctly identified that sterile needles and syringes could be obtained from a:		
pharmacy	27	23.9
hospital	17	15.0
youth service	0	0.0
needle and syringe program (NSP)	8	7.1
sexual health service	2	1.8
needle dispensing machine	0	0.0
Total	54	12.9
Respondents who believed that they knew where to be tested for hepatitis C	180	43.0
Respondents who correctly identified that they could be tested for hepatitis C at a:		
doctor's/GP's clinic	122	67.8
hospital	24	13.3
needle and syringe program (NSP)	0	0.0
Aboriginal medical service	0	0.0
sexual health service	5	2.8
family planning service	1	0.6
Total	152	36.3

Attitudes towards people who inject drugs and people with hepatitis C

Participants were asked to respond to six statements to ascertain their attitudes towards people who inject drugs and people who have hepatitis C. These were used to calculate an overall attitude score out of 12, where zero represented very liberal views and 12 represented very conservative views. A considerable proportion (43.4%) of respondents agreed that injecting drugs was merely a lifestyle choice, which people were free to make (see Table 14). Around half (48.9%) of respondents agreed that people with hepatitis C should not be looked down on by others. However, a similar proportion (49.2%) also agreed

that injecting drug users should be legally required to be tested for blood-borne viruses (see Table 14). The mean attitude score was 5.7 (see Table 15), which suggests that attendees of the Big Day Out who lived in New South Wales were neither liberal nor conservative in their attitudes towards injecting and hepatitis C. Respondents who reported having used more than one drug in the previous 12 months held more liberal or lenient views than those who did not use drugs (see Table 15).

Table 14: Attitudes towards people who inject drugs and people with hepatitis C, 2009 (n = 419)

Respondents who agree that:	n	%
people who get hepatitis C from using drugs get what they deserve	90	21.5
I won't associate with known injecting drug users if I can help it	173	41.3
injecting drug use is immoral	107	25.5
people who inject drugs should be legally required to be tested	206	49.2
people with hepatitis C should not be looked down on by others	205	48.9
if someone injects drugs, that is merely a different lifestyle, which is their choice	182	43.4

Table 15: Attitudes towards people who inject drugs and people with hepatitis C, by age, gender and level of drug use, 2009 (n = 419)

	Age		Gender		Used > 1 drug*		
	Total	≤ 25	> 25	Male	Female	Yes	No
Attitude score (mean)**	5.7	5.7	5.5	5.7	5.7	5.3	5.9

* $p \leq .05$

**The attitude score, where 0 represents very liberal attitudes and 12 represents very conservative attitudes, is calculated from participants' responses to six statements (see Table 14).

Exposure to injecting among attendees of the Big Day Out: young people at risk for hepatitis C

As already reported, the incidence of injecting drug use was low among attendees of the Big Day Out, with 3.8% of respondents in 2009 reporting that they had injected a drug in the previous 12 months (see Tables 8 and 16). While injecting was rare, over a quarter of respondents (26%) reported that in the previous 12 months they had been offered drugs to inject or had a friend or boyfriend/girlfriend who had injected (see Table 17). This suggests that even though injecting is rare a substantial proportion of young people are exposed to injecting through their relationships with other people. Indeed, 'relationships with others' is identified in the research literature

as a primary risk factor for transition to injecting (Bryant & Treloar, 2007; Bryant & Treloar, 2008; Day et al., 2005; Doherty et al., 2000; Roy et al., 2002; Abelson et al., 2006). This suggests that some of this subgroup of respondents who were exposed to injecting may be at risk for transition to injecting, which identifies a need for them to have adequate knowledge of how to reduce the harm associated with injecting. In addition, even if they never inject, their exposure to injecting means they are in a position to support other young people who are already injecting or may start injecting.

Table 16: Risk behaviour for the transmission of hepatitis C in the previous 12 months, 2009 (n = 419)

	n	%
Injected any drug	16	3.8
Reused needle and syringe	9	2.1
Shared ancillary injecting equipment	5	1.2

Table 17: How young people were exposed to injecting, 2009 (n = 419)

	n	%
Were offered drugs to inject	67	16.0
Had a boyfriend/girlfriend who injected drugs	29	6.9
Had friends who injected	64	15.3
Experienced at least one of the above	109	26.0

Respondents who had been exposed to injecting were less likely to say they were heterosexual than those who had not been exposed (74.1% versus 86%) but the two groups were otherwise demographically similar (see Table 18). This supports other research identifying that injecting is more common among networks of gay, lesbian and bisexual people than among the general population (Prestage et al., 2007; Colfax et al., 2001; Southgate & Hopwood, 2001). It also emphasises the continuing need for education and interventions focused on reducing the harm associated with injecting drug use and that are relevant to this group of young people.

Table 18: Demographic profile of young people exposed and not exposed to injecting, 2009 (n = 419)

	Exposed (n = 109)		Not exposed (n = 310)	
	n	%	n	%
Female	57	53.3	193	62.7
Heterosexual***	80	74.1	265	86.0
Aboriginal or Torres Strait Islander	10	9.5	15	4.9
Age (median, IQR)	19 (18–23)		20 (18–24)	

***p < .001 IQR = interquartile range

Note: Valid percentages

Respondents who had been exposed to injecting were less likely than those not exposed to have used any alcohol in the previous year (91.7% versus 97.7%) (see Table 19), although the prevalence of alcohol use was still high among both groups. Those who had been exposed to injecting also more commonly reported the use of heroin (10.8% versus 0.6%) or ketamine (14.7% versus 8.9%) and/or the injecting of a drug in the previous 12 months (10.1% versus 1.6%).

Table 19: Licit and illicit drug use in the previous 12 months among young people exposed and not exposed to injecting, 2009 (n = 419)

	Exposed (n = 109)		Not exposed (n = 310)	
	n	%	n	%
Alcohol**	100	91.7	305	97.7
Tobacco	27	81.8	67	90.5
Cannabis	52	49.1	126	41.6
Amphetamine/Speed	32	30.8	82	27.8
Ecstasy	33	33.0	104	35.4
Cocaine	16	21.6	49	22.1
Heroin***	7	10.8	1	0.6
LSD	13	18.3	31	15.2
Ketamine*	10	14.7	17	8.9
Benzodiazepine	5	7.9	4	2.3
Used at least one drug	59	54.1	173	55.8
Used more than one drug	42	38.5	112	36.1
Injected drugs***	11	10.1	5	1.6

*p < .05

**p < .01

***p < .001

Note: Valid percentages

Because of their exposure to injecting it is important for young people at risk of injecting to have appropriate knowledge about how hepatitis C is transmitted and where to access health services. Table 20 identifies that respondents who reported having been exposed to injecting did not have a higher level of knowledge than those who had not been exposed. Nor did they have what might be considered adequate levels of knowledge to prevent or reduce harm associated with injecting drugs. Alarming, respondents who had been exposed to injecting were significantly less likely than those who had not been exposed to know that a person could get hepatitis C from injecting with a needle someone else had already used (63.5% versus 77.1%). Furthermore, fewer than half of the respondents exposed to injecting correctly identified that a person could get hepatitis from sharing spoons, water or other drug preparation equipment while injecting (36.5%) or from sharing a razor (43.8%). And fewer than half did not know that a person could not get hepatitis C from sharing toilets (45.2%) or sharing food, drinks, cups or cutlery (40.7%) (see Table 20).

Data collected from young people who attended the Big Day Out in Queensland (Bryant et al., 2009) show that a similar proportion of Queensland respondents to New South Wales respondents had been exposed to injecting (25.2% versus 26%) but that they had better knowledge of how hepatitis C could be transmitted. In particular, Queensland respondents who had been exposed to injecting were more likely than their New South Wales counterparts to correctly identify that a person could get hepatitis C from injecting with a needle someone else had already used (81.4% versus 63.5%, $\chi^2 = 10.6$, $df = 1$, $p < .01$), sharing ancillary injecting equipment (57.1% versus 36.5%, $\chi^2 = 8.8$, $df = 1$, $p < .01$) or unsterile tattooing or body piercing (77.1% versus 62.2%, $\chi^2 = 6.3$, $df = 1$, $p < .05$) (Bryant et al., 2009). This suggests that work is needed among young people exposed to injecting in New South Wales to improve their basic knowledge of how hepatitis C can and cannot be transmitted. Because most respondents believe that they first learnt about hepatitis C at school (see Table 9), it may be useful to introduce or improve the quality of education about hepatitis C among school-aged children. Alternatively, education about hepatitis C could be introduced in other settings that attract young people, such as universities, other tertiary institutions and workplaces that commonly employ young people such as retail and hospitality. Importantly, any education messages should capitalise on the finding that a considerable proportion of young people know others who inject, and suggest that they can help their friends and partners by learning about and passing on quality information about injecting and hepatitis C.

When respondents were asked to identify places where they could obtain sterile needles, only 11.9% of respondents who had been exposed to injecting could correctly identify where to get sterile needles and syringes if they needed them (see Table 21). Again this points to a need to improve knowledge about hepatitis C and safe injecting among this group. It suggests that any educational initiatives must include not only information about how hepatitis C is transmitted but also information about where to get appropriate equipment. Most seroconversion (becoming infected with a blood-borne virus) happens within the first three years of injecting (van Beek, 1998), meaning that the early introduction of sterile injecting equipment is paramount in reducing the prevalence of hepatitis C among new injectors. Among those who could correctly identify places to obtain sterile needles, the places most commonly identified were pharmacies (by 17.1%) and hospitals (by 11.4%), with fewer respondents (8.6%) identifying needle and syringe programs (NSPs) (see Table 21). This suggests that pharmacies play an important role in providing harm reduction services for young people at risk for hepatitis C. Pharmacies may be the first point of contact for young people who have recently started injecting or who may soon start injecting. Currently there are many pharmacies in New South Wales that sell or exchange needles and syringes; however, unlike staff at NSPs who are trained to provide advice about safe injecting and referrals to other services, pharmacy staff have little consistent and comprehensive training in these procedures. It would be useful to train pharmacy staff not only about the needs of people who inject drugs, but more specifically about the needs of early career and/or young injectors.

Table 20: Knowledge about hepatitis C transmission, among young people exposed and not exposed to injecting, 2009 (n = 419)

	Exposed (n = 109)		Not exposed (n = 310)	
	n	%	n	%
Respondents who correctly identified that a person <i>could not</i> get hepatitis C from:				
kissing	54	50.0	156	53.4
sharing toilets and showers	47	45.2	147	50.7
sharing food, drinks, cups or cutlery	44	40.7	128	44.0
Respondents who correctly identified that a person <i>could</i> get hepatitis C from:				
injecting with a needle someone else has already used**	66	63.5	225	77.1
sharing spoons, water or other drug preparation equipment while injecting drugs	38	36.5	118	41.0
sharing a razor	46	43.8	144	49.5
unsterile tattooing or body piercing	67	62.6	210	72.2

** $p < .01$

Note: Valid percentages

Table 21: Knowledge about health services for those who inject drugs, among young people exposed and not exposed to injecting, 2009 (n = 419)

	Exposed (n = 109)		Not exposed (n = 310)	
	n	%	n	%
Respondents who believed that they knew where to obtain sterile needles and syringes	35	33.0	78	26.4
Respondents who correctly identified that sterile needles and syringes could be obtained from a:				
pharmacy	6	17.1	21	26.9
hospital	4	11.4	13	16.7
youth service	0	0.0	0	0.0
needle and syringe program	3	8.6	5	6.4
sexual health service	0	0.0	2	2.6
needle dispensing machine	0	0.0	0	0.0
Total	13	11.9	41	13.2
Respondents who believed that they knew where to be tested for hepatitis C	45	41.7	135	45.0
Respondents who correctly identified that they could be tested for hepatitis C at a:				
doctor's/GP's clinic	24	53.3	98	72.6
hospital	7	15.6	17	12.6
needle and syringe program	0	0.0	0	0.0
Aboriginal medical service	0	0.0	0	0.0
sexual health service	2	4.4	3	2.2
family planning service	0	0.0	1	0.7
Total	36	33.0	119	38.4

Note: Valid percentages

Conclusion

Illicit drug use was common among attendees of the Big Day Out who lived in New South Wales. Over half of respondents in 2009 reported having used at least one illicit drug in the previous 12 months, most commonly cannabis, ecstasy and/or amphetamine. In comparison to similar-aged respondents of the NDS Household Survey (AIHW, 2008), respondents to this study reported levels of drug use that were two to three times higher. This shows, as other Australian monitoring projects have shown, that drug use can be very common among certain groups of young people.

Despite this, our respondents reported that for the most part they used drugs infrequently and in smaller quantities. This may mean that a considerable proportion of young people who use these drugs do so in ways that may not be problematic, an important consideration when targeting education messages. Strategies aimed at reducing drug use among young people often portray the use of drugs as pathological and necessarily harmful. If young people do not experience drug use in this way, as the findings of this study suggest, they are unlikely to identify with or relate to such messages. A more relevant approach may be to portray drug use as occasional and recreational, and to convey messages about how young people can effectively reduce the potential harms of this kind of drug use.

The group of particular interest in this study, about a quarter of the sample, was that of young people who reported having recently been exposed to injecting drug use, either by being offered drugs to inject and/or by having a friend, boyfriend or girlfriend who injected. While injecting was rare among respondents (less than 4% reported having injected), being exposed to injecting by other young people was not. This finding identifies a need among a substantial proportion of young people for adequate harm reduction knowledge and skills. It may be that some of these young people exposed to injecting are at risk for transitioning to

injecting themselves; however, even if most never go on to inject, they are in a position to support other young people who are already injecting or who may start injecting. Worryingly, a large proportion of young people exposed to injecting did not have adequate levels of knowledge to prevent or reduce harm associated with injecting drugs. They had a generally poor understanding of how hepatitis C was transmitted and poor knowledge about health services available to injecting drug users. They did not know where to obtain sterile needles and syringes or where to be tested for blood-borne viruses. Improving knowledge among this group is challenging but may be best achieved by high-quality targeted education, perhaps in schools, or alternatively in settings that commonly attract young people such as universities or retail and hospitality workplaces. Importantly, any education messages should capitalise on the finding that a considerable proportion of young people know others who inject, and suggest that they can help their friends and partners by learning about and then passing on quality information about injecting and hepatitis C. The findings also suggest that a crucial component of any education must be information about where to get sterile needles and syringes in order to maximise the early introduction of sterile equipment to young people who start injecting. Only a small proportion of respondents who had been exposed to injecting could correctly identify where to obtain sterile needles and syringes, and the most commonly reported place was a pharmacy. This finding identifies an important role for pharmacies in providing harm reduction services for young people who have recently started injecting, or who may soon start injecting. It calls for the specialised training of pharmacy staff to pass on specific information to their young clients, in particular information about how hepatitis C is transmitted, how to inject safely, where to get a test for hepatitis C and where else, such as at an NSP, to obtain sterile injecting equipment.

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