

I-TRACK Survey
Enhanced Surveillance of Risk Behaviours and Prevalence of HIV and Hepatitis C
Among People Who Inject Drugs

Toronto Report
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Background:

The Public Health Agency of Canada, in collaboration with provincial, regional and local health authorities, community stakeholders and researchers, has established I-Track, an enhanced surveillance system that tracks HIV and hepatitis C-associated risk behaviours as well as HIV and hepatitis C prevalence in injecting drug users (IDU) in urban and semi-urban centres across Canada.

I-Track documents the prevalence of HIV and Hepatitis C and associated risk behaviors among injecting drug users through repeated cross-sectional surveys conducted at various sites across Canada. Data on seroprevalence of HIV and HCV is collected through finger prick blood samples collected from study participants.

The purpose of this report is to provide data from the analysis of Phase II of I-Track in Toronto.

Methods:

Data for phase II of I-Track for Toronto was collected by study interviewers at The Works; Queen West Community Health Centre; Parkdale Community Health Centre; Street Health Community Nursing Foundation; and South Riverdale Community Health Centre in 2006/07 from consented participants. Questionnaires were sent to the Public Health Agency of Canada, which provides funding as well as central co-ordination, laboratory testing, data entry and management functions for all I-Track sites. This analysis used the phase II dataset of I-Track which had been provided to the authors by the Public Health Agency of Canada and was used to produce an SPSS dataset for analysis. Frequency distributions of all variables were produced, along with bivariate analyses (chi-square or fisher's exact tests) of some key factors identified by Toronto Public Health and the authors.

Findings:**Demographics of Participants:**

Three different groups of participants completed the survey; current injectors (must have injected in the past 6 months, may also be crack smokers; N=257); crack smokers who have injected in their lifetime but not in the past 6 months (N=115) and crack smokers who have never injected (N=105). It should be noted that not all questions were asked to each group. It will be highlighted when not all study participants were included in the analysis.

Almost all participants (99.6%) lived in Toronto at the time of the interview. Twenty-eight percent were female; 71% male; 0.46% transgendered male to female; and 0.2% transgendered or female to male. Mean age was 41 and the median age was 41 (minimum 19; maximum 69). Table 1 outlines the age group distribution. The largest percentage of participants was between the ages of 35 and 44.

Table 1. Frequency by Age Group

Age Group	N	%
<25	23	4.9
25-34	89	18.8
35-44	204	43.1
45-54	130	27.5
55+	27	5.7

I-Track participants self-reported their ethnicity. Twelve percent of participants identified as Aboriginal, 73% identified as Canadian and 6% as European (Table 2). Among Aboriginals, 22% identified as Métis; 2% as Inuit and 76% as First Nations. Seventy five percent indicated they had status and 25% were non-status.

Table 2. Self-Reported Ethnicity

Ethnicity	N	%
Eastern European	4	0.8
Southern European	8	1.7
Other European	15	3.2
Caribbean	20	4.2
Central, Latin and South American	5	1.1
East and South East Asian	7	1.5
Middle Eastern	2	0.4
Sub-Saharan African	1	0.2
Aboriginal	57	12.0
Canadian	347	73.1
American	4	0.8
Other	8	1.7

Almost half of study participants had not graduated from high school. Almost one third of participants had continued their education after graduating high school; however, only 12% completed their post-secondary education. Table 3 provides a more detailed distribution of educational levels.

Table 3. Educational Attainment

Education	N	%
Some Elementary School	17	3.6
Completed Elementary School	15	3.2
Some High School	191	40.4
Completed High School	100	21.1
Some College/Trade School	35	7.4
Some University	59	12.5
Completed College/Trade School	29	6.1

Completed University	26	5.5
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The following table provides the distribution of participant’s housing situation within the 6 months preceding their interview (both ever in the past 6 months and current housing situation at the time of the interview). Sixty percent of participants at some point in the past 6 months had lived in their own apartment or in their own house (stable housing). However, many had also lived in unstable housing situations at some point over the past 6 months. For example, 38% had at some point lived in a shelter/hostel and 32% had lived on the street. In terms of current living situation, forty three percent lived in their own apartment or own house (stable housing) compared to 57% who currently lived in unstable housing. This includes 18% who currently lived in a shelter/hostel and 15% who currently lived on the street (Table 4).

Table 4. Living Situation in the Past 6 Months

Place	Past 6 Months*		Current	
	N	%	N	%
Own apartment	258	54.2	186	39.0
Own house	27	5.7	19	4.0
Parent(s) house/place	32	6.7	12	2.5
Other Relative’s house/place	12	2.5	3	.6
Friend’s Place	130	27.3	33	6.9
Hotel/Motel	66	13.9	5	1.0
Rooming/Boarding house	57	12.0	30	6.3
Shelter/Hostel	179	37.6	85	17.8
Transition/Halfway House	3	0.6	2	.4
Recovery house/detox	17	3.6	2	.4
Street	152	31.9	69	14.5
Squats	16	3.4	3	.6
Jail	89	18.7	4	.8
Psychiatric Institution	2	0.4		
Supportive Housing	4	0.8	5	1.0
Hospital	10	2.1		
Other	25	5.3	5	1.0

* Participants can answer yes to more than one category so that total can be more than 100%

Housing status was defined as housed (own apartment or own house) or under-housed (all other categories) at time of interview. Sex, age group, aboriginal ethnicity, crack smoking in the past 6 months, injecting opiates in the past 6 months, injecting cocaine in the past 6 months, frequency of injection in the past month, borrowing needles or injecting equipment in the past 6 months, needle exchange use in the past 6 months, current HIV status and current HCV status were not significantly associated with being under-housed.

People who were under-housed were more likely to report borrowing a crack pipe in the past six months (62% vs. 45%). People who were under-housed were more likely to report using a condom at their last sexual encounter (62% vs. 50%). People who are currently under-housed are more likely to have injected in public or on the street in the past 6 months compared to

those who are housed (62% vs. 41%). People who are currently under-housed are more likely to have been in a jail or correctional facility for more than 1 week in the past year (64% vs. 53%) (Table 5).

Table 5. Factors Associated with Being Under-Housed

	%	P-value
SEX		0.25
Males	58.4	
Females	52.6	
AGE GROUP		0.68
<25	69.6	
25-34	58.4	
35-44	54.9	
45-54	56.9	
55+	63.0	
ABORIGINAL		0.20
Aboriginal	64.9	
Non-Aboriginal	56.0	
CRACK SMOKING		0.41
Yes	57.6	
No	46.2	
BORROW PIPE**		<0.01
Yes	61.6	
No	45.1	
INJECT OPIATES*		0.45
Yes	53.9	
No	60.5	
INJECT COCAINE*		0.12
Yes	56.6	
No	41.4	
FREQ INJECTION*		0.34
Everyday	50.0	
Less than everyday	54.8	
Don't inject	65.6	
INJECTION RISK (Borrow needles/equip)*		0.25
Yes	58.7	
No	51.5	
INJECT IN PUBLIC OR ON STREET*		<0.01
Yes	62.4	
No	41.3	
NEP use		1.0
Yes	54.8	

	No	60.0	
CONDOM USE LAST TIME SEX			0.03
	Yes	61.1	
	No	49.7	
HIV Status			0.51
	Positive	50.0	
	Negative	57.4	
HCV Status			0.32
	Positive	54.5	
	Negative	59.1	
PRISON			0.02
	Yes	63.6	
	No	52.6	

* among respondents who had injected in the past 6 months

** among respondents who had smoked crack

Injection Drug Use:

The following section pertains to respondents who had injected drugs in the past 6 months (n=257).

The average age of first injection drug use was 22 years of age with a median of 20 years (range 11 to 56). Participants were asked which drugs they had injected in the past 6 months, participants could respond to as many different drugs as they had used. Over half of I-Track participants reported injecting each of cocaine, morphine (non-prescribed), Oxycontin/Oxycodone, crack, and heroin in the past 6 months. Participants indicated their most frequently injected drug in the past 6 months as: cocaine (24.9%), crack (22.6%), Oxycontin (16.0%), and prescribed morphine (14.4%). See table 6 for the distribution of use for the remaining drugs.

When recoded into drug classes, 85% had injected any opiate and 89% had injected any form of cocaine (including crack) in the past 6 months.

Table 6. Drugs Injected in the Past 6 Months

Drug	Injected in past 6 months*		Most commonly injected in past 6 months	
	N	%	N	%
Cocaine (uptown, up)	210	81.7	64	24.9
Morphine (non-prescribed)	155	60.3	8	3.1
Morphine (prescribed)	21	8.2	37	14.4
Dilaudid	124	48.2	8	3.1
Oxycontin/Oxycodone	165	64.2	41	16.0
Heroin+Cocaine (speedballs)	52	20.2	6	2.3
Amphetamines (speed, uppers, bennies)	30	11.7		
Crack	172	66.9	58	22.6
Methadone (prescribed)	9	3.5	2	.8
Methadone (non-prescribed)	25	9.7	1	.4
Methamphetamine (crystal meth, ice)	36	14.0	3	1.2
Steroids/hormones	8	3.1	1	.4
Heroin	133	51.8	24	9.3
PCP	8	3.1		
Talwin and Ritalin	6	2.3		
Ritalin Alone	27	10.5		
Benzodiazepines	9	3.1		
Barbiturates	7	2.7		
Fentanyl Patch	48	18.7	1	.4
Other	7	2.7	3	1.2

* Participants can answer yes to more than one category so that total can be more than 100%

In the **past month**, 27% of injectors had injected daily, 60% less than every day and 13% reported not injecting (however, they had injected in the past 6 months) (Table 7). Among those who injected daily, the average number of injections was 5 with a median of 4 per day (range 1 to 40).

Table 7. Frequency of Injection in the Past Month

	N	%
Not at all	32	12.5
Once in a while, not every day	58	22.6
Regularly, once or twice a week	57	22.2
Regularly, three or more times per week	40	15.6
Everyday	70	27.2

Eighty one percent reported injecting alone and almost three quarters of respondents reported injecting with close friends at some point in the past 6 months. Noteworthy are the 27% who

reported injecting with people they didn't know well and 21% who reported injecting with people they didn't know at all at some point in the past six months (Table 8). Opiate users were not more likely to inject alone in the past 6 months ($p=0.719$).

In terms of their most common injection partner in the past 6 months, 54% reported injecting alone, 30% with close friends and 14% with a regular sex partner. Less than 2% reported their most common injection partner was someone they didn't know at all or very well (Table 8). Please note that Table 11 shows the people injectors borrowed with – Table 8 represents people who were in attendance when the person injected, but may not necessarily have shared any equipment.

Table 8. Individuals Injected with in Past 6 Months

	Injected with in past 6 months*		Most commonly injected with in past 6 months	
	N	%	N	%
Close Friends	188	73.2	75	29.8
Family	9	3.5	3	1.2
Regular Sex Partner	68	26.5	34	13.5
People don't know well	70	27.2	3	1.2
People don't know at all	55	21.4	1	0.4
No one	207	80.5	136	54.0

* Participants can answer yes to more than one category so that total can be more than 100%

Non-Injection Drug Use:

All Participants were asked which drugs they had used through non-injection methods (smoking, snorting, etc.) and which drug they used most in the past 6 months. Over half of participants reported using cocaine, marijuana, alcohol, benzodiazepines, crack, and Tylenol with codeine in the past 6 months. The most commonly used non-injection drug was crack at 64% (Table 9).

Table 9. Non-injection Drugs Used and Most Commonly Used in the Past 6 Months

Drug	Used in past 6 months*		Most commonly used in past 6 months	
	N	%	N	%
Methadone (prescribed or non-prescribed)	132	27.7	20	4.8
Cocaine (up, uptown)	316	66.2	20	4.8
Marijuana (pot, hash, weed)	379	79.5	30	7.3
Oxycontin/Oxycodone	219	45.9	19	4.6
Alcohol	389	81.6	31	7.5
Benzodiazepines (Xanax, Valium, nerve pills)	241	50.5	5	1.2
Crack/Freebase	447	93.7	263	63.7
Morphine non-prescribed	135	28.3	4	1.0

Morphine prescribed	19	4.0	3	0.7
Dilaudid	100	21.0	1	0.2
Fentanyl patches	34	7.1	0	0
Tylenol with codeine	258	54.1	5	1.2
Demerol	25	5.2	0	0
Ecstasy (E,X)	118	24.7	0	0
Heroin (dust, junk, horse, smack)	99	20.8	6	1.5
Methamphetamine (Crystal meth, Ice)	62	13.0	3	0.7
Acid	30	6.3	0	0
Amphetamines	40	8.4	0	0
MDA	14	2.9	0	0
Mushrooms	53	11.1	0	0
Solvents-drink	15	3.1	0	0
Solvents-sniff	8	1.7	0	0
Talwin & Ritalin	22	4.6	0	0
Barbiturates	21	4.4	0	0
Ketamine	18	7.0	2	0.5
Other	23	4.8	0	0
Nothing	1	0.2	1	0.2

* Participants can answer yes to more than one category so that total can be more than 100%

Injecting Risk Behaviours:

The following section pertains to respondents who had injected in the past 6 months (N=257).

A. Borrowing Needles and Equipment

Eighteen percent of participants reported injecting with needles/syringes previously used by someone else in the past 6 months. Almost half of participants reported using injection paraphernalia already used by someone else (at least one of water, filters, or cookers) - this included 23% borrowing water, 24% borrowing filters, and 37% borrowing cookers. Twenty six percent reported also borrowing tourniquets, 6% swabs and 14% acidifiers (Table 10).

Table 10. Frequency of Borrowing Needles/Syringes and Injecting Equipment in the Past 6 Months

Risk Behaviour	N	%
Needles/Syringes	47	18.4
Water	59	23.1
Filter	61	23.8
Cooker	94	36.6
Any of water, filter or cooker	119	46.3
Tourniquet	66	26.1
Swabs	16	6.4
Acidifiers	34	13.7

Of the 47 participants who reported borrowing used needles/syringes in the past 6 months, 53% borrowed from close friends and 44% from regular sex partners at some point in the past 6 months. Of those who reported borrowing used needles/syringes in the past 6 months, 44% stated that they borrowed **most often** from a close friend, 42% from a regular sex partner, and 11% from someone they did not know very well or at all. Of the participants who reported borrowing used injecting equipment, 70% borrowed from a regular sex partner, 32% borrowed from a close friend, 3% from family members, 16% from people they don't know well and 7% from people they don't know at all at some point in the past 6 months. In contrast, 65% of people **most often** borrowed injecting equipment from close friends, 26% regular sex partners, 2% family and 7% people they didn't know well (Table 11).

Table 11. People From Whom Needles/Syringes and Equipment were Borrowed Ever and Most Often in the Past 6 Months

	Needles borrowed Ever*		Needles borrowed most often		Equipment borrowed ever*		Equipment borrowed most often	
	N	%	N	%	N	%	N	%
Regular sex partner	20	44.4	19	42.2	80	70.2	29	25.9
Close friends	24	53.3	20	44.4	36	31.6	73	65.2
Family	2	4.4	2	2.2	3	2.6	2	1.8
People don't know well	6	13.3	2	4.4	18	15.8	8	7.1
People don't know at all	5	11.1	3	6.7	8	7.0	0	0

* Participants can answer yes to more than one category so that total can be more than 100%

Of those who borrowed needles/syringes in the past 6 months (n=47), just over half borrowed occasionally, almost one-third borrowed sometimes, 2% borrowed usually and 14% borrowed always. Of those who borrowed injecting equipment (n=119), approximately one-third borrowed occasionally and one-third borrowed sometimes in the past six months. Of note are the remaining one-third who borrowed usually or always in the past 6 months (Table 12). Eighty three percent of people who reported borrowing needles 'always' in the past 6 months also reported they 'always' borrowed injecting equipment.

Table 12. Frequency of Borrowing Needles and Equipment in the Past 6 Months

	Needles		Equipment	
	N	%	N	%
Occasionally	22	51.2	41	35.3
Sometimes	14	32.6	9	33.6
Usually	1	2.3	16	13.8
Always	6	14.0	20	17.2

Respondents were asked to place their borrowing of used needles in the past month on a scale of 0 to 10. The average was 3.1 with a median of 2.0 (range 0 to 10). Respondents were asked to

place their borrowing of used equipment in the past month on a scale of 0 to 10. The average was 4.3 with a median of 4.0 (range 0 to 10).

Sex, age group, aboriginal ethnicity, housing status, crack use in the past 6 months, injecting cocaine in the past 6 months, frequency of injection in the past month, needle exchange use in the past 6 months, condom use at last sexual encounter, current HIV status, current HCV status, and being in a jail or correctional facility for more than a week in the past year were not significantly associated with borrowing needles or equipment (Table 13). However, it should be noted that none of the IDU who reported borrowing used needles and equipment in the last 6 mo. reported that they were needle exchange attenders.-

Respondents who borrowed needles or equipment were more likely to have borrowed a crack pipe in the past 6 months (56% vs. 25%), more likely to inject opiates in the past 6 months (52% vs. 21%), and more likely to inject in public places or on the street in the past 6 months (53% vs. 36%; Table 13).

Table 13. Factors Associated with Borrowing Used Needles and Equipment in the Past 6 Months

	%	P-value
SEX		0.09
Males	43.5	
Females	55.1	
AGE GROUP		0.14
<25	68.8	
25-34	51.0	
35-44	46.4	
45-54	47.0	
55+	18.2	
ABORIGINAL		0.16
Aboriginal	61.9	
Non-Aboriginal	45.8	
STABLE HOUSING		0.25
No	50.4	
Yes	43.1	
CRACK SMOKING		0.19
Yes	49.6	
No	30.8	
BORROW PIPE**		<0.01
Yes	56.1	
No	24.5	
INJECT OPIATES*		<0.01
Yes	51.6	
No	21.1	
INJECT COCAINE*		0.89

	Yes	46.9	
	No	48.3	
FREQ INJECTION*			0.52
	Everyday	52.9	
	Less than everyday	45.2	
	Don't inject	43.8	
INJECT IN PUBLIC OR ON STREET*			<0.01
	Yes	53.3	
	No	35.9	
NEP use			0.06
	Yes	0	
	No	48.0	
CONDOM USE LAST TIME SEX			1.0
	Yes	49.4	
	No	49.4	
HIV Status			1.0
	Positive	50.0	
	Negative	47.6	
HCV Status			0.19
	Positive	50.6	
	Negative	41.6	
PRISON			0.30
	Yes	50.5	
	No	43.9	

* among respondents who had injected in the past 6 months

** among respondents who had smoked crack

B. Lending Needles and Equipment

Somewhat higher proportions of participants reported lending used needles and equipment compared to borrowing these materials. Twenty three percent reported passing used needles/syringes to someone else and 48% reporting passing used injecting equipment (any of water, filters or cookers) to another person in the preceding six months (29% for water, 29% for filters, and 40% for cookers). In addition, 29% reported lending tourniquets, 7% swabs and 13% acidifiers (Table 14).

Table 14. Frequency of Lending Needles/Syringes and Injecting Equipment in the Past 6 Months

Risk Behaviour	N	%
Needles/Syringes	57	22.9
Water	75	29.4
Filter	74	28.9
Cooker	102	39.8
Any of water, filter or cooker	122	47.5
Tourniquet	74	28.9
Swabs	18	7.1
Acidifiers	32	12.5

Of those who reported lending used needles/syringes in the past 6 months (n=57), 55% reported lending occasionally, 38% reported lending sometimes, and 7% reported lending always. Of participants who lent injecting equipment (n=122), approximately one-third reported lending occasionally, one third lending sometimes and one third lending at least usually if not always (Table 15).

Table 15. Frequency of Lending Needles/Syringes and Equipment in the Past 6 Months

	Needles		Equipment	
	N	%	N	%
Occasionally	31	55.4	39	32.2
Sometimes	21	37.5	43	35.5
Usually	0	0	17	14.0
Always	4	7.1	22	18.2

Respondents were asked to place the lending of their used needles in the past month on a scale of 0 to 10. The average was 2.6 with a median of 2.5 (range 0 to 10). Respondents were asked to place the lending of used equipment in the past month on a scale of 0 to 10. The average was 4.5 with a median of 4.0 (range 0 to 10).

Location of Injecting

The following section pertains to respondents who had injected in the past 6 months (N=257).

Table 16 shows all the locations in which participants injected drugs in the past 6 months and the location most frequently used for injection in the past 6 months. In Toronto, there were a wide variety of locations used for injecting. Over half of respondents had at some point in the past six months injected in their own apartment, at a friend's house, or in a public place. In terms of places most commonly injected, 45% most commonly injected in their own apartment. Of note are the 13% who had injected most commonly in a public place and the additional 11% who most commonly injected on the street in the past 6 months.

Table 16. Place Most Commonly Injecting in the Past 6 Months

	Places Injected*		Places most commonly injected	
	N	%	N	%
Own apartment	141	54.9	109	45.4
Friend's Place	167	65.0	40	16.7
Own house	11	4.3	9	3.8
Street	117	45.5	26	10.8
Rooming/Boarding house	71	27.6	7	2.9
Hotel/Motel Room	93	36.2	1	0.4
Public place (e.g. washroom, stairwell)	139	54.1	32	13.3
Other relative's house/place	19	7.4	3	1.2
Jail/Prisons/Corrections	7	2.7	0	0
Parent(s) house/place	24	9.3	1	0.4
Shelter/Hostel	59	23.0	9	3.8
Transition house/Halfway house	10	3.9	0	0
Recovery house/Detox	8	3.1	0	0
Squats	22	8.6	0	0
Psychiatric Institution	0	0	0	0
Supportive housing	4	1.6	0	0
Other	8	3.1	3	1.2

* Participants can answer yes to more than one category so that total can be more than 100%

Respondents were also asked whether they had injected in a variety of additional places in the past six months. More than one-third of respondents had injected in a place they pay to use or exchange drugs to use; a parking lot, street or alley; a park; in a stairwell or doorway; or a public washroom or toilet. Of note, only 16% of respondents had not injected in any of these locations (Table 17).

Table 17. Additional Places for Injection

	Places Injected*	
	N	%
A place you pay to use or exchange drugs to use	88	40.2
An abandoned building (not a shooting gallery or crack house)	44	20.1
A parking lot/street or alley	96	43.8
A park	81	37.0
A school yard	29	13.2
In a stairwell/doorway of a store, office or other building	85	38.8
A car	62	28.3
A public washroom or toilet	127	58.0
A place were you buy drugs	44	20.1
None	34	15.5

* Participants can answer yes to more than one category so that total can be more than 100%

Crack Smoking:

Of all I-track participants, 97.2% reported smoking crack in the past 6 months. The average age of first crack use was 26.4 and the median age was 25.0 (range 4 to 68). Of those who reported smoking crack in the past 6 months, 77.5% reported lending pipes and 73.1% reported borrowing used pipes.

Sex, age group, aboriginal ethnicity, injecting cocaine in the past 6 months, frequency of injection in the past month, needle exchange use in the past 6 months, injecting in public places or on the street in the past 6 months, current HIV status, and current HCV status were not associated with borrowing a pipe in the past 6 months (Table 18).

Respondents who borrowed a pipe in the past 6 months were more likely to be under-housed (83% vs. 71%), were more likely to use a condom at their last sexual encounter (81% vs. 72%), were more likely to have been incarcerated for more than a week in the past year (84% vs. 73%), were more likely to borrow needles or syringes in the past six months (90% vs. 69%), and were more likely to have injected opiates in the past six months (82% vs. 66%) compared to their counterparts (Table 18).

Table 18. Factors Associated with Borrowing a Pipe in the Past 6 Months

	%	P-value
SEX		0.76
Males	77.2	
Females	78.6	
AGE GROUP		0.55
<25	81.0	
25-34	83.8	
35-44	78.4	
45-54	74.0	
55+	74.1	
ABORIGINAL		0.59
Aboriginal	80.4	
Non-Aboriginal	77.1	
HOUSING STATUS		<0.01
Housed	70.7	
Under-housed	82.5	
INJECTION RISK (Borrow needles/equip)*		<0.01
Yes	89.7	
No	68.9	
INJECT OPIATES*		0.03
Yes	81.6	
No	65.7	
INJECT COCAINE*		0.08
Yes	80.6	
No	63.2	

FREQ INJECTION*		0.38
Everyday	74.1	
Less than everyday	79.7	
Don't inject	86.7	
INJECT IN PUBLIC OR ON STREET*		0.19
Yes	81.9	
No	74.7	
NEP use		0.06
Yes	80.1	
No	40.0	
CONDOM USE LAST TIME SEX		0.04
Yes	80.8	
No	72.0	
HIV Status		0.57
Positive	83.3	
Negative	77.8	
HCV Status		0.25
Positive	80.4	
Negative	75.8	
PRISON		<0.01
Yes	83.8	
No	73.2	

*among respondents who had injected drugs in the past 6 months

Safe Injection Sites and Safe Smoking Rooms:

Injectors and crack smokers were asked a series of questions about safe injection sites (SIS) and safe smoking rooms (SSR). SIS were defined as 'a place where drug users can take their own drugs to inject and where there will be a trained staff person to provide sterile injection equipment and to assist anyone who overdoses'. SSR were defined as 'a place where users can smoke their own drugs such as crack in a safe, supervised place where clean mouth pieces can be provided'.

Seventy six percent of current and past injectors reported they would use a supervised injection site (SIS).

Sex, aboriginal ethnicity, current housing status, injecting cocaine in the past 6 months, frequency of injection in the past month, using a NEP in the past 6 months, condom use at last sexual encounter, current HIV status, and current HCV status were not associated with willingness to use a SIS (Table 19).

Younger respondents, those who had injected opiates in the past 6 months (82% vs. 58%), those who injected in public or on the street in the past 6 months (88% vs. 62%), those who borrowed needles or injecting equipment in the past 6 months (86% vs. 72%), and those who were

incarcerated for more than one week in the past year (81% vs. 71%) were more likely than their counterparts to be willing to use a SIS (Table 19).

Table 19. Factors Associated with Willingness to Use a SIS

	%	P-value
SEX		0.74
Males	75.0	
Females	76.7	
AGE GROUP		0.01
<25	88.9	
25-34	84.1	
35-44	71.2	
45-54	81.4	
55+	45.0	
ABORIGINAL		0.59
Aboriginal	79.4	
Non-Aboriginal	75.2	
HOUSING STATUS		0.20
Housed	72.3	
Under-housed	78.2	
INJECT OPIATES*		0.01
Yes	82.2	
No	57.9	
INJECT COCAINE*		0.29
Yes	77.6	
No	86.2	
FREQ INJECTION*		0.13
Everyday	85.7	
Less than everyday	77.4	
Don't inject	68.8	
INJECT IN PUBLIC OR ON STREET*		<0.01
Yes	87.9	
No	62.0	
INJECTION RISK (Borrow needles/equip)*		<0.01
Yes	86.0	
No	72.1	
NEP use		0.29
Yes	79.0	
No	60.0	
CONDOM USE LAST TIME SEX		0.56
Yes	75.7	
No	79.1	

HIV Status		0.55
	Positive	68.8
	Negative	76.6
HCV Status		0.52
	Positive	77.4
	Negative	74.4
PRISON		0.03
	Yes	81.2
	No	71.3

* among respondents who had injected in the past 6 months

A variety of reasons were provided as to why a current or past injector would not use a SIS. One quarter stated they were not currently using drugs, not currently injecting or that they plan to quit using. Almost one-quarter use solely in their own place and the same proportion stated they don't like to use around other people. Twelve percent of respondents stated they don't trust it or are paranoid to use a SIS (Table 20).

Table 20. Reasons For Not Using a SIS*

	N	%
Don't use/inject/want to quit using	17	25.0
I use at my own place	16	23.5
Don' like using around people	16	23.5
Don't trust it/paranoia	8	11.7
not specified	3	4.4
Other	8	11.7

* among respondents who had injected in the past 6 months

Sixty four percent (N=288) of crack users reported they would use a supervised room for crack smoking.

Sex, age group, current HIV status, and current HCV status were not associated with a willingness to use a SSR by crack smokers, while Aboriginal ethnicity was marginally associated with willingness to use a SSR ($p=0.05$) (Table 21).

Respondents who were currently under-housed were more likely to report a willingness to use a SSR compared to those who were adequately housed (72% vs. 54%). Crack smokers who reported borrowing a pipe in the past 6 months were also more willing compared to crack smokers who had not borrowed a pipe (73% vs. 39%). Respondents who had used the services of a NEP were more likely to report a willingness to use a SSR (59% vs. 0%). Respondents who had used a condom at their last sexual encounter were also more willing (70% vs. 59%). Finally, respondents who had been incarcerated for more than one week in the past year were also more likely to report a willingness to use a SSR (70% vs. 60%; Table 21).

Table 21. Factors Associated with Willingness to Use a SSR

	%	P-value
SEX		0.80
Males	63.6	
Females	64.9	
AGE GROUP		0.59
<25	63.6	
25-34	58.0	
35-44	66.8	
45-54	66.9	
55+	57.7	
ABORIGINAL		0.05
Aboriginal	75.4	
Non-Aboriginal	62.3	
HOUSING STATUS		<0.01
Housed	53.6	
Under-housed	71.7	
BORROW PIPE**		<0.01
Yes	72.7	
No	39.4	
NEP use		0.03
Yes	59.4	
No	0	
CONDOM USE LAST TIME SEX		0.03
Yes	70.1	
No	58.5	
HIV Status		0.28
Positive	78.9	
Negative	64.2	
HCV Status		0.11
Positive	60.9	
Negative	68.3	
PRISON		0.03
Yes	70.3	
No	59.9	

** among respondents who had smoked crack

Table 22 provides the reported benefits of a SIS for a current and past injector and a SSR for a crack user. For both crack users and injectors the benefits were similar - being safe from being seen by police and safe from crime. Interestingly the order was the same for both a SIS and a SSR.

Table 22. Reasons For Using a SIS or a SSR

	SIS		SSR	
	N	%	N	%
I would be safe from being seen by the police	172	85.1	149	68.3
I would be safe from crime	164	81.2	137	62.8
I would be able to get clean sterile injection equipment/sterile smoking equipment	148	73.3	113	51.8
I would be able to inject/use in private and not in a public space	147	72.8	106	48.6
Overdoses can be prevented	143	70.8	96	44.0
Overdoses can be treated	143	70.8	96	44.0
I would be able to see health professionals	133	65.8	91	41.7
I would be able to get a referral for services such as detox, treatment, etc	105	52.0	80	36.7
Other	71	35.1	57	26.1

Current and past injectors were asked if a SIS was established close by, how often they would use it. Three in 10 respondents reported they would always use it with a further 23% reporting they would usually use it (Table 23). Currently homeless injectors were more likely than those who were not to say they would ‘always’ use a SIS ($p=0.012$).

Table 23. Expected Frequency of Using a SIS

	SIS	
	N	%
Always	59	29.8
Usually	45	22.7
Sometimes	66	33.3
Occasionally	28	14.1

Current injectors were asked about needing help to inject their drugs. Over two thirds always inject themselves. Only 11% always require help to inject (Table 24).

Table 24. Frequency of Requiring Help to Inject

	N	%
Always	22	10.9
Usually	10	5.0
Sometimes	18	8.9
Occasionally	16	7.9
Never	136	67.3

Current and past injectors were asked about the importance of potential services at a SIS. Respondents felt that nursing staff was the most important, followed by food, toilets, and drug counsellors (Table 25).

Table 25. Importance of Potential Services at a SIS

	Very Important	Somewhat Important	Not that Important
Nursing Staff	84.2% (N=170)	12.9% (N=26)	3.0% (N=6)
Food	62.9% (N=127)	29.2% (N=59)	7.9% (N=16)
Toilets	61.9% (N=125)	30.7% (N=62)	7.4% (N=15)
Drug Counselors	55.9% (N=113)	24.3% (N=49)	19.8% (N=40)
Social Workers	54.2% (N=109)	27.9% (N=56)	17.9% (N=36)
Urgent Detox Beds	49.0% (N=99)	31.2% (N=63)	19.8% (N=40)
Showers	45.8% (N=92)	30.8% (N=62)	23.4% (N=47)

People who smoke crack were asked to rate the importance of potential services at a safe smoking room. The highest ranked were nursing staff, food, toilets and showers (Table 26).

Table 26. Importance of Potential Services at a SSR

	Very Important	Somewhat Important	Not that Important
Nursing Staff	75.8% (N=135)	16.9% (N=30)	7.3% (N=13)
Food	75.7% (N=134)	19.2% (N=34)	5.1% (N=9)
Toilets	72.5% (N=129)	25.3% (N=45)	2.2% (N=4)
Showers	62.8% (N=110)	25.3% (N=45)	12.9% (N=23)
Urgent Detox Beds	59.3% (N=105)	22.6% (N=40)	18.1% (N=32)
Drug Counselors	57.1% (N=101)	24.9% (N=44)	18.1% (N=32)
Social Workers	47.2% (N=84)	33.1% (N=59)	19.7% (N=35)

Injectors (both current and past) and crack users were asked how far they would travel to use a SIS or an SSR. Over one quarter of injectors would travel over a kilometer compared to 40% of crack users (Table 27).

Table 27. Farthest Distance a User Would Travel to a SIS or SSR

	SIS		SSR	
	N	%	N	%
One block or less	7	3.5	6	3.4
2 to 5 blocks	59	29.2	57	32.4
6 to 10 blocks	39	19.3	23	13.1
A km or less	41	20.3	19	10.8
More than a Km	56	27.7	71	40.3

Both injectors (current and past) and people who smoke crack were asked about their willingness to take the TTC to a SIS or SSR. Almost three quarters would be willing to take the TTC to a SIS or SSR, however, approximately 25% could not afford it. Just over ¼ of respondents would be unwilling to take the TTC to a SIS or a SSR even if they could afford it (Table 28).

Table 28. Willingness to Take TTC to SIS

	SIS		SSR	
	N	%	N	%
I would be willing to take the subway, bus or streetcar	93	46.5	77	44.3
I would be willing to take the TTC but can't afford it	51	25.5	45	25.9
I would not be willing to take the TTC even if I could afford it	56	28.0	52	29.9

Injectors (current and past) and people who smoke crack were asked about their willingness to use different models for service delivery of SIS and SSRs. The largest proportion of respondents stated they would use a place at a Toronto needle exchange site (81% of crack users and 85% of injectors). However, the preferred model for crack users was a separate place in downtown Toronto designated for smoking only. Injectors preferred model was for the SIS to be placed at a needle exchange program (Table 29).

Table 29. Willingness of Injectors and Crack Smokers to Use Services

	Crack Users				Injectors			
	Would Use		Preferred Model		Would Use		Preferred Model	
	N	%	N	%	N	%	N	%
Place with one room for drug injectors and one for crack users	146	73.7	46	23.4	179	74.0	68	28.3
Separate place for injectors only	92	46.0	7	3.6	172	70.8	48	20.0
Separate place in downtown Toronto only for smoking crack or other drugs	143	69.4	60	30.5	129	53.5	12	5.0
Place at a Toronto needle exchange site	167	81.1	48	24.4	208	84.9	76	29.6
Mobile service which would visit particular neighborhoods	125	61.0	22	11.2	154	63.9	20	7.8
Outreach Services to existing shooting galleries and crack-using places	157	76.2	11	5.6	186	78.2	11	4.3
Other	19	8.6	3	1.5	18	7.0	1	0.4
None							3	1.2

Issues related to Drug Use:

Forty percent of I-Track participants had been in a jail or correctional facility for more than one week in the past year. Only 3.3% (N=16) reported injecting in jail or prison. Forty three percent of these reported sharing in prison (N=6). Of note, only current injectors were asked this question - crack smokers who did not currently inject were therefore excluded from this question.

Sixteen percent (N=73) of I-Track participants had been to an emergency department or been admitted to hospital in the last six months due to a drug overdose. The average number of times was 2.4 (median 1.0; range 1 to 30). Eight percent of respondents had overdosed in the past 6

months but no one called 911. Sixteen percent (N=76) had been with someone else who overdosed but no one called 911 in the past six months. The majority of respondents reported that 911 had not been called to a drug overdose due to a fear that police would come or that they would be arrested. As shown in table 30 there are a large proportion of respondents who reported an 'other' reason – much of this was due to CPR being performed by others on site.

Table 30. Reasons why 911 was not called to a drug overdose

	N	%
Fear that the police would come or that they would be arrested	33	66.0
Fear that they would be treated badly by paramedics	8	16.0
Fear that they would be treated badly in the ER	6	12.0
Other	29	58.0

Sexual Activity & Condom Use:

Sixty five percent of I-Track participants (N=309) reported sexual activity in the last month (all types of partners). Women were more likely to report having had sex compared to men (81.5% vs. 58.3%; $p < 0.01$)

Among respondents who reported sexual activity in the past month, 40.8% reported exchanging sex for drugs in the past six months. There was no significant difference between men and women (37.8% vs. 45.5%; $P > 0.05$).

Fifty four percent of respondents reported using a condom the last time they had sex. There was no significant difference between men and women (53.4% vs. 53.9%; $P > 0.05$). People who exchanged sex for drugs in the past 6 months were significantly more likely to report using a condom at their last sexual encounter ($p > 0.01$) (67.7% vs. 44.4%).

While not quite significant ($p = 0.09$) people who always used the services of the NEP they were recruited from were more likely to use a condom (66.7% vs. 51.8%).

Tables 31 and 32 indicate numbers of male and female partners in the past 6 months reported by each gender.

Table 31. Numbers of Female Sex Partners Reported by Male and Female Participants in the Previous 6 months

Number of Female Sex Partners	Male Participants	Female Participants
None	43 (26.5%)	47 (87.0%)
1	38 (23.5%)	3 (5.6%)
2 – 5	55 (34.0%)	4 (7.4%)
6 – 20	17 (10.5%)	0
21 or more	9 (5.6%)	0

Table 32. Numbers of Male Sex Partners Reported by Male and Female Participants in the Previous 6 months

Number of Male Sex Partners	Male Participants	Female Participants
None	150 (93.2%)	6 (10.9%)
1	4 (2.5%)	14 (25.5%)
2 – 5	5 (3.1%)	16 (29.1%)
6 – 20	1 (0.6%)	6 (10.9%)
21 or more	1 (06%)	13 (23.6%)

Table 33, 34, 35 and 36 display the frequency of condom use for various types of sexual activity with various types of partners by sex and partner’s sex.

Table 33. Percent of Female with Female Sex Partners Who Used Condoms with Various Types of Sexual Activity

		No Sexual contact	Never	Occasionally	Sometimes	Usually	Always
Regular (n=7)	Vaginal	0.0	71.4	0	0	14.3	14.3
	Oral	0	71.4	0	0	0	28.6
	Anal	28.6	42.9	0	14.3	0	14.3
Casual (n=12)	Vaginal	25.0	58.3	0	0	0	16.7
	Oral	0	83.3	0	0	0	16.7
	Anal	41.7	58.3	0	0	0	0
Client (n=6)	Vaginal	16.7	50.0	0	16.7	0	16.7
	Oral	0	50.0	16.7	0	0	33.3
	Anal	83.3	16.7	0	0	0	0
You are client (n=0)	Vaginal	0	0	0	0	0	0
	Oral	0	0	0	0	0	0
	Anal	0	0	0	0	0	0

Table 34. Percent of Males with Female Sex Partners who Used Condoms with Various Types of Sexual Activity

		No Sexual contact	Never	Occasionally	Sometimes	Usually	Always
Regular (n=103)	Vaginal	0	59.2	11.7	5.8	2.9	20.4
	Oral	1.0	75.7	7.8	3.9	0	11.7
	Anal	37.9	42.7	5.8	3.9	1.0	8.7

Casual (n=121)	Vaginal	6.6	20.7	6.6	6.6	12.4	47.1
	Oral	1.7	47.9	9.9	4.1	4.1	32.2
	Anal	54.5	13.2	4.1	5.0	2.5	20.7
Client (n=5)	Vaginal	0	0	0	0	0	100.0
	Oral	20.0	60.0	0	20.0	0	0
	Anal						
You are client (n=12)	Vaginal	8.3	8.3	0	0	8.3	75.0
	Oral	8.3	33.3	8.3	0	0	50.0
	Anal	41.7	8.3	0	0	0	50.0

Table 35. Percent of Females with Male Sex Partners who Used Condoms with Various Types of Sexual Activity

		No Sexual contact	Never	Occasionally	Sometimes	Usually	Always
Regular (n=72)	Vaginal	0	75.0	4.2	6.9	0	16.9
	Oral	4.2	80.6	4.2	4.2	0	6.9
	Anal	38.9	50.0	0	5.6	0	5.6
Casual (n=37)	Vaginal	5.6	56	5.6	16.7	13.9	52.8
	Oral	2.8	36.1	16.7	11.1	0	33.3
	Anal	58.3	2.8	5.6	5.6	8.3	19.4
Client (n=54)	Vaginal	13.2	0	1.9	13.2	7.5	64.2
	Oral	1.9	13.2	15.1	9.	9.4	50.9
	Anal	62.3	0	0	13.2	1.9	22.6
You are client (n=5)	Vaginal	20.0	0	0	20.0	20.0	40.0
	Oral	20.0	0	200	20.0	20.0	20.0
	Anal	80.0	0	0	0	20.0	0

Table 36. Percent of Males with Male Sex Partners who Used Condoms with Various Types of Sexual Activity

		No Sexual contact	Never	Occasionally	Sometimes	Usually	Always
Regular (n=13)	Oral	0	84.6	0	0	0	15.4
	Anal	16.7	41.7	0	0	0	41.7
Casual (n=9)	Oral	0	77.8	0	0	11.1	11.1
	Anal	25.0	12.5	0	0	12.5	50.0
Client (n=14)	Oral	0	46.2	7.7	0	7.7	38.5
	Anal	33.3	0	8.3	0	16.7	41.7
You are client (n=5)	Oral	0	100.0	0	0	0	0

	Anal	25.0	0	25.0	0	0	50.0
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HIV Infection:

Eighty-eight percent of I-Track participants reported that they had previously tested for HIV. Table 37 shows the reasons why people have not previously tested. Please note that only 9 people responded to this question – each person reported multiple reasons for not testing.

Table 37. Reasons Why Never Tested for HIV

	N	%
I am at low risk of HIV infection	6	66.7
I do not want to know	1	11.1
I think I am HIV negative	5	55.6
I always have safer sex	3	33.3
I never thought about it	3	33.3
I am worried about the impact on my sex life	1	11.1
I know that I have never had sex with an infected person	2	22.2
I know that I have never borrowed needles/equipment from an infected person	4	44.4
I know that I have never borrowed needles/equipment	3	33.3
I could not deal with knowing I was infected	2	22.2
I am worried about being discriminated against	1	11.1
It could affect my career or insurance	2	22.2
It could affect my relationship	1	11.1
Other	4	44.4

Table 38 outlines the year of most recent HIV test. Fifty seven percent had been tested in the past year.

Table 38. Year of Most Recent HIV Test

Year	N	%
2007	1	0.2
2006	234	56.8
2005	83	20.1
2004	27	6.6
2003	23	5.6
2002	8	1.9
2001	12	2.9
2000	4	1.0
1999	4	1.0
1998	1	0.2
1997	3	0.7
1996	5	1.2
1995	0	0
1994	0	0
1993	0	0
1992	1	0.2
1991	2	0.5
1990	2	0.5
1989	0	0
1988	0	0
1987	2	0.5

Sex, age group, aboriginal ethnicity, current housing status, crack smoking in the past 6 months, injecting opiates in the past 6 months, injecting cocaine in the past 6 months, frequency of injecting in the past month, injecting in public or on the street in the past 6 months, using a NEP in the past 6 months, condom use at last sexual encounter, current HIV status, current HCV status, and being incarcerated for more than one week in the past year were not associated with having been tested for HIV in the past year (Table 39).

People who smoke crack who had never borrowed a pipe in the past 6 months were more likely to have been tested for HIV in the past year (58% vs. 47%). Participants who borrowed needles or injecting equipment were more likely to have been tested for HIV in the past year (59% vs. 49%) (Table 39).

Table 39. Factors Associated with Testing for HIV in the Past Year

	%	P-value
SEX		0.16
	Males	46.9
	Females	54.1
AGE GROUP		0.43
	<25	47.8

	25-34	56.2	
	35-44	51.0	
	45-54	44.6	
	55+	40.7	
ABORIGINAL			0.41
	Aboriginal	54.4	
	Non-Aboriginal	48.6	
HOUSING STATUS			0.46
	Housed	51.2	
	Under-housed	47.8	
CRACK SMOKING			0.74
	Yes	49.2	
	No	53.8	
BORROW PIPE**			0.04
	Yes	46.6	
	No	57.8	
INJECT OPIATES*			0.06
	Yes	56.2	
	No	39.5	
INJECT COCAINE*			0.16
	Yes	55.3	
	No	41.4	
FREQ INJECTION*			0.13
	Everyday	58.6	
	Less than everyday	51.6	
	Don't inject	53.1	
INJECT IN PUBLIC OR ON STREET*			0.25
	Yes	56.4	
	No	48.9	
INJECTION RISK (Borrow needles/equip)*			0.01
	Yes	58.7	
	No	49.3	
NEP			1.0
	Yes	53.6	
	No	60.0	
CONDOM USE LAST TIME SEX			0.71
	Yes	49.0	
	No	51.5	
HIV Status			0.61
	Positive	55.0	
	Negative	49.2	

HCV Status		0.08
	Positive	53.6
	Negative	45.5
PRISON		0.18
	Yes	52.9
	No	46.7

* among respondents who had injected in the past 6 months

** among respondents who had smoked crack

Just over 1 in 4 participants had last tested for HIV with their family physician. Similarly 1 in 4 participants last tested at a community health center (Table 40).

Table 40. Place Last Tested for HIV

Location	N	%
Family Physician	114	27.7
Hospital	54	13.1
Research	2	0.5
Canadian Blood Services	1	0.2
Antenatal testing	0	0
Jail	57	13.8
Needle Exchange Program	25	6.1
Community Health Centre	106	25.7
Anonymous Testing Site	0	0
Sexual Health Clinic	4	1.0
Drug Treatment Facility/Organization	33	8.0
Outreach Program	1	0.2
Other	15	3.6

Among respondents, 3.6% self reported positive and 3.4% stated they did not know the test results. Eighty seven percent of those who reported they are HIV positive reported they were under the care of a doctor for HIV and of those, 73.3% had ever taken antiretroviral medications. Eighty one percent of these people were on antiretrovirals at the time of the survey.

Of 459 participants with HIV dried blood spot (DBS) test results, 20 (4.4%) were HIV positive. Half of the HIV positive participants were also HCV positive (DBS). Due to the very small sample size there is very low precision in the statistical tests. For this reason no bivariate analyses were performed on HIV status and the other demographic and drug use variables.

As shown in table 41, 25% of those who tested positive through DBS for HIV self-reported they were HIV negative and are therefore unaware of their infection.

Table 41. Self Reported HIV Status Compared to Dried Blood Spot Results

	HIV Negative (self-report)	HIV Positive (self-report)
HIV Negative (DBS)	369 (99.5%)	2 (0.5%)

HIV Positive (DBS)	4 (25%)	12 (75%)
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HCV Infection:

Eighty-eight percent reported that they had been previously tested for HCV. Just over half of testers had tested within the past year (Table 42). Some participants reported a previous HCV test in a year prior to the availability of tests for HCV, suggesting that they may not be correctly distinguishing tests for different forms of hepatitis, or may be mis-recalling the testing year.

Table 42. Year of Last HCV Test

Year	N	%
2007	2	0.5
2006	220	53.9
2005	78	29.1
2004	35	8.6
2003	18	4.4
2002	13	3.2
2001	8	2.0
2000	5	1.2
1999	3	0.7
1998	3	0.7
1997	3	0.7
1996	6	1.5
1995	3	0.7
1994	0	0
1993	1	0.2
1992	2	0.5
1991	1	0.2
1990	3	0.7
1989	2	0.5
1986	1	0.2
1980	1	0.2

Sex, age, aboriginal ethnicity, current housing status, smoking crack in the past 6 months, borrowing a pipe in the past 6 months, injecting cocaine in the past 6 months, frequency of injecting in the past month, injecting in public or on the street in the past 6 months, NEP use in the past 6 months, condom use at last sexual encounter, borrowing needles or injecting equipment in the past 6 months, current HIV status, current HCV status, and being incarcerated for more than a week in the past year were not associated with being tested for HCV in the past year (Table 44).

Respondents who had injected opiates in the past 6 months were more likely to have been tested for HCV in the past year compared to respondents who had not injected opiates (Table 43).

Table 43. Factors Associated with Testing for HCV in the Past Year

	%	P-value
SEX		0.28
Males	44.8	
Females	50.4	
AGE GROUP		0.51
<25	43.5	
25-34	49.4	
35-44	50.0	
45-54	42.3	
55+	37.0	
ABORIGINAL		0.48
Aboriginal	50.9	
Non-Aboriginal	46.0	
HOUSING STATUS		0.30
Housed	49.3	
Under-housed	44.5	
CRACK SMOKING		0.27
Yes	46.2	
No	61.5	
BORROW PIPE**		0.07
Yes	43.8	
No	53.9	
INJECT OPIATES*		0.04
Yes	55.3	
No	36.8	
INJECT COCAINE*		0.76
Yes	52.2	
No	55.2	
FREQ INJECTION*		0.66
Everyday	57.1	
Less than everyday	51.0	
Don't inject	50.0	
INJECT IN PUBLIC OR ON STREET*		0.26
Yes	55.2	
No	47.8	
INJECTION RISK (Borrow needles/equip)*		0.17
Yes	57.0	
No	48.5	
NEP use		0.21

	Yes	52.0	
	No	80.0	
CONDOM USE LAST TIME SEX			0.56
	Yes	44.9	
	No	48.0	
HIV Status			0.15
	Positive	65.0	
	Negative	46.0	
HCV Status			0.51
	Positive	48.5	
	Negative	45.5	
PRISON			0.17
	Yes	50.3	
	No	43.9	

* among respondents who had injected in the past 6 months

** among respondents who had smoked crack

Almost thirty percent last tested for HCV with their family physician. A further 25% last tested at a community health centre (Table 44).

Table 44. Place Last Tested for HCV

Location	N	%
Hospital	50	12.1
Needle Exchange Program	25	6.1
Community Health Care	103	25.0
Sexual Health Clinic	3	0.7
Jail	56	13.6
Family Physician	116	28.2
Drug Treatment	39	9.5
Red Cross	2	0.5
Research	1	0.2
Other	17	4.1

Of the 455 participants who had HCV dried blood test results, 51.6% were positive.

Sex, aboriginal ethnicity, current housing status, smoking crack in the past 6 months, borrowing a pipe in the past 6 months, injecting opiates in the past 6 months, injecting cocaine in the past 6 months, frequency of injecting in the past month, NEP use in the past 6 months, condom use at last sexual encounter, borrowing needles or injecting equipment in the past 6 months, current HIV status, and being incarcerated for more than a week in the past year were not associated with being HCV positive (Table 45).

The prevalence of HCV significantly increased with age. Respondents who reported injecting on the street or in public in the past 6 months were more likely to be HCV positive compared to those who had not injected on the street (74% vs. 62%) (Table 45).

Table 45. Factors Associated with Being HCV Positive

	%	P-value
SEX		0.94
Males	51.9	
Females	51.5	
AGE GROUP		0.03
<25	36.4	
25-34	40.7	
35-44	52.0	
45-54	60.2	
55+	58.3	
ABORIGINAL		0.15
Aboriginal	42.0	
Non-Aboriginal	52.8	
HOUSING STATUS		0.32
Housed	54.3	
Under-housed	49.6	
CRACK SMOKING		0.69
Yes	51.7	
No	46.2	
BORROW PIPE**		0.25
Yes	53.6	
No	46.8	
INJECT OPIATES*		0.15
Yes	71.3	
No	59.5	
INJECT COCAINE*		0.72
Yes	69.2	
No	72.4	
FREQ INJECTION*		0.28
Everyday	73.9	
Less than everyday	69.9	
Don't inject	58.1	
INJECT IN PUBLIC OR ON STREET*		<0.05
Yes	74.1	
No	61.5	
INJECTION RISK (Borrow needles/equip)*		0.19
Yes	73.6	

	No	65.9	
CONDOM USE LAST TIME SEX			0.52
	Yes	46.9	
	No	50.3	
HIV Status			0.88
	Positive	50.0	
	Negative	51.7	
PRISON			0.48
	Yes	53.6	
	No	50.2	

* among respondents who had injected in the past 6 months

** among respondents who had smoked crack

Of those who had tested, 47.0% reported a positive test and 2.2% reported they didn't know the test results. Of those who self-reported HCV positive, 41.8% reported that they were receiving medical care for their HCV. Of those who were receiving care, 10% indicated receiving treatment for HCV. One quarter of these were currently taking HCV medications.

Among those who are HCV positive (through DBS testing), 19% thought they were negative and were therefore not aware of their status (Table 46).

Table 46. Self Reported HCV Status Compared to Dried Blood Spot Results

	HCV Negative (self-report)	HCV Positive (self-report)
HCV Negative (DBS)	155 (92.3%)	13 (7.7%)
HCV Positive (DBS)	40 (19.2%)	168 (80.8)

Service Access:

NEP Use

Ninety one percent of respondents reported ever using the needle exchange program at the site they were recruited from. Due to the very small sample size of non-NEP users there is very low precision in the statistical tests. For this reason no bivariate analyses were performed on NEP use and the other demographic and drug use variables.

Among those who had ever used the services of this NEP, 12% had used it daily, 42% used it regularly but not daily and 46% used it only occasionally in the past 6 months (Table 47).

Table 47. Frequency of NEP use in the Past 6 Months

	N	%
Occasionally, not every week	199	45.9
Regularly, once or twice a week	131	30.2
Regularly, three or more times per week, but not daily	52	12.0
Every day	50	11.5
Never	2	0.5

Forty six percent of respondents reported ever using the services of another NEP. In the past 6 months, only 4% reported using it daily; 37% used it regularly; and 55% used it occasionally (Table 48).

Table 48. Use of Services of Other NEPs in Past 6 Months

	N	%
Occasionally, not every week	121	55.0
Regularly, once or twice a week	73	33.2
Regularly, three or more times per week, but not daily	10	4.5
Every day	8	3.6
Never	8	3.6

Table 49 shows all the places injectors disposed of needles in the past 6 months. Thirty eight percent returned them to a NEP and 36% in their own sharps container. Less than 1% reported throwing them on the street or in a park (Table 49).

Table 49. Places Needles Disposed

	N	%
Throw them on the street/parks/allies	1	0.4
Return to NEP	96	37.5
Own sharps container	92	35.9
In a sharps container somewhere other than at a NEP	18	7.0
Break the tip and place in a bottle/can	118	46.1
Give it to others to discard	3	1.2
Other	26	10.2

Eighty nine percent of respondents reported receiving safer crack use materials from a harm reduction program or worker in Toronto in the past 6 months.

RECOMMENDATIONS:

1. 81% of injectors had injected alone at some point in the past 6 months & 54% reported injecting in a public place in the past 6 months. These behaviours increase the risk of overdose. Recommendation that overdose education be available at all NEPs.
2. A large proportion of respondents reported that CPR is being performed by other users when someone overdoses. Recommendation – CPR training
3. 66% of respondents felt that 911 was not called to a drug overdose due to a fear that police would come or that they would be arrested. Recommend - policy be investigated by the Toronto Drug Strategy similar to a policy in Vancouver where the police are not dispatched to a drug overdose call.

4. Only 42% of HCV positive participants reported receiving medical care for their infection and of those only 10% were receiving treatment for their HCV. Recommendation – increasing access to care and treatment for HCV positive people who use drugs.
5. A high proportion of injectors report injecting on the street or in other risky locations at least some of the time, as well as high levels of willingness to use supervised injection facilities if available. This supports the importance of the current study of potential to develop SIFs in Toronto.
6. There continue to be high levels of borrowing/lending of harm reduction supplies other than needles therefore it is recommended that:
 - harm reduction programs increase efforts to educate people who use their services about the risks associated with borrowing/lending equipment beyond just needles
 - harm reduction programs provide service users with information about where to access harm reduction supplies other than their agency
7. It is recommended that the results of this study be shared with:
 - The Ministry of Health and Long Term Care – Hepatitis C Secretariat, Infectious Disease Control Branch, AIDS Bureau.
 - OACHA; Hepatitis C Advisory Committee
8. The results highlight the importance of addressing social determinants such as being under-housed and having been incarcerated, since these have been shown to be associated with sharing of injection equipment.