

## **I – TRACK Survey**

**Enhanced Surveillance of Risk Behaviours  
and Prevalence of HIV and Hepatitis C  
Among People Who Inject Drugs**

### **Report**

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## **Executive Summary**

The I-TRACK survey is a national, enhanced surveillance program implemented by the Public Health Agency of Canada (PHAC), Centre for Infectious Disease Prevention and Control, in partnership with the Vancouver Island Health Authority (VIHA) and other regional health authorities throughout the country. I-TRACK is designed to track changes in the prevalence of HIV and hepatitis C and associated risk behaviours among people who inject drugs (IDU), through repeated cross-sectional surveys. The I-TRACK survey was successfully piloted in Victoria, British Columbia, and other sites across Canada in 2002 and 2003. Victoria completed Phases I and II in 2003 and 2005, respectively. The purpose of this report is to disseminate the results from the pilot, Phase I and Phase II so the information may be used to enhance harm reduction and support services provided to people who inject drugs.

The I-TRACK survey includes an interviewer-administered questionnaire and a blood test for HIV and hepatitis C viruses. Participants were recruited at the Street Outreach Services Needle Exchange (SOS) in the pilot (150 participants) and at SOS and the Streetlink Emergency Shelter in Phases I and II (254 respondents in Phase I, 250 respondents in Phase II). For both Phase I and Phase II, approximately three-quarters of the respondents were male, and one-quarter were female. Those who identified themselves as Aboriginal represented approximately 20% of the respondents in both phases. Respondents had to be 15 years of age or older to participate, and the average age increased from 35 years to 39 years between Phases I and II.

Information gathered during Phases I and II indicated a decrease in the prevalence of HIV from 15.4 % to 12.5% and an increase in hepatitis C from 68.5% to 73.8%, among the injecting drug users who participated in the survey. The prevalence of HIV and hepatitis C among new users (those who had injected for five years or less) ranged between 7% to 10% for HIV and 48% to 56% for hepatitis C.

Overall, needle sharing was high among respondents and increased from 36.8% to 41.8% between Phases I and II. Between 23% and 28% of respondents infected

with HIV, and 20% to 24% of respondents infected with HCV, were not aware of their positive status. Many of these respondents also shared used needles. The percentage of respondents who reported passing or receiving injection equipment (water, filters, cookers or spoons) ranged between 31% and 45% across phases. Approximately 90% of respondents reported using a needle exchange in the past 6 months in both phases, with a slight increase in Phase II.

In both phases, over 90% of respondents reported injecting cocaine in the past six months, and approximately 60% of respondents injected heroin. In Phase I, questions asked respondents for additional information about crack smoking. Almost 70% of respondents reported smoking crack in the past 6 months. Over 90% shared pipes, and approximately one-third burnt their lips. Almost three-quarters of respondents who smoked crack would like pipes to be supplied.

In Phase I and II, approximately 30% of respondents reported that the street was the location where they most often injected drugs. The Phase II survey included additional questions about a possible safe injection site in Victoria. Almost three-quarters of respondents reported that they would use a safe injection site (SIS). Of those who would use an SIS, 40% had injected daily in the past 6 months, and 76% had injected on the street.

Over half of the respondents who reported having sex in the past month did not use a condom when they last had sex. The majority of HIV positive respondents reported no sexual activity during the previous month, but among those who were sexually active, a substantial proportion did not use condoms.

In both phases, approximately three-quarters of respondents had been tested for HIV in the previous two years, two-thirds tested for HCV. The percentage of respondents who reported being under physician HIV care increased from 70% to 92% from Phase I to Phase II. In both phases, approximately 55% of respondents infected with hepatitis C were receiving physician care.

## **1. Introduction**

Human immunodeficiency virus (HIV) and hepatitis C virus (HCV) are blood-borne pathogens that are transmitted primarily through direct contact with blood and, to a lesser extent, other body fluids. Individuals who regularly engage in behaviours that directly expose them to blood and other body fluids are at risk of acquiring HIV and HCV. The World Health Organization has recommended enhanced monitoring of these diseases in populations that are at increased risk of exposure because of behaviours associated with their lifestyles.

People who inject drugs (IDU) are considered a high-risk population for both acquiring and transmitting HIV and hepatitis C because of activities such as needle and equipment sharing and unsafe sexual practices. The national prevalence of HIV and hepatitis C among injecting drug users is much higher than in the general population (Health Canada, 2004). Twenty percent of the estimated 15,700 individuals who tested positive for HIV, from 1985 to 2002, inject drugs (Public Health Agency of Canada, 2005). In 2002, Health Canada began implementing an enhanced surveillance program to monitor the prevalence of HIV and HCV in this population. One of the objectives of this program is to provide information to service providers who are involved in the planning and implementation of prevention and control measures at the community level.

## **2. Background**

The IDU population in Victoria is estimated to be between 1500 and 2000 (Centre for Health Evaluation and Outcome Sciences, 2002). In 2002, Victoria was chosen as a site to pilot the I-TRACK survey. The I-TRACK survey is a national, enhanced surveillance program implemented by the Public Health Agency of Canada (PHAC), Centre for Infectious Disease Prevention and Control, in partnership with the Vancouver Island Health Authority (VIHA) and other regional health authorities throughout the country.

I-TRACK is designed to track changes in the prevalence of HIV and hepatitis C and associated risk behaviours among injecting drug users through repeated

cross-sectional surveys conducted at various sites across Canada. In addition to contributing data on a national level, I-TRACK is able to provide data on issues relevant to specific communities by adding questions that address local issues to the core questionnaire. There are many local agencies involved with the planning and delivery of social and health services that relate to the IDU population. It is important for such agencies to be able to review preliminary findings, provide feedback, and put forward ideas for recruitment strategies and questions that may be used in future I-TRACK surveys.

The I-TRACK survey was successfully piloted at the Street Outreach Services Needle Exchange (SOS) in Victoria and three other sites across Canada from October 2002 to February 2003. The Streetlink Emergency Shelter was included as a second recruitment site in Victoria during Phase I and Phase II, which were completed in November 2003 and June 2005, respectively. VIHA invited local service providers to a meeting in January 2006 to discuss and obtain feedback on the results of the preliminary analysis. The meeting also provided an opportunity for agencies to request additional analyses specific to their needs and concerns. The purpose of this report is to disseminate the results of the I-TRACK survey so they may be used to enhance harm reduction and support services provided to people who inject drugs in Victoria.

### **3. Methods**

#### Ethical Review Process

To ensure high ethical standards in research, the I-TRACK survey is reviewed and approved by the Health Canada Research Ethics Board and the Vancouver Island Health Authority Research Review and Ethical Approval Committee.

#### Confidentiality

Survey respondents are asked to provide a unique identifier -- an initial and a significant date -- which may be remembered for future surveys. This unique identifier is then encrypted through a computer program that generates an ID number which cannot be traced back to the participant. The questionnaire and blood sample are linked only by the encrypted code which ensures the respondent remains anonymous.

### Survey Design

I-TRACK is a cross-sectional survey conducted every two years. Respondents consent to an interviewer-administered questionnaire and a finger-prick blood sample.

### Eligibility

To be eligible for the survey, the participant has to meet the following criteria:

- Have injected drugs for non-therapeutic purposes in the past six months
- Be 15 years of age or older
- Be capable of providing informed consent
- Understand English or French
- Not have participated in current survey phase

### Recruitment

The recruitment of survey participants includes the following activities:

- Contact with community agency staff members
- On-site promotion at recruitment sites – SOS Needle Exchange and Streetlink Emergency Shelter
- Establishing trust and credibility with the IDU population
- Posters/flyers
- Word of mouth
- Monetary compensation, snacks, juice

### Questionnaire

The core questionnaire consists of approximately 50 questions and is administered across all sites in Canada. The questionnaire is divided into four main sections related to drug use, sexual behaviours, HIV/HCV testing and care, and demographics. Questions relating to drug use ask about drugs most injected, frequency of injection, sharing of needles/equipment, and places where users inject. Sexual behaviour questions ask about condom use and number and type of sexual partners. The HIV/HCV testing and care section asks about the dates, frequency, location, and results of tests and about whether



respondents are under the care of a physician for HIV or HCV. Demographic questions ask about gender, age, ethnicity, education, and residence.

Each site participating in the I-TRACK survey may include a limited number of additional questions that address the needs of their community. Victoria has taken this opportunity to include questions related to crack pipe use (Phase I), to acceptance of a safe injection site (Phase II), and to use of local needle exchanges (Phases I and II).

#### Blood Specimen

A sterile lancet is used to collect a finger-prick blood sample. The blood is preserved on a small card provided by the National Microbiology Laboratory. The blood samples are sent to the laboratory for analysis of HIV and hepatitis C.

#### Local Data Analysis Approach

VIHA was provided with a clean dataset by the Public Health Agency of Canada. Local analyses were carried out using SPSS 14.0 software, and descriptive analyses were conducted on variables related to demographics, drug use, sexual behaviours and HIV/HCV testing and care. Laboratory-confirmed HIV and HCV results were analyzed in relation to duration of drug use, needle and equipment sharing behaviours, high risk sexual practices, and respondent-reported disease status. Respondent-reported disease status was used to analyze the percentage of respondents under the care of a physician for HIV or hepatitis C. Analyses characterized those who shared needles in terms of gender, age, ethnicity, and education. High-risk needle sharing behaviour was also examined. This included disease-positive individuals passing used needles to others and disease-negative individuals receiving used needles from someone else.

Additional analyses were completed on local survey questions regarding crack pipe use, needle exchange use, and safe injection site acceptance. Disease prevalence and needle sharing results were also analyzed by recruitment site.

### Limitations of Analysis and Interpretation of Results

It is important to acknowledge the limitations of the I-TRACK survey and of the results presented. The survey did not select a random sample of the population; therefore, the study population may not represent all those who inject drugs in Victoria. Extrapolating the results of this survey beyond the study population could be misleading if the study population is different from the general population of IDU in Victoria. Because the study population was not randomly selected, results are based on descriptive analyses. No tests of statistical significance were completed, and apparent trends between phases should be interpreted with caution. In addition, bias may have occurred due to under-reporting of risk behaviours if respondents were reluctant to disclose such behaviours to the interviewer. These limitations are inherent in the survey methodology and are considered acceptable for the purposes of this research.

## **4. Results**

### Recruitment Sites and Sample Size

In the I-TRACK pilot, 150 participants were recruited from the SOS Needle Exchange. Recruitment was expanded to include both the SOS Needle Exchange and Streetlink Emergency Shelter in Phases I and II, and the sample size was increased. Phase I included 254 participants, and Phase II included 250.

### Characteristics of Respondents

Demographic characteristics of respondents are shown in Table 1. For both Phase I and Phase II, approximately three-quarters of the respondents were male, and one-quarter were female. The number of survey respondents who had not completed high school was about the same as the number who had a high school level of education or higher, and this distribution was the same for both phases. Those who identified themselves as Aboriginal represented approximately 20% of the respondents in both phases. Age distributions for both phases were similar. Respondents had to be 15 years of age or older to participate; therefore, no data was collected on those younger than age 15. Approximately two-thirds of respondents were between the ages of 30 and 49. The average age increased between Phases I and II from 34.6 to 38.8 years, indicating a slightly older population of IDU in the second phase.

**Table 1: Characteristics of Respondents – Demographics, Phase I and II**

Demographics	Phase I	Phase II
Males	73.5%	76.0%
Females	26.5%	23.6%
Less than High School	51.6%	50.0%
High School or Greater	48.4%	50.0%
Aboriginal	20.6%	20.9%
Age Group		
15-19 yrs	1.6%	0.8%
20-29 yrs	23.7%	20.0%
30-39 yrs	34.8%	29.2%
40-49 yrs	33.2%	36.4%
50+ yrs	6.7%	13.6%
Average age (yrs)	34.6	38.8

Drug Use History

Tables 2 and 3 summarize information on drug use history. In both phases, approximately 45% of respondents reported being 19 or less when they first injected drugs. Duration of use ranged from less than 1 year to 41 years. Approximately one-quarter of the study population had injected drugs for 5 years or less.

**Table 2: Age First Injected Drugs – Phase I and II**

Age Group	Phase I	Phase II
3-9 yrs	1.2%	0.4%
10-14 yrs	11.8%	12.4%
15-19 yrs	31.9%	34.0%
20-29 yrs	31.1%	32.4%
30-39 yrs	18.5%	15.6%
40-49 yrs	4.7%	4.8%
50+ yrs	0.8%	0.8%
Average age (yrs)	23.0	22.8
Age range (yrs)	4-59	3-59

**Table 3: Time Since First Injection – Phase I and II (Duration of Use)**

Duration of Use	Phase I	Phase II
< 1 yr	5.5%	4.8%
1 to 2 yrs	10.7%	6.4%
3 to 5 yrs	10.3%	10.8%
6 to 10 yrs	23.7%	14.4%
11 to 20 yrs	26.5%	29.2%
21 to 41 yrs	23.3%	34.4%

Drugs Used

Tables 4 and 5 summarize the use of injected and non-injected drugs in the six months prior to the respondent completing the survey. Over 90% of respondents in both phases reported injecting cocaine, a higher percentage than any other drug. Heroin was used by about 60% of respondents in both phases and Dilaudid and morphine (non-prescribed) by about 40% in both phases. Approximately 30% of respondents reported using methamphetamine (crystal meth) in injected or non-injected form. With regard to other non-injected drugs, approximately half to three-quarters of respondents reported using marijuana, alcohol, and cocaine during the past six months.

**Table 4: Drugs Injected in Past 6 Months - Phase I and II\***

	Phase I	Phase II
Cocaine	93.3%	90.4%
Heroin	59.7%	62.8%
Dilaudid	40.3%	39.6%
Morphine (non-prescribed)	39.5%	45.6%
Methamphetamine	26.5%	32.4%
Amphetamines	14.2%	9.2%
Crack	11.9%	14.8%
Morphine (prescribed)	10.3%	7.2%

\* Other drugs reported were used by less than 10% of respondents and are not included in the table.

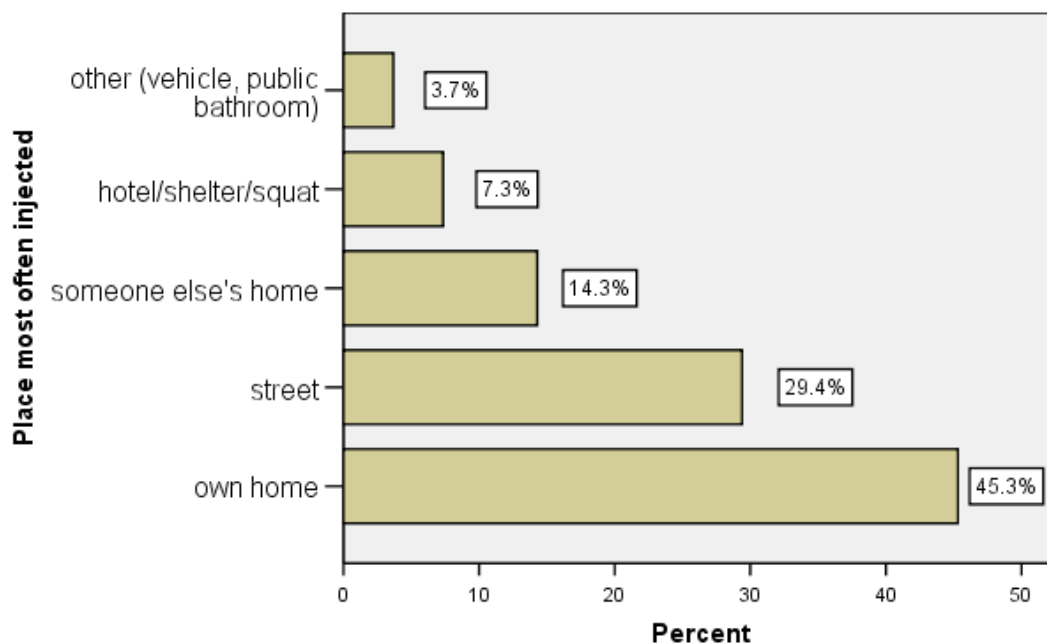
**Table 5: Non-Injected Drugs Used by IDU in Past 6 Months – Phase I and II**

	Phase I	Phase II
Marijuana	75.2%	73.9%
Alcohol	70.5%	72.3%
Cocaine	63.8%	51.4%
Crack	60.6%	59.4%
Tylenol with Codeine	47.6%	31.3%
Benzodiazepines	33.9%	31.3%
Heroin	28.3%	24.5%
Methamphetamine	28.0%	31.7%
Methadone	26.8%	18.1% (prescribed) 14.9% (non-prescribed)
Morphine (non-prescribed)	26.0%	27.3%
Dilaudid	24.4%	24.1%

\* Other drugs reported were used by less than 20% of respondents and are not included in the table.

### Place of Injection

In both phases, approximately 30% of respondents reported injecting most often on the street in the previous six months. Figure 1 provides a further breakdown of the types of places where participants reported that they most often injected drugs in Phase I.

**Figure 1: Places Respondents Most Often Injected – Phase I**

In Phase II, respondents were asked in which neighbourhood they most often injected. Table 6 summarizes the municipalities where respondents reported having injected most often in the past 6 months. A substantial majority of respondents reported injecting drugs most often in the City of Victoria. Table 7 breaks down results for the City of Victoria into the neighbourhoods of that municipality.

**Table 6: Municipality Where Respondents Reported Injecting Most Often in Past 6 Months – Phase II**

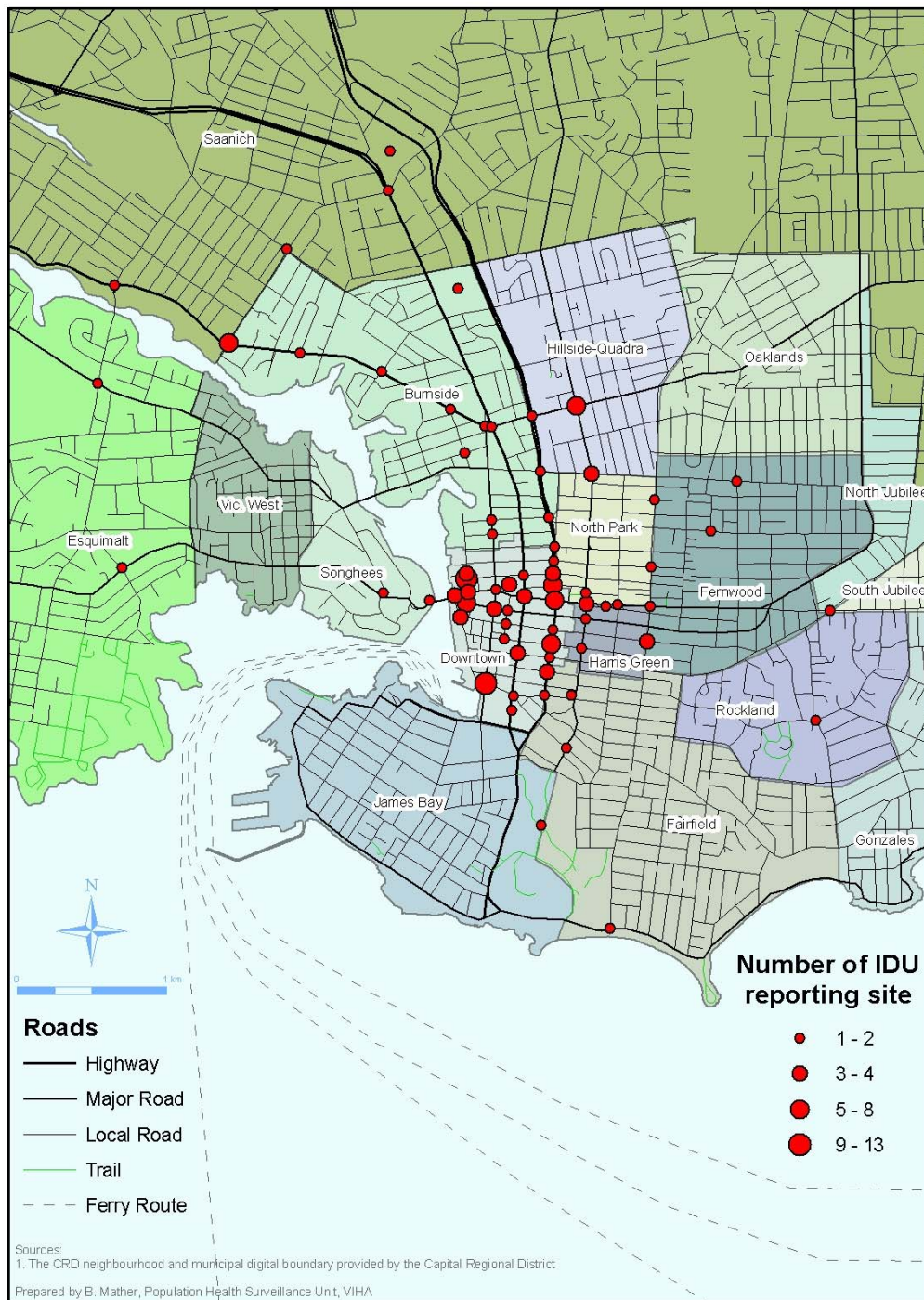
Municipality	Number of Respondents	% of Respondents
District of Langford	1	0.5
City of Colwood	3	1.4
District of Saanich	8	3.6
Township of Esquimalt	11	5.0
City of Victoria	197	89.5

**Table 7: Neighbourhoods in the City of Victoria Where Respondents Reported Injecting Most Often in the Past 6 Months – Phase II**

Neighbourhoods in the City of Victoria	Number of Respondents	% of Respondents
North Jubilee	1	0.5
Rockland	1	0.5
Harris Green	4	2.0
James Bay	6	3.0
Fairfield	7	3.6
Vic. West	8	4.1
North Park	9	4.6
Hillside-Quadra	10	5.1
Burnside	18	9.1
Fernwood	19	9.6
Downtown	114	57.9

The results in Tables 6 and 7 include responses that specified neighbourhoods (e.g., downtown) as well as responses that specified particular locations or street intersections (e.g., at Yates and Blanshard). Figure 2 shows a map of the particular locations or street intersections that respondents specified as the places where they injected most frequently. These locations were most often in the downtown core of Victoria, but some injection sites were identified in other areas including Saanich, Burnside, Esquimalt, Fernwood, and Fairfield.

**Figure 2: Specific Locations Where Injections Most Frequently Occur - Phase II**



### HIV/Hepatitis C Prevalence

The prevalence of HIV decreased between Phase I and Phase II from 15.4% to 12.5%, and the prevalence of HCV increased from 68.5% to 73.8%. According to laboratory tests completed for both phases of the survey, most of the respondents with HIV were also infected with HCV. The percentage of respondents in Victoria who were infected with HIV was slightly higher than the average of all sites in Canada who participated in Phase I of the I-TRACK survey. However, the prevalence of both HIV and HCV in the Victoria survey respondents was lower than in the IDU population who use the safe injection site in Vancouver (see Table 8).

**Table 8: Estimated Prevalence of HIV, Hepatitis C and HIV/Hepatitis C Co-Infections – Phase I and II Compared to all I-TRACK sites across Canada and Insite (Safe Injection Site) in Vancouver**

Test Result	Victoria		All Sites Across Canada	Vancouver Downtown Eastside
	Phase I I-Track (n)*	Phase II I-Track (n)	Phase I I-Track	Safe Injection Site**
HIV(+)	15.4% (36)	12.5% (30)	11.7%	17%
HCV(+)	68.5% (161)	73.8% (177)	62.5%	87%
HIV(+) & HCV(+)	15.4% (36)	12.1% (29)	13.4%	-

\* Number of study participants in category.

\*\* Buxton, 2005

### Awareness of HIV and Hepatitis C status

Many individuals who tested positive for HIV and/or HCV were not aware of their positive status. In Phase I and Phase II, 23-28% of those who were positive with HIV did not know they were positive, and 20-25% of those who were positive with hepatitis C did not know they were positive. The percentage decreased for HIV between Phases I and II, but it increased for HCV (see Table 9).



**Table 9: Awareness of HIV/Hepatitis C Status – Phase I and II**

	Phase I		Phase II	
	HIV(+)	HCV(+)	HIV(+)	HCV(+)
% respondents who tested positive	15.4%	68.5%	12.5%	73.8%
% of positive respondents not aware of status*	27.8%	20.5%	23.3%	24.3%

\* This includes those who did not report being tested previously and those who reported their previous HIV or HCV test result as 'negative', 'indeterminate' or 'don't know.'

### Risk Behaviours – Needle Sharing

Individuals who are HIV or HCV positive and who pass used needles or equipment to others put those who are not infected at risk of acquiring HIV/HCV. Individuals who are negative and who receive used equipment are susceptible to becoming infected with both viruses.

An overall increase in needle sharing behaviours occurred in all groups between Phase I and Phase II regardless of age, sex, ethnicity, or education. The percentage of respondents who reported sharing needles by either passing or receiving used needles increased from 35% to 42% between phases. A greater percentage of women than men shared needles in both phases. In Phase I, the percentage of respondents with less than a high school level of education who shared needles was similar to the percentage of those with a high school level of education or higher. However in Phase II, a higher percentage of respondents who had not completed high school shared needles. In both phases, a higher percentage of those under the age of thirty shared needles compared to respondents thirty years of age or older (see Table 10).

**Table 10: Characteristics of Respondents Who Shared Used Needles – Phase I & II**

	Phase I	Phase II
% of Respondents Who Shared Used Needles	36.8%	41.8%
% of Men Who Shared	34.3%	40.7%
% of Women Who Shared	43.9%	46.4%
% of Aboriginal Respondents Who Shared	33.3%	37.5%
% with Less Than High School Education Who Shared	36.5%	46.6%
% with High School Education or Greater Who Shared	36.7%	37.5%
% of Respondents Younger Than 30 Years of Age Who Shared	48.4%	51.0%
% of Respondents 30 Years of Age or Older Who Shared	33.0%	39.4%

From Phase I to Phase II, the percentage of HIV(+) respondents who passed their used needles to someone else decreased substantially from 38.8% to 6.7%. The percentage of HCV(+) respondents who reported passing used needles decreased from 37.7% to 31.8%. For both HIV(-) and HCV(-) respondents, there was an increase from Phase I to Phase II in the number who receive used needles. The percentage of HIV(-) participants who received used needles increased from 15.8% to 27.5%, and the percentage of HCV(-) participants who received used needles increased from 9.6% to 11.5% (see Table 11).

**Table 11: HIV/HCV Status and Needle Sharing Behaviours of Respondents – Phase I and II**

Passing Needles	Phase I	Phase II
% of HIV(+) passing used needles	38.8%	6.7%
% of HCV(+) passing used needles	37.7%	31.8%
Receiving Needles		
% of HIV(-) receiving used needles	15.8%	27.5%
% of HCV(-) receiving used needles	9.6%	11.5%

### Risk Behaviours – Equipment Sharing

Respondents were asked whether, in the past six months, they had passed used injection equipment to others or had received injection equipment that had been used by someone else. Injection equipment included water, filters, and cookers/spoons. Respondents who had passed or received any of these kinds of equipment were counted as sharing equipment.

The percentage of respondents who passed used equipment increased from 37.5% in Phase I to 44.8% in Phase II. The percentage of respondents who received used equipment also increased between phases from 31.0% to 34.4%. However, the percentage of HIV(+) respondents who passed used equipment decreased substantially between phases from 38.9% to 23.3%. Table 12 shows results for other equipment sharing by those who were positive and negative for HIV and hepatitis C.

**Table 12: HIV/HCV Status and Equipment Sharing Behaviours of Respondents – Phase I and II**

Passing Equipment	Phase I	Phase II
% passing used equipment	37.5%	44.8%
% of HIV(+) passing used equipment	38.9%	23.3%
% of HCV(+) passing used equipment	38.1 %	40.7 %
Receiving Equipment		
% receiving used equipment	31.0%	34.4%
% of HIV(-) receiving used equipment	29.8%	33.8%
% of HCV(-) receiving used equipment	31.1%	31.7%

### New Users

New users were defined as those who had injected drugs for the first time no more than five years before they had completed the survey. This definition was chosen because of an increase in the number of respondents who were positive for HIV and hepatitis C after five years of use. Table 13 presents characteristics of this IDU group. New users represented 26.5% of the sample size in Phase I and 22% in Phase II. Approximately 30% of new users were female, which is a

higher percentage than that of women in the general survey population (approximately 25% female). Over 40% of new users had injected drugs for the first time between the ages of 20 and 29 in both phases.

**Table 13: New Users – Characteristics of Respondents Who Have Injected Drugs for 5 Years or Less – Phase I and II**

Characteristics	Phase I	Phase II
Used 5 yrs or less	26.5%	22.0%
Male	67.2%	64.8%
Female	32.8%	35.2%
Age first injected		
3-9	0%	0%
10-14	1.5%	0%
15-19	9%	9.1%
20-29	40.3%	43.6%
30-39	31.3%	29.1%
40-49	14.9%	14.5%
50-59	3.0%	3.6%

Table 14 summarizes disease status and high-risk needle sharing behaviours in those who had injected for 5 years or less. In this population, the prevalence of HIV decreased slightly from 10.0% to 7.7% between Phases I and II; however, HCV infection increased from 48.3% to 55.8%. The percentage of those who tested positive for HIV or HCV but were not aware of their positive status was high in both groups for both phases. From Phase I to Phase II, there was an increase in the percentages of those who were HIV(-) or HCV(-) and who were receiving used needles. Of those who were HIV(-) in Phase II, almost 28% reported receiving used needles, double the percentage reported in Phase I. The numbers involved in calculating results for new users are small and therefore should be interpreted with particular caution.

**Table 14: New Users – HIV/HCV Status and Needle Sharing Behaviours of Respondents with Injecting History of 5 Years or Less – Phase I and II**

Prevalence	Phase I	Phase II
HIV(+)	10.0%	7.7%
HCV(+)	48.3%	55.8%
% of HIV(+) not aware of positive status	50%	25.0%
% of HCV(+) not aware of positive status	31.0%	31.0%
% receiving used needles	12.1%	26.9%
% of HIV(-) receiving used needles	13.2%	27.7%
% of HCV(-) receiving used needles	10.0%	13.0%

#### Use of Drugs in Prison

In both phases, about one-quarter of respondents had been in prison for more than one week. Of those who had been incarcerated for more than one week, approximately 25% reported injecting drugs while in prison. The percentage of those respondents who used drugs in prison and who reported sharing needles while in prison increased from 57% to 82% from Phase I to Phase II (see Table 15).

**Table 15: Drug Use by Respondents While in Prison – Phase I and II**

	Phase I	Phase II
% in prison for more than 1 week in past year	23.9%	25.6%
% of those in prison who used drugs while in prison	23.7%	27.4%
% of those using drugs in prison who shared needles or equipment in prison	57.1%	82.4%

### Needle Exchange Use

Table 16 summarizes data on respondents' use of needle exchanges.

Approximately 85% of respondents reported using the SOS Needle Exchange in both phases. A high number of respondents also reported using another needle exchange, 36.4% in Phase I and 49.6% in Phase II. Needle exchange use by respondents from Phase I to Phase II increased from 88.5% to 92.2%. This increase was seen primarily in the use of needle exchanges other than the SOS Needle Exchange, though the percentage using the SOS Needle Exchange increased slightly as well.

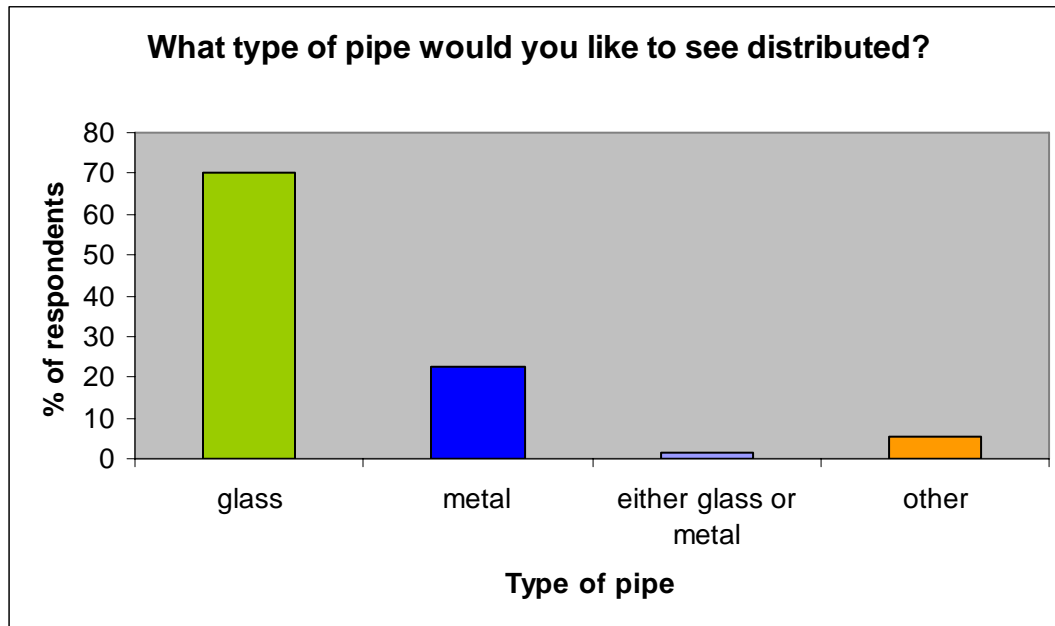
**Table 16: Respondents Using SOS or Other Needle Exchange – Phase I and II**

	Phase I	Phase II
Used SOS Needle Exchange	84.2%	86.0%
Used other needle exchange	36.4%	49.6%
Used any needle exchange	88.5%	92.2%

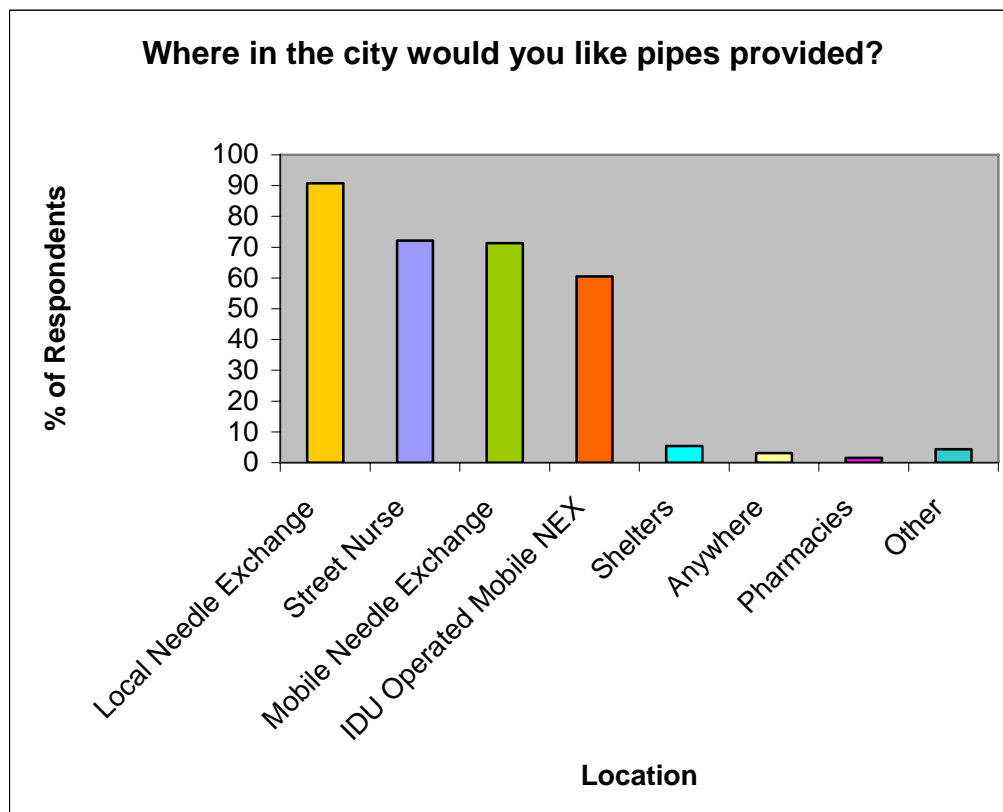
### Crack Pipe Use

Studies have indicated that the sharing of crack pipes may increase the risk of disease transmission because burnt lips, due to crack pipe use, can be a portal of entry for viruses such as hepatitis C (Tortu, Mahon, Pouget & Hamid, 2004). In Phase I, respondents were asked about crack pipe use and about whether they would want crack pipes provided by service provider agencies. Sixty-nine percent of respondents reported smoking crack in the past 6 months. Of those who smoked crack, 90.8% shared pipes and 32.0% burnt their lips. Almost three-quarters of respondents who smoked crack reported they would like pipes to be supplied. Figure 3 presents results for the types of pipes that respondents would like provided. Figure 4 shows where respondents would like crack pipes provided.

**Figure 3. Type of Pipe Preferred by Respondents – Phase I**



**Figure 4. Suggested Locations For Crack Pipe Distribution – Phase I**



### Safe Injection Site

In Phase II, respondents were asked about whether they would use a safe injection site (SIS) in Victoria. Approximately 72% of the respondents reported they would use a safe injection site. These respondents had the following characteristics:

- 40% had injected every day in the past 6 months
- 21% had injected at least 3 times per week, but less than daily, in the past 6 months
- 76% reported injecting in the street in past 6 months
- Over 50% reported they would use an SIS for 75% to 100% of all injections
- The percentage of respondents who would use a SIS increased with frequency of use
- 75% of HCV(+) respondents who shared used needles reported they would use an SIS.

Gender, age, education, ethnicity, drug most injected, needle sharing, and disease status were not associated with acceptance of an SIS.

### Sexual Behaviours

Table 17 summarizes data on sexual behaviours and condom use of survey respondents. Over half of the respondents reported having sex in the past month. Of those, the percentage of respondents who did not use a condom when they last had sex increased from 55.5% in Phase I to 66% in Phase II. Condom use was also examined for those respondents who were HIV(+). Results indicated that 8.6% of those who reported having sex in the past month without a condom were HIV(+) in Phase I, and this percentage decreased to 4.9% in Phase II.



**Table 17: Condom Use and HIV Status of Those who Reported Having Sex in Past Month – Phase I and II**

	Phase I	Phase II
% who had sex in past month	55.0%	57.3%
% who did not use condom when last had sex in past month	55.5%	64.9%
% who did not use condom when last had sex and are HIV+	8.6%	4.9%

Table 18 presents condom use data specific to the 12% - 16% of the survey population who were HIV(+) in the two phases of the study. In both phases, approximately a third of HIV(+) respondents reported having sex in the past month. About half of those HIV(+) respondents who reported having sex in the past month did not use a condom when they last had sex. In other words, the majority of HIV positive respondents reported no sexual activity during the previous month, but among those who were sexually active, a substantial proportion did not use condoms.

**Table 18: Condom Use among Respondents who were HIV(+) and had Sex in Past Month – Phase I and II**

	Phase I	Phase II
% of HIV(+) who had sex in past month	31.4%	34.5%
% of HIV(+) who did not use condom when last had sex	50.0%	45.5%

Respondents were asked about condom use with different types of sexual partners including client sex partners. A client sex partner was someone who gave the respondent money, drugs, goods, or anything else in exchange for sex. From Phase I to Phase II, the percentage of female respondents with clients decreased from 43.3% to 25.4%, and the percentage of male respondents with clients decreased from 3.8% to 1.6%. These decreases may be the result of recruitment differences between the two phases rather than a decrease in the

number of people in Victoria with client sex partners. In Phase I, 25.8% of respondents with clients were HIV(+), and 17.6% were HIV(+) in Phase II.

#### HIV/Hepatitis Testing

Participants were asked whether they had ever been tested for HIV or hepatitis C and whether they had been tested in the past two years. The percentage of respondents ever tested for HIV increased from 86.2% in Phase I to 93.6% in Phase II. Approximately three-quarters of respondents in both phases had been tested for HIV in the past two years. The percentage of respondents ever tested for hepatitis C increased from 83.8% in Phase I to 94.0% in Phase II. The percentage of respondents tested for hepatitis C in the past two years also increased from 64.0% to 68.3% (see Table 19).

**Table 19: HIV and Hepatitis C Testing Among Respondents – Phase I and II**

	Phase I	Phase II
Ever Tested for HIV	86.2%	93.6%
Tested for HIV in Past 2 Years	75.6%*	76.4%**
Ever Tested for HCV	83.8%	94.0%
Tested for HCV in Past 2 Years	64.0%*	68.3%**

\* Phase 1 testing period: approximately November 2001 – November 2003

\*\* Phase 2 testing period: approximately June 2003 – June 2005

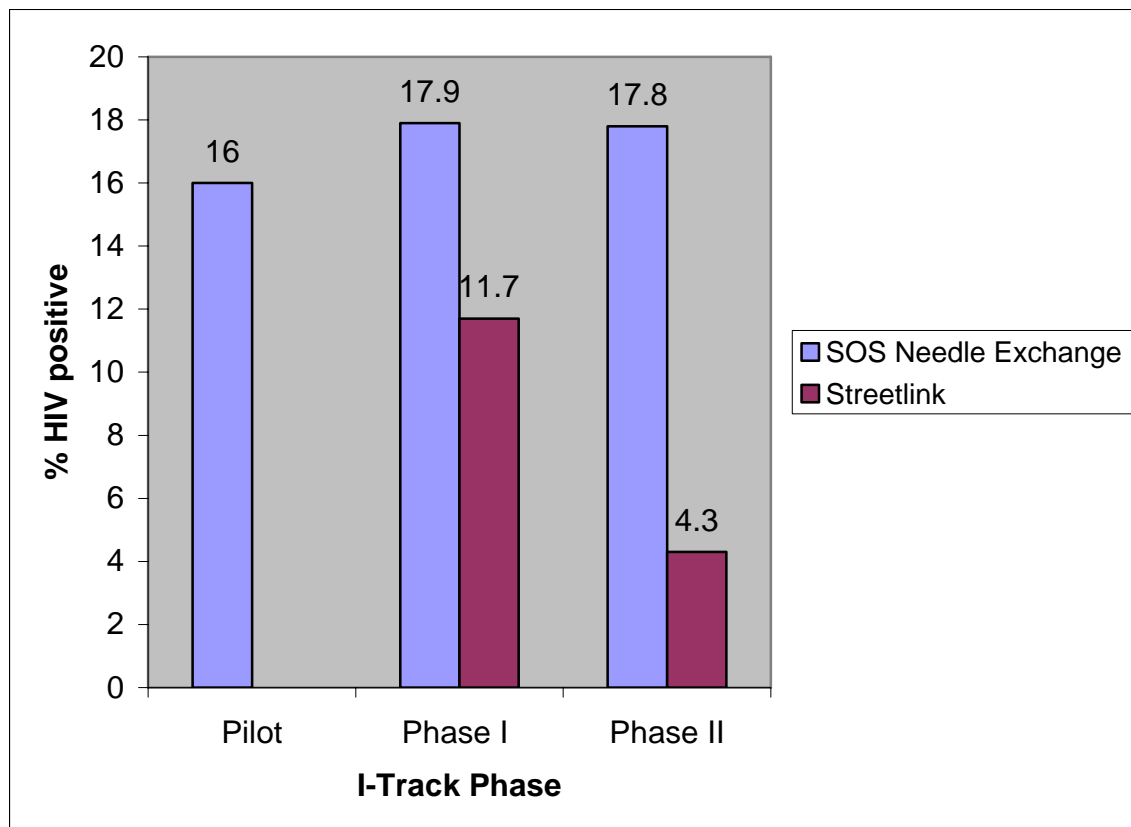
#### Respondents Under Care of Physician

Respondents who reported that they were positive for HIV or hepatitis C were asked if they were under the care of a physician. Care was defined as a single visit or more to a doctor in the past six months for HIV or HCV services such as treatment, counseling, or testing. The percentage of respondents who reported being under physician HIV care increased from 71.4% in Phase I to 91.7% in Phase II. For hepatitis C, the percentage of respondents under physician care dropped slightly from 56.0% in Phase I to 54.6% in Phase II.

### Results for Recruitment Sites

As previously discussed, the pilot I-TRACK survey recruited study participants through the SOS Needle Exchange, and both the SOS Needle Exchange and Streetlink Emergency Shelter were recruitment sites for Phases I and II. Figures 5 and 6 present prevalence data for the two recruitment sites. The prevalence of HIV and HCV in those respondents recruited from the SOS Needle Exchange is higher than in the respondents recruited from Streetlink for Phase I and Phase II. Rates of HIV and HCV prevalence at the needle exchange are similar across each survey phase, suggesting the data represents a similar population across phases. The variability in HIV prevalence at Streetlink between phases may be the result of differences in the Streetlink population that was recruited for the two phases.

**Figure 5: Site Specific Results – HIV Prevalence across I-TRACK Studies**



**Figure 6: Site Specific Results – Hepatitis C Prevalence across I-TRACK Studies**

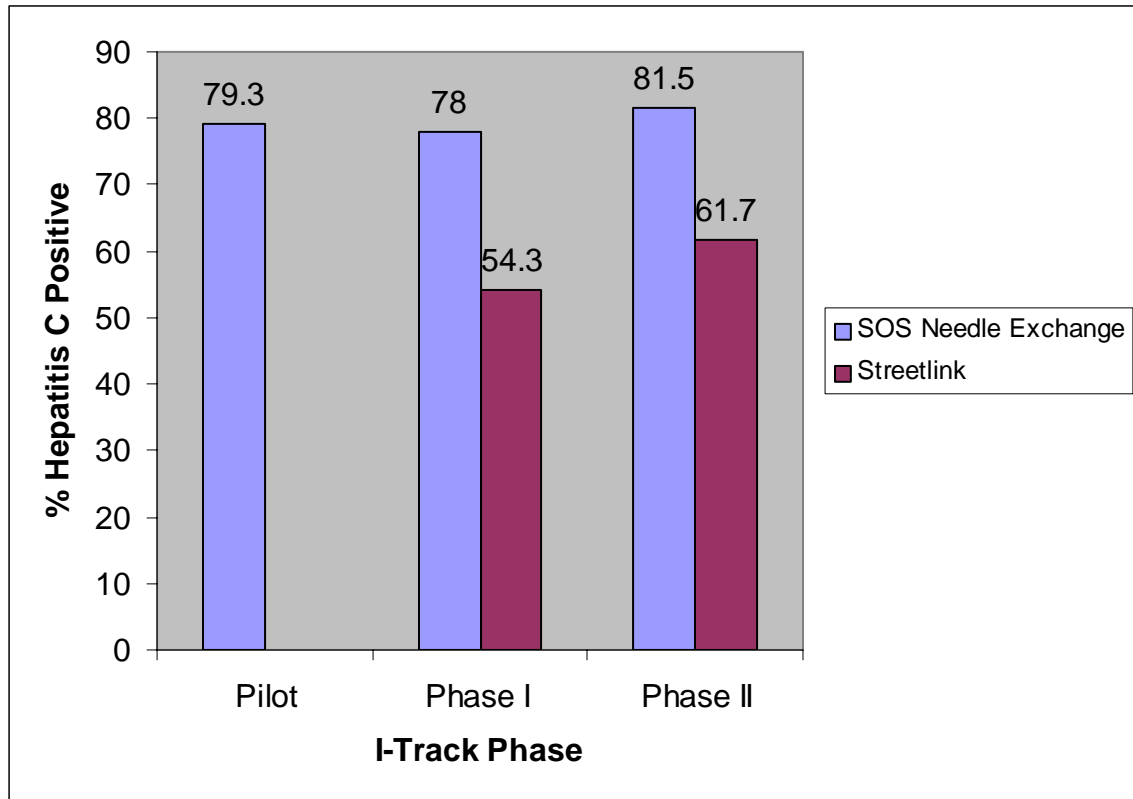


Table 20 presents results of needle sharing for the SOS Needle Exchange and Streetlink. Overall needle sharing results include information on passing and receiving used needles. In both phases, respondents recruited through the SOS Needle Exchange were somewhat more likely to share needles than respondents recruited through Streetlink. Needle sharing increased for respondents at both sites between phases. At SOS Needle Exchange, needle sharing increased from 40.5% to 43.9% from Phase I to Phase II, and it increased from 31.3% to 39.0% at Streetlink between the two phases.

Needle sharing results were also broken down into the categories of passing needles and receiving needles. In general, respondents from SOS Needle Exchange were again more likely to pass or receive needles than respondents at Streetlink. The exception was passing needles in Phase II, where respondents

recruited through Streetlink were slightly more likely to pass needles than respondents from SOS Needle Exchange.

**Table 20: Needle Sharing Results for Recruitment Sites – Phase I and II**

	Phase I		Phase II	
	SOS Needle Exchange	Streetlink	SOS Needle Exchange	Streetlink
Share Needles (Pass or Receive)	40.5%	31.3%	43.9%	39.0%
Pass Needles	35.3%	26.3%	29.7%	33.0%
Receive Needles	20.5%	17.2%	30.0%	26.0%

## **5. Conclusions**

The I-TRACK surveillance survey provides useful information for describing prevalence rates and risk behaviours among people who inject drugs in Victoria, BC. Information gathered during initial phases of I-TRACK indicated a 12% to 16% HIV prevalence among injecting drug users and a hepatitis C prevalence of 68% to 74%. Many respondents reported injecting drugs on the street, and needle sharing was high in both phases. Approximately 20% to 28% of those infected with HIV or hepatitis C were not aware of their positive status, and many of these respondents shared used needles. Among new users, those who had injected for five years or less, needle sharing increased substantially between Phases I and II for those who were HIV(-). Needle sharing also increased, though to a lesser extent, for new users who were HCV(-).

Crack smoking and pipe sharing were prevalent among respondents, with many of them reporting burnt lips. In addition, over half of the respondents who reported having sex in the previous month did not use a condom when they last had sex, some of whom were HIV positive. While many respondents reported engaging in high-risk behaviours that can facilitate the transmission of HIV and hepatitis C, approximately 90% of them used needle exchanges in Phase I and II. In both phases, three-quarters of respondents had been tested for HIV in the previous two years, and two-thirds had been tested for hepatitis C.

The I-TRACK survey accesses a sample of injection drug users and cannot be considered representative of all IDU in Victoria. Over 30% of respondents reported first injecting drugs between the ages of 15 and 19; however, only 1.6% of survey respondents were in this age group. This suggests that users aged 15-19 were under-represented in the study sample. Having recruitment focused on the SOS Needle Exchange and Streetlink may also have resulted in limited representation of IDU who do not use those sites. For this reason, broader recruitment strategies will be important for future survey phases and may encourage increased participation by women. Additional phases of the survey are planned, and results from future surveys will help to clarify trends in disease prevalence, drug use and sexual behaviours.

Injecting drugs users in this survey engaged in multiple risk behaviours that put them at risk of transmitting and/or acquiring infections. Interventions aimed at reducing the sharing of needles and equipment and at increasing testing and follow-up of results may decrease the risk of HIV and hepatitis C in addition to other drug-related harm. Women, youth and new users may benefit in particular from such initiatives. Results indicate strong support for both a safe injection site and a crack pipe distribution program among IDU in Victoria who participated in the I-TRACK survey.

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