

The Winnipeg Injection Drug Use Social Network Study: Phase II

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2. Acknowledgements

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3. Executive Summary

The data presented in this report originate from phase II of the **Winnipeg Injection Drug Use Social Network Study** (SNS II). This study is one of a series designed to examine the social networks of injection drug users (IDU) in Winnipeg and the importance and effects of social networks on an individual drug user's risk of infection, risk behaviours and harm reduction activities. This report focuses on the demographics and behaviours of the individuals interviewed and provides a current snapshot of the drug scene in Winnipeg.

- The study was based on administration of a quantitative questionnaire including a short number of open-ended questions and collection of a blood specimen for bloodborne pathogen diagnosis. A total of 435 individuals were enrolled in the study between December 2003 and August 2004.
- The last large scale study of IDU in Winnipeg was the **Winnipeg Injection Drug Epidemiology** (WIDE) study in 1998. The sociodemographic and socioeconomic profile of study participants was similar in SNS II compared to WIDE, suggesting that no major changes in the makeup of the IDU population in Winnipeg have occurred over the last 6 years.
- Bloodborne prevalence data (based on confirmed positives and negatives only) was 54% for Hepatitis C, 32% for Hepatitis B, and 7% for HIV. The prevalence for HIV is lower than the 12.6% found in WIDE. Although, the different study participant recruitment strategies must be kept in mind when comparing WIDE and SNS II, the comparison does suggest that HIV prevalence in this population has not shown a dramatic increase during the time between implementation of the two studies. Evidence for vaccination against HBV was found in 18% of study participants. Enhanced efforts to increase vaccination among IDUs should proceed as quickly as possible.
- Just over a quarter of the SNS II sample (28%) had moved to Winnipeg in the last year, reflecting the high mobility of this population. Thirty-two percent of these individuals moved here from other parts of Manitoba, 41% from the 3 western provinces, 25% from eastern Canada, and 2% from the US. The high mobility of IDU, both within and between provinces, highlights the importance of developing strong partnerships with other regional, provincial, and national agencies.
- For drugs used by injection, the most notable change since WIDE was the drop in cocaine as both a preferred drug and a most frequently injected drug. No one other drug has risen dramatically, rather it appears that several drugs have either increased in usage (i.e. talwin and ritalin, heroin, morphine) or have recently appeared (crystal methamphetamine, oxycodone). Despite the percentage drop in cocaine as either the most frequently injected or preferred drug of Winnipeg IDU, a large percentage of IDU (63.1%) still state that they have used this drug at some point in the past 6 months.
- After private residences (their own or a friend's place) hotels were the most common site of injection among IDUs. Almost half of all IDU had at some time in the past 6 months injected at hotels. Given that private residences are potentially a more difficult access

point for Public Health, these more public types of injection venues are important as potential Public Health contact points for the IDU population.

- Data were collected on various injection risk behaviours associated with bloodborne pathogen infection (giving away used needles, transferring drugs between syringes, using someone else's used syringe, how often those syringes were cleaned before reuse, frequency of cleaning used syringes, and using someone else's used drug preparation equipment). In most cases, the data suggest that many of these behaviours have become relatively rare, however, it was also clear that opportunity for disease transmission along these routes still occurs and these practices continue to occur in some circumstances even when an individual suspects a syringe has been used by someone infected by a bloodborne pathogen.
- Although it was clear that the majority of IDU found it easy to obtain new syringes, primarily either through needle exchanges or pharmacies, approximately 1/3 of IDU indicated a category of "somewhat easy" or lower in terms of their ability to readily access new syringes. Additional research and ongoing evaluation is required to ensure that programs are developed that appropriately target these IDU to improve their access to new syringes.
- For drugs used in a non-injection manner, several drugs, such as crack or cocaine, were nearly as commonly used as alcohol and marijuana. The emergence of the use of crystal methamphetamine was also evident. The most common drugs smoked, inhaled, or snorted were crack, cocaine, crystal methamphetamine, gasoline/solvents, and heroin. The most common response regarding frequency of sharing or re-using straws or pipes for smoking drugs was "always". Many participants had also indicated they had had cuts or burns on their lips or in their mouth in the last 6 months due to crack smoking. This combination of sharing equipment/supplies and breaks in the integrity of the skin increases the risk for transmission of bloodborne pathogens.

4. Introduction

This study represents phase II of the **Winnipeg Injection Drug Use Social Network Study** (SNS II); one of a series of studies on the social networks of injection drug users (IDU) in Winnipeg and the importance and effects of social networks on an individual drug user's risk of infection, risk behaviours and harm reduction activities. In collecting this type of data, a considerable amount of information must also be collected on the demographics and behaviours of an individual as well as their respective social networks. Much of this individual data is important in its own right for understanding the drug scene in Winnipeg. This report focuses on that individual data. Much of the social network data are also of interest, but it will be published in subsequent reports and will focus on specific research questions and hypotheses. Those reports will be published in the peer-reviewed literature. Notices and copies of these publications will be sent out when they become available to the various agencies and clinics in Winnipeg which focus on addictions and drug use.

As noted above, the purpose of the present report is to focus on an individual's demographics and associated drug use behaviours, essentially providing a current snapshot of the injection drug scene in Winnipeg in 2004. Specifically, IDU demographics, non-injection and injection drug use behaviours, risk behaviours, and needle exchange use are highlighted. Where possible, results are compared to those from the **Winnipeg Injection Drug Epidemiology** (WIDE) study carried out in 1998 (1) to identify and track trends or changes in the Winnipeg drug scene since the time of data collection for that study.

4.1 Overall Study Objectives

The overall objectives of SNS II, as presented to our funding agency, the Canadian Institutes of Health Research are as follows:

1. Analyze the social context of syringe sharing among IDU.
2. Correlate social network variables with the seroprevalence of hepatitis C (HCV) and HIV.
3. Analyze the molecular epidemiology of HCV within social networks.
4. Correlate immune system status with social behavioural data.
5. Construct and analyze sociometric networks of IDU

5. Methods

5.1 Study Setting

SNS II was carried out within the City of Winnipeg, Manitoba, Canada. Winnipeg is the provincial capital of Manitoba and the largest urban population centre in the province (approximate population of 670,000 out of a provincial population of approximately 1.1 million).

5.2 Study Rationale and Origin

Phase I of the Winnipeg Social Network IDU study originated in 2000 when the Winnipeg Regional Health Authority was interested in gathering data on the social networks of IDU in Winnipeg. This request followed the successful investigation of social and sexual networks of STD cases and contacts by Drs. John Wylie and Ann Jolly and their collaborators (2-5). Phase I

was meant to be largely exploratory; primarily for the purpose of determining whether Winnipeg IDU were willing to provide information on their social networks and to gather data that would allow specific testable hypotheses to be formulated for incorporation into future studies.

Both of these goals were clearly met in phase I. IDU in Winnipeg were willing to discuss their connections with other people, as long as it was done in a confidential, anonymous manner. It was also clear from preliminary analysis of these data that several aspects of Winnipeg IDU social networks could potentially contribute to the transmission of bloodborne and sexually transmitted pathogens. It was these latter findings which led to the hypotheses and specific data items incorporated into the SNS II proposal and its successful funding by the Canadian Institutes of Health Research.

5.3 Subject Recruitment

The enrollment criteria for possible inclusion in SNS II was a history of injecting drugs in the 6 *months* prior to interview. This differed from WIDE where the drug use criteria was *ever* having injected illicit drugs. WIDE also enrolled the majority of its study participants through referral of potential study subjects by various agencies/clinics working with IDU. In contrast, SNS II enrolled almost entirely through word-of-mouth advertising and self-referral to the study nurse, relying on communication structures within the IDU population. Additionally WIDE gathered data over a 12 month period vs. 9 months for SNS II. Given that study recruitment and deployment were not identical, any comparisons between SNS II and WIDE should be considered within the context of these differences. A random sample of IDU is not possible, and different trends may reflect true differences (e.g. a change inherent to the IDU population or a change brought on by implementation of or changes to a program since WIDE), or simply reflect the different populations accessed by a given sampling strategy.

Regardless of the underlying reason, in areas where the two studies have produced different results, caution should be considered before making any major program or policy decisions based on that change. Rather, differences should be interpreted either as true changes or indications that our knowledge or beliefs of the IDU population with respect to a given variable, may not be as accurate as thought. In contrast, when the two studies do agree, it helps to bolster our ideas that, for those variables, there is a greater likelihood that the characteristics of the IDU population in Winnipeg have been accurately represented.

During the first few months of SNS II, there was overlap with another study in Winnipeg, the **Enhanced STD surveillance in Canadian Street Youth Study, Phase IV**. Margaret Ormond was the study nurse for both studies, and as such, if Street Youth participants met the SNS II criteria, she invited them to join the study. She also established a presence in different neighbourhoods, to establish connections to the community and spread word of the study in an informal, conversational way.

Most individuals were interviewed at their homes. Care was taken to ensure that the circumstances of the interview allowed for a private, confidential interview to take place. Frequent use was also made of neutral places, such as Sunshine House, if participants preferred or were more comfortable with a venue of this type.

5.4 Data Collection

SNS II relied primarily on a quantitative questionnaire format with a small number of short answer open-ended questions. The questionnaire consisted of two main parts – Part I questions pertained primarily to the study participant themselves followed by Part II where questions pertained to that person's social network.

Part I consisted of the following main sections:

- i) demographics
- ii) individual drug behaviours
- iii) needle sources
- iv) binges
- v) smoking, inhaling, or snorting drugs
- vi) sexual behaviours
- vii) social support
- viii) social diversity
- ix) drug dependency
- x) depression
- xi) extraversion
- xii) infection status knowledge
- xiii) overall group norms

Many of the latter sociobehavioural sections (e.g. depression, extraversion) were designed specifically to answer certain questions pertaining to IDU behaviours and will not be discussed further in this report.

Part II consisted of the social network portion of the questionnaire. In this section, study participants were asked to think back over the last 30 days about the people with whom they had had more than casual contact. Prompts included people that they had used drugs with; people that they had sex with; friends, relatives, or other individuals they feel close to; people they lived with; people they hung out with.

Using initials or other anonymous identifiers, participants were asked to list a maximum of 20 members of their social networks (referred to as contacts or network members in this report). They were asked basic questions about each of these people including identifying which were injection drug users; which used drugs in a non-injection manner; which were sex partners of the participant; and their gender, age, ethnicity, and relationship to the study participant.

Next the questionnaire focused on the network contact members that were IDU (as reported by the study participant). A series of detailed questions were asked about each of these individuals to a maximum of 5 IDU. If more than 5 IDU were on the list they were chosen in the order that the study participant listed them originally. The detailed questions were formatted as shown in the example below:

CD4. How frequently would you say you have contact with [person]?

	Network Member #				
	1	2	3	4	5
0 Daily					
1. 2-4 times per week					
2. Once a week					
3. 1-3 times per month					
4. Less than once per month					
55 Unsure					
66 Not applicable					
99 Refused to answer					

In this manner the study participant was asked a single question, but could provide different answers corresponding to each of the IDU network members. This part of the questionnaire contained the following sections:

- i) contact demographics
- ii) contact injection drug behaviours
- iii) contact non-injection drug behaviours
- iv) characteristics of the relationship (i.e. between the study participant and a given contact)
- v) relationship norms and expectations
- vi) initiation and demonstration of injection

In addition to questionnaire administration, participants were asked if they would provide a blood specimen for determination of hepatitis C (HCV), HIV, and hepatitis B (HBV) infection status and whether participants had been vaccinated against HBV. Testing was conducted on an ongoing basis to allow study participants access to their test results in a timely manner. Testing was done based on a study participant's study code, therefore, when information on previously undiagnosed infections were given to participants, they were informed that they would have to present to primary health care for retesting and follow-up. A referral process to clinical/treatment sites had been established by the study nurse as part of the start-up phase of the study. Additionally, clinical questions were answered by the study nurse as comprehensively as possible, and resource material was frequently left behind with the participant.

Provision of results by return follow-up appointments was generally not successful. However, more success was obtained by suggesting that participants re-call the study nurse when they were ready to receive test results.

An honorarium of \$40.00 was provided to study participants for taking part in any aspect of the study (questionnaire and/or specimen collection). In practice, 88% of study participants who completed the questionnaire, also provided a blood specimen. The remainder either refused to provide a specimen or were unable to provide a specimen (e.g. due to damaged veins).

As part of their participation, a short summary sheet of the main findings/aspects of Phase I of the study was made available to study participants. This provision of results appeared to be well-received by study participants and helped in fostering continuing community involvement in Phase II.

6. Results and Discussion

6.1 Demographics

A total of 435 study participants were enrolled (in the various tables presented in this report, total participants may number less than 435 depending on the amount of missing data for a given question). This target enrollment number was based on a sample size calculation required for one of the research questions included within the CIHR funding proposal. This sample is slightly smaller than the sample size of 608 used in WIDE, however, in both cases, the relatively large number of people interviewed provides for a robust cross-section of the IDU population in Winnipeg. Participants in SNS II ranged in age from 16 to 64 with representation across all age groups (Table 1). The median age was 35 (males, 36; females, 35).

Table 1. Frequency distribution of study participant age

Age group	Number of study participants	Percent
15-19 years	27	6.24%
20-24 years	53	12.24%
25-29 years	55	12.70%
30-34 years	67	15.47%
35-39 years	79	18.24%
40-44 years	79	18.24%
45-49 years	42	9.70%
>50 years	31	7.16%
total	433	100.00%

Fifty-six percent (247) of the participants were male, 43% (186) were female, and 1.4% (6) were transgender female (biological male). With respect to ethnicity, 47% (204) self-identified as First Nations (either treaty or non-treaty), 34% (149) as Caucasian/white, 15% (68) as Métis, and 2.7% (12) as “other” (Latin American, Mid-East, Caribbean-black, Inuit). Forty percent (174) of the participants were born in Winnipeg, 30% (132) outside Winnipeg, but within the province of Manitoba, 26% (113) were born in other Canadian provinces or territories, while the remaining 3% (14) were foreign-born. The majority of participants had dropped out of school (35% [150] before grade 9; 34% [148] between grades 10 - 12). Eleven percent (48) graduated grade 12, 16% (69) pursued additional educational activities after grade 12 (e.g. university, community college), while 4% (18) were currently pursuing their grade school education.

Just over a quarter of our sample (28%) had moved to Winnipeg in the last year, reflecting the high mobility of this population. Thirty-two percent of these individuals moved here from other parts of Manitoba, 41% from the 3 western provinces, 25% from eastern Canada, and 2% from the US. The high mobility of IDU, both within and between provinces, highlights the importance of developing strong partnerships with other regional, provincial, and national agencies.

The primary source of income for the majority of participants (65% [278]) was some form of support (i.e., government support in the form of welfare, employment insurance, etc. or support

from family or friends). Twenty-three percent (97) had full- or part-time employment, while the remaining 13% (56) listed either sex trade (12, 2.8%), dealing drugs (10, 2.3%) or stealing, boosting (the selling of stolen goods), or panhandling (34, 7.9%), as their main source of income.

Although a relatively small number of individuals relied on sex trade, drug dealing, or other forms of illicit activity as their main source of income, many partially relied on these activities to supplement their income. Table 2 shows this latter data and also illustrates the percentage of people reporting their supplementary types of income from all other sources. This differs from the data in the preceding paragraph where only main income sources are discussed. The majority of participants were either living in their own house or apartment (48%, 207), a friend’s house or apartment (12%, 52) or a family member’s house or apartment (12%, 50). The remainder were living in a hostel, rooming house, or some other form of shelter (13%, 57), in a hotel (9%, 39), or on the street or in a vehicle (6%, 27).

Table 2: All types of supplementary income sources indicated by study participants (Corresponding question on questionnaire - Over the last year what other ways did you get money to live on? – more than one response allowed per participant)

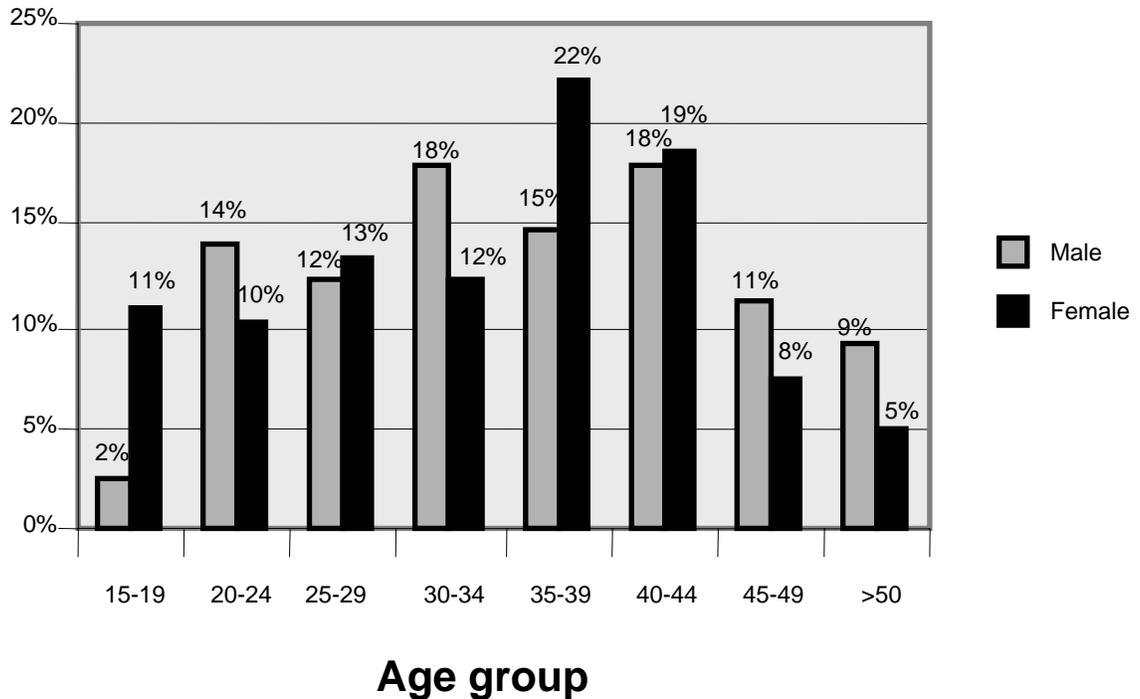
Income source	Number of participants indicating income from this source	Percent
regular work (full, part time or contract)	165	38.11%
welfare, EI, pension or other government support	117	27.02%
money from family/friends	235	54.27%
sex trade/prostitution	83	19.17%
dealing or doing drug runs	208	48.04%
Panhandling	71	16.40%
Stealing	137	31.64%
Boosting (selling of stolen goods)	129	29.79%
Other	41	9.47%
Total number of participants providing responses for this question - 433		

The male/female gender and ethnicity ratios in SNS II and WIDE were very similar, suggesting the overall demographic characteristics of the population have not changed substantially over the past several years nor were they affected by the different sampling strategies in the two studies. Additionally, the gender ratio stratified by ethnicity is also very similar in SNS II and WIDE. In both studies there was a 3:1 ratio of males to females for Caucasians, while the ratio was near equality in both studies for aboriginals (WIDE was 47% male: 52% females, while SNS II was 44% males: 56% females for First Nations and 53% males: 47% females for Métis).

In contrast to the clear trend towards young IDU being female in WIDE (in WIDE the three youngest age groups [15-19, 20-24, and 25-29] were each dominated by females), this trend was less clear in the SNS II data (Fig. 1). The youngest age group was heavily skewed towards females, however, the 20-24 year age group was skewed towards males, as was the 30-34 year age group. The 25-29 year age group was close to evenly split between males and females. This discrepancy between SNS II and WIDE is also reflected in the differing percentages of male and

female IDU less than 30 years of age (SNS II - 34% female, 29% male; WIDE – 41% female, 25% male). Although it is clear that many young IDU are female, the greater tendency for young IDU to be female, suggested by WIDE, is not as evident in SNS II. The trend may have begun near the time when WIDE was implemented, however, the pattern is much less clear today.

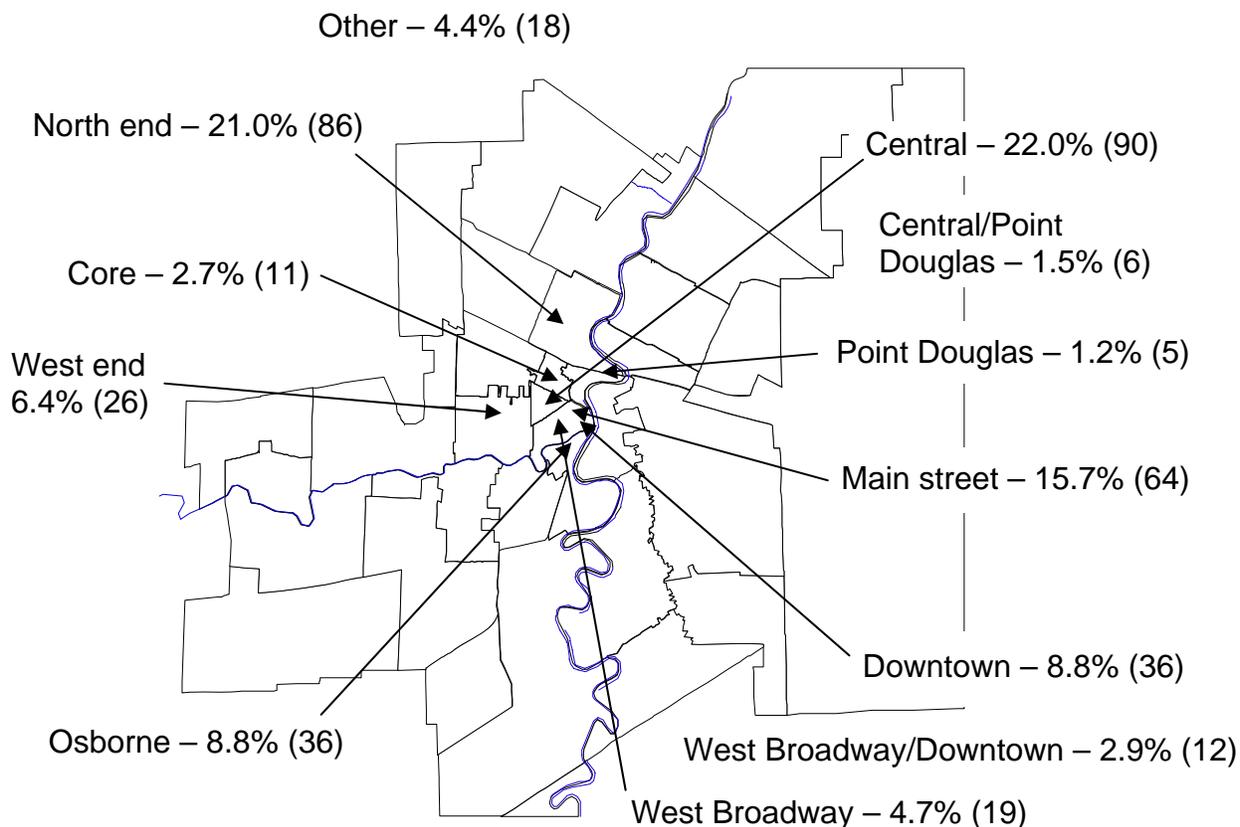
Fig. 1. Age and gender distribution of SNS II study participants.



The socioeconomic indicators from the two studies are generally similar. Government support from welfare, employment insurance, and other similar sources, continues to be the main income source for most IDU. The percentage of individuals citing sex trade and other illegal activities as main income sources in SNS II appears lower than WIDE (13% vs. 27%), while a greater percentage of IDU cite regular employment as their main income in SNS II than WIDE (22% vs. 11%). These differences could easily reflect the different sampling strategies as, for instance, sex trade workers, may be more likely to have enrolled in WIDE due to its focus on community agencies as enrollment sites. The percentage graduating high school was slightly higher in WIDE (SNS II – 27% vs. WIDE – 35%)

In SNS II, questions were also asked about a person’s place of residence in the city, and where they normally hang out. Figure 2 illustrates the various places in the city where people say they typically hang out. Several individuals could not be definitely placed in a specific area based on their answers and some combination areas (e.g. Central/Point Douglas and West Broadway/Downtown) are included on the map. The three most common areas were the North End, the Central area of Winnipeg, and the Main Street strip, followed by Osborne and the Downtown area. The “other” area indicated at the top of the map is a catch-all category and, in effect, represents anyone who hung out in Winnipeg, but not in one of the designated areas on the map.

Figure 2. Areas where IDU say they “hang out”.



6.2 Prevalence Data

Prevalence data for HCV, HIV, and HBV (both infection and vaccination status) was determined using the blood specimens IDU provided (Table 3).

Table 3. Prevalence data for HCV, HIV, HBV, and HBV vaccination status of study participants. HBV prevalence was based on the presence of antibodies to the core protein of HBV. HBV vaccination is based on the presence of antibodies to HBV surface antigen only.

Result	Number of participants	Percent (based on positive, negative and indeterminant specimens only)
HCV		
Positive	209	54.15%
Negative	175	45.34%
not determined or indeterminant	2	0.52%
Specimen not available*	49	
HIV		
Positive	28	7.39%
Negative	351	92.61%
not determined or indeterminant	56	
HBV		
Positive	122	31.77%
Negative	261	67.97%
not determined or indeterminant	1	0.26%
Specimen not available*	51	
HBV vaccination		
Yes	68	17.85%
No**	293	76.90%
specimen not available*	54	
Low***	20	5.25%

* specimens were either not available due to refusal to provide a specimen or the inability to collect sufficient specimen from some individuals.

** "no" indicates both people who are unvaccinated and uninfected and those infected by HBV.

*** "low" indicates people who had weak positive results against surface antigen and could represent either false positive reactions or a low positive vaccination status

Prevalence data (based on positive, negative, and indeterminant specimens only) indicate that 54% of IDU have experienced infection with HCV, 32% have experienced an HBV infection, while HIV has infected 7% of the study participants. For the latter, it is notable that this figure is lower than the 12.6% found in WIDE. Although, the different recruitment strategies must be kept in mind when comparing WIDE and SNS II, the comparison does suggest that HIV prevalence in this population has not shown a dramatic increase during the time between implementation of the two studies. Additionally, although the prevalence of HCV is clearly high, it is lower than seen in some other Canadian cities based on the pilot phase of the I-track National Surveillance Project (6) and there remain many opportunities for the prevention of transmission between infected and uninfected IDU. HBV has not spread to the extent that HCV has in this population, however, it is also clear that there are relatively few IDU that have been vaccinated against this infectious agent.

Enhanced efforts to increase vaccination among IDUs should proceed as quickly as possible to reduce or prevent further infection and transmission of HBV in this population. It should be noted that depending on the infection status of those individuals who refused testing or who were unable to provide a specimen, the true prevalence of the bloodborne pathogens noted above could be higher.

Questions were also posed to the study participants with respect to whether they had been previously tested for HCV or HIV. Prior to enrollment in the study, 81 (18.8%) and 70 (16.4%) study participants had not been tested for either pathogen. Although it is encouraging that a large majority of IDU had been tested and were aware of their infection status, further efforts to increase testing is warranted. Awareness of infection status is important not only to ensure an individual is receiving proper care, but also due to the existence of altruistic behaviour on the part of IDU to prevent further transmission from infected to uninfected individuals, that has been noted in other locales (7, 8). Whether altruistic behaviours of this type occur in Winnipeg IDU has not yet been studied.

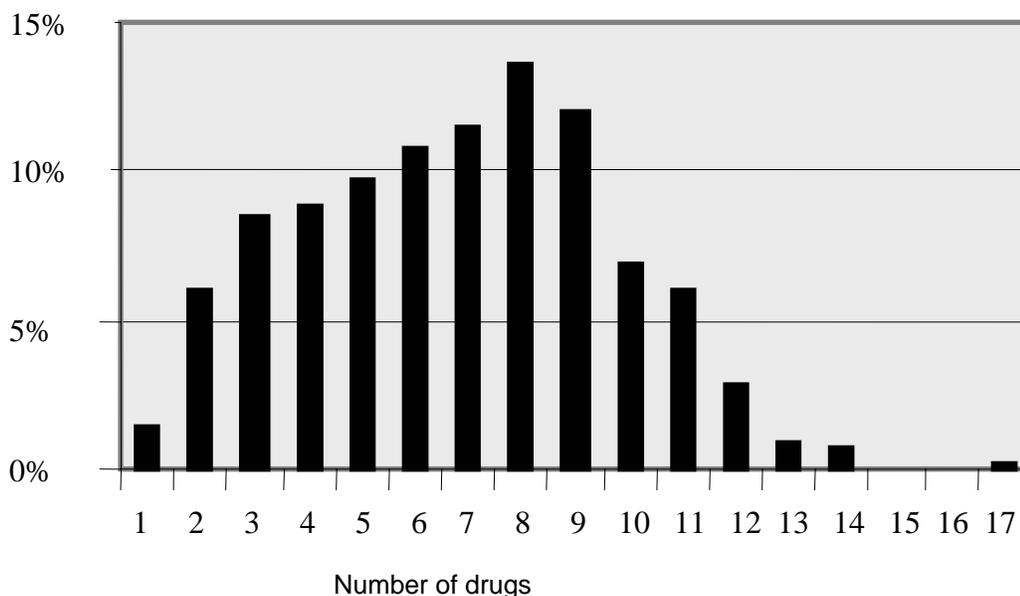
6.3 Non-injection Drug Use

Table 4 illustrates which drugs participants have used in a non-injecting manner. Several drugs, such as crack or cocaine, are nearly as commonly used as alcohol and marijuana. The emergence of the use of crystal methamphetamine is also seen, although by a relatively small number of participants. Fig. 3 shows the number of different drugs study participants use by routes other than injecting (alcohol and marijuana have been excluded from the data used in Fig. 3), and illustrates the frequency of poly-drug use.

Table 4. Drugs used in a non-injecting manner by study participants. Listed in order of most to least common (with exception of “other” drugs).

Drugs used without injecting	Number of participants indicating use of drug	Percent
Alcohol	388	89.61%
Marijuana	336	77.60%
Crack	332	76.67%
Cocaine	296	68.36%
downers/tranquilizers	290	66.97%
Tylenol 3	279	64.43%
Barbiturates	235	54.27%
Painkillers	206	47.58%
Demerol/morphine/opium	189	43.65%
Mushrooms	107	24.71%
methadone unprescribed	89	20.55%
Amphetamines	86	19.86%
crystal methamphetamine	71	16.40%
methadone prescribed	65	15.01%
Acid	54	12.47%
gasoline/solvents	50	11.55%
Heroin	43	9.93%
Ecstasy	31	7.16%
PCP/angel dust	21	4.85%
other drug	51	11.78%
Total number of participants providing responses for this question - 433		

Figure 3. The number of non-injection drugs used by study participants. The percent data reflects the percent of study participants using a given number of drugs. Alcohol and marijuana have been excluded from this data.



A more specific set of questions was also asked on smoking, inhaling, or snorting drugs in the 6 months prior to interview. Ninety-four percent of respondents answered “yes” for this question. Excluding marijuana and those individuals who use only marijuana, the most common drugs used in this manner were crack (328 participants, 80%); cocaine (227, 55.5%), crystal methamphetamine (87; 21.3%) gasoline/solvents (47; 11.5%) and heroin (29, 7.1%). All other types of drugs were indicated by less than 3% of participants. The most common response to the question, “Excluding marijuana use, in the past month, how often did you smoke/inhale/snort drugs?” was “once in a while, not every week” (135 participants, 35.3%), while 64 (16.7%) participants indicated they used drugs in this manner on a daily basis. In addition to private residences, other common places to smoke or snort drugs were on the street, (152 participants, 39.7%); hotels (144, 37.6%); vehicles (127, 33.2%); rooming/boarding houses (77, 20.0%) and shooting galleries (49; 12.8%).

Participants were asked about their re-use or sharing of straws/pipes. Two hundred and eighty-three (76.3%) of the 371 participants who are smoking drugs other than marijuana, indicated they do share equipment. Frequency choices for this behaviour were “hardly ever” (26 participants, 9.2%); “sometimes” (79, 27.9%); “frequently” (64, 22.6%); and “always” (114, 40.3%). Of the 328 participants who indicated they smoked crack, 99 (30.6%) said that, in the prior 6 months, they have had cuts or burns on their lips or in their mouth due to crack smoking. The frequency with which sharing of straws/pipes occurs and the frequency with which burns occur, highlights the need for ongoing distribution of crack kits to this population to potentially help reduce pathogen transmission via this route.

6.4 Injection Drug Use Behaviours

The median and mean age of first injection was 19 and 21 years, respectively. Seventeen percent of participants indicate they inject on a daily basis, 29% at least one or more times per week. Fifty-seven percent binged on drugs in the 6 month period prior to their interview date. The most common age of first injection was between 13 and 17 (152 participants; 35%). Twenty participants (4.6%) began injecting between the ages of 8 and 12.

The most frequently injected drugs (the one drug that a study participant most frequently injects) and preferred injection drugs (the one drug that a study participant would prefer to inject if availability/price was not an issue) are shown in Tables 5 and 6, respectively. The most notable change since WIDE was the drop in cocaine as both a preferred drug and a most frequently injected drug (cocaine was a preferred drug of 60% of respondents in WIDE). No one other drug has risen dramatically in the place of cocaine, rather it appears that several drugs have either increased in usage (e.g. Talwin and ritalin, heroin, morphine) or have recently appeared (crystal methamphetamine, oxycodone).

Table 5. Preferred injection drug as indicated by study participants (only one choice allowed per study participant).

Drug name	# of participants	Percent
cocaine	168	38.80%
talwin & ritalin	87	20.09%
heroin	57	13.16%
Morphine	39	9.01%
crystal methamphetamine	19	4.39%
Crack	10	2.31%
Oxycodone	8	1.85%
Dilaudid	7	1.62%
Other	31	7.16%
Unsure	6	1.39%
not applicable	1	0.23%
Total	433	100.00%

Table 6. Most frequently injected drug as indicated by study participants (only one choice allowed per study participant).

Drug name	# of participants	Percent
cocaine	157	36.43%
talwin & ritalin	103	23.90%
Morphine	70	16.24%
Crack	24	5.57%
crystal methamphetamine	22	5.10%
heroin	14	3.25%
Oxycodone	7	1.62%
Dilaudid	11	2.55%
Other	20	4.64%
Unsure	2	0.46%
not applicable	1	0.23%
total	431	100.00%

Table 7 shows, in total, the range of drugs participants have injected in the last 6 months. For this question participants were allowed to select as many drugs as were applicable.

Table 7. Total overall usage of injection drugs by study participants. Corresponding question on questionnaire – Which drugs have you injected in the last 6 months.

Drugs injected in the last 6 months	Number of participants indicating use of this drug	Percent
Cocaine	273	63.05%
Morphine	156	36.03%
talwin & Ritalin	140	32.33%
crack/rock cocaine	105	24.25%
Dilaudid	71	16.40%
Heroin	43	9.93%
Crystal methamphetamine	43	9.93%
Methadone	26	6.00%
ritalin alone	23	5.31%
Oxycodone	17	3.93%
Amphetamines	14	3.23%
heroin & cocaine	12	2.77%
heroin & other drugs	3	0.69%
Barbiturates	3	0.69%
PCP	1	0.23%
“other”	33	7.62%

Despite the percentage drop in cocaine as either the most frequently injected or preferred drug of Winnipeg IDU, a large percentage of IDU (63.1%) still state that they have used this drug at some point in the past 6 months. Morphine is the second on the list, despite Talwin/Ritalin being the second choice for most frequently injected drug and second on the list of preferred drugs of IDU (Tables 5 and 6). Again, as above, the emergence of crystal methamphetamine and, to a lesser extent, oxycodone on the Winnipeg scene is evident. Using the data of Table 7, the number of drugs injected by IDU was calculated. In comparison to the poly-drug use of Fig. 3 for using drugs in a non-injection manner, most IDU indicate they have only used one injection drug in the past 6 months (189 participants, 43.7%), with a maximum of 9 drugs indicated by one study participant.

Questions were asked regarding the types and number of places where drugs were injected (Tables 8 and 9).

Table 8. Types of places most frequently used as a venue for injecting drugs. Only one choice was allowed per study participant (Over the last 6 months, at what type of place have you most frequently injected?).

Place of injection	Number of participants	Percent
at your own house or apartment	180	41.67%
at a friend's house or apartment	154	35.65%
Hotel	28	6.48%
on the street	24	5.56%
shooting gallery	18	4.17%
at family member's house or apartment	13	3.01%
Other (e.g. rooming/boarding house, vehicles)	15	3.47%
Total	432	100.00%

Table 9. All types of places injected at by study participants. More than one choice allowed per study participant (Questionnaire question - Over the past 6 months, what types of places have you injected drugs?)

Place of injection	Number of study participants choosing a given category	% yes
at friend's house	309	71.36%
at own house	248	57.27%
Hotel	176	40.65%
rooming/boarding house	134	30.95%
on the street	126	29.10%
Vehicle	106	24.48%
public washroom	84	19.40%
shooting gallery	67	15.47%
at family's house	62	14.32%
empty house	61	14.09%
hostel/shelter	11	2.54%
recovery house	9	2.08%
jail or prison	4	0.92%
Other	40	9.24%
Total number of participants providing a response for this question - 433		

In both cases, after private residences (own or friend's place) hotels were the most common site of injection (most frequently used by 28 [6.5%] participants and used overall by 176 [40.7%]). Public places including the street, public washrooms, and vehicles are also commonly used by many IDU. Given that private residences are potentially a more difficult access point for Public Health, it is notable that almost half of all IDU have at some time in the past 6 months injected at a hotel. Given the importance of hotels in terms of both a potential site of pathogen transmission

and as a Public Health contact point, analysis of hotel data is currently underway and is expected to be the first report published subsequent to the present report.

6.5 Risk Behaviours

Several questions were asked on various risk or harm reduction behaviours to provide a current overall picture of these activities in Winnipeg. The vast majority of IDU in Winnipeg have indicated they have not given away a used needle to another IDU in the past 6 months (369 participants, 85.4%). Fifty-seven (13.1%) people have done this occasionally or sometimes in the past 6 months, while a small minority indicated they usually or always give away their needles (3 people, 0.9%).

Questions were also asked regarding the frequency of transfer of prepared drugs between syringes. In this behaviour, drugs are prepared in one user's syringe and transferred to another user's syringe. Although the syringes themselves are not shared, if the drug preparation syringe has been previously used for injection, it could be contaminated with a pathogenic agent. Therefore, the drugs being transferred could be likewise contaminated and potentially result in pathogen transmission. As above, this is a relatively rare behaviour with 356 participants (82.4%) indicating they have never done this in the previous 6 months. Sixty-one people (14.1%) have done this occasionally or sometimes, while 7 people (1.6%) did this usually or always.

Although the majority of IDU (60.4%) have either used someone else's used syringe (or were unsure whether they had) at some point in the past, the majority have said they did not use anyone else's used syringe in the previous 6 months (337, 78.2%). However, this still leaves almost a quarter of study participants who either indicated they have definitely used someone else's used syringe in the previous six months (72, 16.7%) or weren't sure whether they had engaged in this behaviour (22, 5.1%).

Of the 72 study participants who indicated they had definitely used someone else's used syringe in the previous 6 months, 65 provided a response to how often they cleaned those needles first before use. Seventeen (26.15%) indicated they never or hardly ever cleaned them first, 19 (10.77%) indicated "sometimes" while 45 (60%) indicated "frequently" or "always". Two were unsure how often they cleaned needles previously used by someone else. Also, it is interesting to note that of these 72 study participants, 28 (43.1%) knowingly used a syringe after someone they suspected or knew to be infected with HIV and/or HCV had used it first. Another 7 (10.8%) were unsure if the person from whom they received the used syringe was infected with either pathogen.

The use of someone else's used equipment, including cookers, rinse water, cotton, etc. is not practiced by the majority of IDU, however, it is clearly more common than the reuse of used syringes. Two hundred and seventy-four study participants (63.4%) indicated they had not done this in the previous 6 months, while "occasionally", "sometimes", "usually", and "always" was chosen by 67 (15.5%), 34 (7.9%), 23 (5.3%), and 18 (4.2%) study participants, respectively. Sixteen (3.7%) were unsure whether they had used someone else's used equipment.

This discrepancy in the frequency of sharing syringes vs. sharing equipment is also reflected in the different beliefs in the risk posed by syringes vs. equipment. Three hundred and eighty-four (88.9%) and 376 (87.0%) IDU believe that transferring drugs between syringes poses a risk for HCV and HIV transmission, respectively. This number drops to 334 (77.5%) and 306 (71.0%)

when asked if sharing drug preparation equipment poses a risk for transmission of these same two pathogens.

In most cases the data suggests that sharing behaviours or the re-use of someone else’s syringes/equipment has become relatively uncommon as IDU take steps to protect themselves. However, it is also clear that opportunity for disease transmission along these routes still does occur and these practices continue to occur in some circumstances even when an individual suspects the needle has been used by someone infected by a bloodborne pathogen.

6.6 Use of Needle Exchanges

The introductory question for this section was, “In the past six months, have you exchanged needles or gotten new needles at a needle exchange?” Two hundred and seventy-six (63.9%) study participants responded affirmatively for this question. Two hundred and seventy-four participants provided information on how many needles they usually obtained in this manner. The two most common responses were “most” (113, 41.1%) and “less than half” (81 (29.5%). Forty-one (14.9%) responded “all”, while 39 (14.2%) said “about half”. A separate question was also asked on where individuals in general obtained syringes as well as the specific name of the needle exchange site they had obtained syringes from (Table 10).

Table 10. Sources of new syringes accessed by study participants in the previous 6 months. As many choices as applicable were allowed.

Syringe sources	Number of participants indicating they had used this source	Percent
friends/partners/family	278	64.35%
pharmacy/drugstore	275	63.66%
street connections	207	47.92%
other needle exchanges*	138	31.94%
Dealer	60	13.89%
someone on the street	59	13.66%
Nine Circles	45	10.42%
Sage House	35	8.10%
Sunshine House	32	7.41%
from other cities	30	6.94%
nurse/doctor/hospital	25	5.79%
shooting gallery owner	20	4.63%
found on the street	2	0.46%
Total number of participants providing responses for this question – 433		
* here “other” implies needle exchanges other than the ones specifically listed above.		

When asked to choose the one site where they obtained the majority of their new syringes from, most IDU selected “Street Connections” (140, 32.6%), followed by pharmacy/drugstore (125, 29.1%), friends/partners/family (93, 21.7%), needle exchanges other than Street Connections (62, 14.5%), and “someone on the street” (9, 2.1%). The majority of individuals indicated it was “very easy” to obtain new needles (282, 65.3%), followed by “somewhat easy” (85, 19.7%), “somewhat difficult” (40, 9.3%), “very difficult” (22, 5.1%), and “unsure” (3, 0.7%).

Although it is clear that the majority of IDU find it easy to get new syringes, primarily either through exchanges or pharmacies and drugstore, approximately 1/3 of IDU indicated a category of “somewhat easy” or lower in terms of their ability to readily access new syringes. Additional research and analysis is required to delve into the details of whom these individuals are and why they have some difficulty in obtaining syringes. Power relationships, in which some IDU may depend on others to obtain needles for them, may play a role in ease of access and also risk, as these “dependent” IDU may have poorer access to harm reduction educational efforts available to exchange attendees.

7. Summary

This report highlights the current Winnipeg IDU scene in 2004 with respect to various demographic and injection and non-injection drug behaviours and provides an update of the data collected during WIDE, the last major IDU study to have taken place in Winnipeg since 1998. The data presented here were collected as part of Phase II of the Winnipeg IDU Social Network Study. In general, with respect to many sociodemographic and socioeconomic variables, the IDU population in Winnipeg appears quite similar to that represented in WIDE. Some prevalence data is encouraging given that HIV does not appear to have increased since WIDE and approximately half of the IDU interviewed have not been infected by HCV. However, work still needs to be done to increase HBV vaccination rates. The emergence of new drugs, including crystal methamphetamine and oxycodone, is also documented in our results. The high frequency with which equipment used for smoking drugs is shared and the relatively large number of individuals who report burns or cuts on their lips or in their mouth from crack smoking suggests opportunities exist for potentially reducing transmission of pathogens via this route. With respect to injection drug use, there appears to have been a decrease in the frequency of cocaine use with many other drugs having risen in prominence (although cocaine is still the most common drug used). The central importance of Winnipeg hotels as places of injection is also clear, with almost half of all IDU interviewed having injected at a hotel in the last six months. Data on risk behaviours suggest that many IDU are taking steps to protect themselves from infection, however, some IDU are still placing themselves at risk through the re-use of syringes and/or drug-preparation equipment. Additional data analysis now ongoing will provide further insights into the correlates associated with infection by bloodborne pathogens or risk behaviours such as syringe sharing within this population.

8. References

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