Canadian Street Youth and Substance Use

Findings from Enhanced Surveillance of Canadian Street Youth, 1999–2003
Our mission is to promote and protect the health of Canadians through leadership, partnership, innovation and action in public health.

*Public Health Agency of Canada*

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Canadian Street Youth and Substance Use

Findings from Enhanced Surveillance of Canadian Street Youth, 1999–2003
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Executive Summary

Substance use is common among street youth. The prevalence of smoking, alcohol use and intoxication, drug use, and drug-use risk behaviours is much higher among street youth than in the general youth population. Despite the detrimental health, psychological and social consequences of substance abuse, it continues to persist in street youth populations, because the challenges of meeting immediate daily needs are considered more pressing than preoccupation with health risks.

This report is intended to provide more information on substance use in street youth and is based on Enhanced Surveillance of Canadian Street Youth (E-SYS), a national, multicentre sentinel surveillance system that monitors rates of sexually transmitted infections and blood-borne infections, behaviours and risk determinants in Canada’s street youth population. Key findings from 1999, 2001 and 2003 are presented.

Key Findings

- Smoking rates are very high among street youth. Approximately 80% of street youth reported smoking about half a pack of cigarettes daily. Females averaged 14 to 16 cigarettes per day, while males averaged 16 to 18 cigarettes per day.

- Alcohol use is common among street youth. In 2003, about 76% reported consuming alcohol in the 3 months prior to the interview; about 5% of street youth reported drinking daily.

- Approximately 40% of street youth who drank alcohol reported recent alcohol intoxication.

- Street youth who reported using one substance were more likely to report using other substances (polydrug use).

- Rates of non-injection drug use are extremely high; 95% of youth reported ever using drugs by means other than injection. Marijuana was the most commonly used non-injection drug.

- Rates of injection drug use are also high. About 20% of street youth reported injection drug use in their lifetime. Cocaine was the most commonly injected drug.

- About 31% of street youth reported not always using clean injection equipment.

- Approximately 22% of non-injection drug users and 37% of injection drug users reported that they had quit using drugs.

- Among those who reported quitting drug use, half of the non-injection drug users and close to a third of injection drug users quit drugs using treatment services.
It is widely recognized that conventional treatment approaches and mainstream programs are not effective with street youth. As such, alternative integrated approaches to developing and implementing intervention programs for this marginalized population are necessary. Likewise, multifaceted gender-based initiatives aimed at addressing the broader determinants of health issues are imperative, rather than single-issue public health interventions, which are unlikely to address the root causes of substance use and associated risk behaviours.

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Experiencing with tobacco, alcohol and drugs may be part of the transition to adulthood for some youth, but for others, particularly street youth, experimentation often leads to substance use problems over time, possibly due to a perceived need for substance use to cope with life on the street.

Many studies have examined substance use and risky sexual behaviours and their impact on the health of street youth, and they have all shown that substance use is more prevalent among street youth than it is in the general youth population. A myriad of constantly changing factors, including parental abuse, peer and social pressures, curiosity, genetic vulnerability, individual personality characteristics, environmental stressors and others have been suggested as reasons for substance use.

Drug-using populations may have a higher risk of contracting and transmitting both sexually transmitted infections (STIs) and blood-borne infections (BBIs), as they tend to engage in high-risk sexual behaviours due to the influence of the substances they use. It has been argued that drug use is often an important determinant or correlate of sexual risk behaviours.

The short- and long-term health, psychological and social consequences of substance use are many and may include higher morbidity and premature death due to the presence of chronic conditions such as hepatitis C or HIV/AIDS, as well as increased prevalence of injuries, suicidal tendencies, psychosis, theft and violent crime. The costs associated with health care utilization and the criminal justice system are other important societal burdens.

Information regarding substance use patterns of Canadian youth often relies on student surveys, but while these surveys can provide a general overview of youth substance use patterns, they often do not include youth who are in institutions or have dropped out of school, or those who are at high risk or already involved in substance use.

Available information shows that compared to youth in the general population, street youth are 11 times more likely to die of drug overdose and suicide. Another study in Montreal found that almost half (45.8%) of the street youth in that city had injected drugs. Clearly the youth populations most at risk of substance use may be missed by population-based telephone surveys or school-based student drug use surveys. Enhanced Surveillance of Canadian Street Youth (E-SYS) is attempting to reach this population and obtain information about street youth to complement the general portrait of youth substance use in Canada.

1.1 Purpose

The information presented in this report is based on E-SYS. It is hoped that the insights garnered will help in attaining the following goals:

- Identifying trends in substance use among street youth.
- Identifying the demographic and social factors associated with substance use among street youth.
- Identifying potential risk factors associated with substance use among street youth.
2. Methods

Enhanced Surveillance of Canadian Street Youth is a multicentre sentinel surveillance system that monitors rates of STIs and BBIs, behaviours and risk determinants in the Canadian street youth population through repeated surveys accompanied by biological sampling (blood and/or urine testing). A pilot project launched in October 1998 (Phase I) investigated the feasibility of studying the street youth population. Since then, data collection has been conducted in large urban centres across Canada biannually, starting in 1999 (Phase II) and continuing in 2001 (Phase III) and 2003 (Phase IV).

In Phase II, the recruitment of youth involved informal snowball sampling methods, a method shown to be effective for hard-to-reach populations. Participants were recruited through drop-in centres and outreach work. For the purposes of the behavioural surveys, the inclusion criteria were that respondents: (a) were between 15 and 24 years of age; (b) were able to speak either French or English; and (c) had, in the previous 6 months, been absent from their residence for at least 3 consecutive nights; run away from home (or another place of residence) for 3 days or more; been thrown out of their home for 3 days or more; or been without a fixed address for 3 days or more.

There were two interviewer-administered questionnaires. The first consisted of questions on demographics, lifestyle, sexual practices, attitudes about and knowledge of risk behaviours, and family history. In addition to completing the questionnaire, consenting youth were asked to provide urine and blood samples. If necessary, a second questionnaire about barriers to partner notification was administered as a follow-up for those whose urine or blood sample tested positive for STIs or BBIs. Phases III and IV of the study followed the same methodology as Phase II. Youth were permitted to participate in the survey only once during each data collection year. A total of 4728 street youth were recruited over the three phases of data collection: 1645 in 1999, 1427 in 2001 and 1656 in 2003.

2.1 Analysis

Data were analyzed using SAS Statistical Software (version 8, SAS Institute, Carey, NC). Chi-square statistics were used to compare distributions across demographic factors. A two-tailed p value of <0.05 was defined as statistically significant for univariate analysis. Further multivariate analyses using logistic regression models were conducted, with a p value of <0.10 defined as statistically significant, to select independent factors associated with specified outcomes.

For more detailed information, please refer to the methodology section of the 2006 Public Health Agency of Canada report Street Youth in Canada: Findings from Enhanced Surveillance of Canadian Street Youth 1999–2003. For the purposes of this report, younger youth are defined as those 15 to 19 years of age, while older youth are defined as those 20 to 24 years of age.

2.1.1 Analysis terms

Univariate analysis examines the relation of one independent variable to the outcome variable of interest, without taking other potential independent variables into account. In this report, univariate analysis was conducted using the chi-square test for heterogeneity.

Statistically significant relationships in univariate analyses are defined by a p value <0.05 and are denoted by § in this report.
**Multivariate analysis** examines numerous factors or variables simultaneously: that is, it examines the relation of each independent variable to the outcome variable of interest while controlling for other variables. Logistic regression analysis was employed for multivariate analysis.

**Independent associations** were determined by multivariate analysis. They are denoted by † in this report. Variables found to be significantly associated with outcomes of interest in univariate analysis were included in multivariate analysis and were as follows: age; sex; previous STIs; age at initiation of sexual activity; number of sexual partners over lifetime; having been in jail, foster care, and/or group homes; having been assigned to a social worker; having had unwanted sex; having been expelled from school; having dropped out of school; and perceived risk of contracting STIs.

### 2.2 Laboratory Methods

A polymerase chain reaction (PCR) test was used to detect *Chlamydia trachomatis* and *Neisseria gonorrhoeae* (Roche Amplicor). Herpes simplex virus (HSV) antibody was screened using an EIA I/II enzyme immunoassay (EIA) (Meridian); repeatedly reactive and discordant results on EIA were confirmed by type-specific line immunoassay (MRL Diagnostics). Hepatitis C virus (HCV) antibody was screened using an EIA (Ortho HCV 3.0); repeatedly reactive results on EIA were confirmed by recombinant immunoblot assay (RIBA) (HCV 3.0 RIBA). PCR testing was used to detect recent seroconversion if the RIBA (v3) result was indeterminate. Testing was also done for hepatitis B virus (HBV) serology markers (antibodies to HBV surface antigen and core antigen). Syphilis testing was performed using serological testing (rapid plasma reagent [RPR]/Venereal Disease Research Laboratory [VDRL]) followed by confirmatory testing (fluorescent treponemal antibody absorption [FTA-ABS]/[microhemagglutination assay–Treponema pallidum [MHA-TP]]).

### 2.3 Limitations

E-SYS has several limitations that should be noted.

- **First**, it is cross-sectional in design. As is the case for all cross-sectional research, it does not allow causality to be established.
- **Second**, the sample is limited to seven urban centres across Canada. This could be viewed as both a strength and limitation. It is a strength in that it documents the presence and the plight of street youth in cities, where they are most often situated. The limitation is that the findings may not be applicable to other geographic areas or to less populated areas.
- **Third**, the recruitment of youth involved informal snowball sampling methods; the study was well advertised and news of it passed verbally to potential participants without the use of specific geographic sampling frames or direct linked referrals. While this technique has been shown to be effective in hard-to-reach populations such as street youth, it could result in a selection bias.
- **Finally**, findings were based on self-reported data. As such, veracity of the information provided could not be established except for specific STIs and BBIs, for which blood or urine testing was performed. Also, street youth in this sample may have been reluctant to report socially undesirable behaviours such as unprotected sex, commercial sex trade work or injection drug use.
Table 1. Overview of socio-demographic characteristics of street youth in E-SYS

There were more male participants, with a ratio of approximately 2 males to 1 female in all survey years. The age of street youth ranged from 15 to 24 years, with an average of approximately 19 years across all years of recruitment. Fewer than 10% of study participants reported being born outside of Canada. Youth were of varied ethnic backgrounds, with about 60% overall reporting Caucasian origins and about 30% reporting Aboriginal ethnicity; about 12% reported African, Asian, Middle Eastern and other ethnicities.
4. Substance use

4.1 Smoking

Smoking, a highly addictive habit, is among the leading causes of premature death and morbidity worldwide.\(^4\) Cigarettes kill half of all lifetime users, and tobacco kills more than AIDS, legal and illegal drugs, road accidents, murder and suicide combined.\(^4\) Each year in Canada over 45 000 people die from tobacco-related causes (this includes those exposed to second-hand smoke).\(^1\) Smoking is a major cause of respiratory disease, cancer and circulatory disease. It also has an enormous burden on society, directly and indirectly, in terms of lost economic productivity and health care expenditure.\(^5\)

Consistently throughout the three phases of data collection, about 80% of youth reported smoking cigarettes every day. As Figure 1 shows, the proportion of youth who reported smoking daily was very high (84.3% in 1999, 82.5% in 2001 and 78.8% in 2003). The proportion of youth who reported smoking occasionally was 5.7%, 7.2% and 9.2% in 1999, 2001 and 2003, respectively. There were no major differences by age group or gender in the proportions of street youth who reported smoking every day (Figure 2).

Figure 1. Everyday and occasional smoking among street youth

Figure 2. Everyday smoking in street youth by age group and gender
Based on 1999 and 2001 data (the question was not asked in 2003), street youth smoked approximately 15 cigarettes per day (females 14 to 16 and males 16 to 18 cigarettes per day); about 72% of smokers smoked more than 10 cigarettes daily.

Figure 3 compares the proportion of smokers among street youth (E-SYS) vs. the general youth population. The Canadian Tobacco Use Monitoring Survey (CTUMS)\textsuperscript{16} is a general population survey that tracks smoking status and amount smoked, especially among those 15 to 24 years old, the age group at most risk of taking up smoking. It shows that overall, the proportion of smokers among youth aged 15 to 24 has dropped to 24% in 2003 from 31% in 1999. Likewise, the Ontario Student Drug Use Survey (OSDUS),\textsuperscript{17} the longest ongoing provincial survey of student drug use in Canada, reported that smoking rates among students in Ontario are currently on a downward trend. In the general population, youth aged 15 to 19 years reported consuming an average of 11.6 cigarettes per day, with males on the average smoking 2.2 more cigarettes daily (13.8) than their female counterparts (11.6). In contrast, E-SYS has found that rates of smoking among street youth have remained consistently high.

Figure 3. Proportion of smokers in youth aged 15 to 24 in CTUMS and E-SYS

As seen in the literature, factors associated with youth tobacco use include low socioeconomic status; use and approval of tobacco use by peers or siblings; smoking by parents or guardians; accessibility, availability and price of tobacco products; perception that tobacco use is normative; lack of parental support or involvement; low levels of academic achievement; lack of skills to resist influences to tobacco use; lower self-image or self-esteem; belief in functional benefits of tobacco use; and lack of self-efficacy to refuse offers of tobacco.\textsuperscript{18,19} For street youth recruited in E-SYS, having been in jail or in a detention centre and having been expelled from school or having dropped out of school were important factors\textsuperscript{5} predicting smoking.
4.2 Alcohol Use

Alcohol abuse, including binge drinking, is a significant substance abuse problem and a major health and social concern. Alcohol produces a strong dose-response effect, depending on individual characteristics. Continuous and excessive use of alcohol can lead to a variety of serious adverse short- and long-term health conditions, such as alcohol poisoning, cirrhosis of the liver, kidney failure, depression, and impaired judgment leading to vehicular fatalities and alcohol related hospitalizations, among others.\textsuperscript{20,21}

Numerous studies exist on the risk factors or predictors of alcohol use and abuse in youth.\textsuperscript{1,2,9-11,22-30} Most of these studies suggest that the reasons why adolescents use alcohol are complex but may include curiosity, a need to fit in with friends and a desire to relax and escape problems. Other important risk factors common to all substance abuse and addiction issues are peer risk behaviour and parental and peer influences. Peer risk behaviour reflects attitudes and decisions about involvement in substance use. Parents’ drinking behaviour and favourable attitudes about drinking or the use of drugs are associated with adolescents’ initiating and continuing drinking.\textsuperscript{24-28} Early initiation of drinking has been identified as an important risk factor for later alcohol-related problems.

In the 12 months prior to the Canadian Addiction Survey, 79.3\% of Canadians aged 15 or older reported alcohol consumption, 14\% were former drinkers (those who had consumed alcohol in their lifetime but not in the past 12 months) and 7\% were lifetime abstainers (had never consumed alcohol in their lifetime). Among youth 15 to 24 years of age, 83\% were current drinkers, 8\% were former drinkers and 9\% were abstainers. Among current drinkers aged 15 to 24, 13.8\% reported heavy drinking (five or more drinks on a single occasion) at least once a week, and 46.0\% reported this pattern of drinking at least once a month.\textsuperscript{22}

The proportion of street youth in E-SYS who reported consuming alcohol in the 3 months prior to the interview was 80.6\% in 1999, 79.1\% in 2001 and 75.7\% in 2003. Over 30\% of street youth reported drinking at least once a week in the 3 months prior to the study. About 5\% of youth reported drinking every day in all cycles of the survey. The proportion of non-drinkers ranged from 18.6\% in 1999 to 24.2\% in 2003. A greater proportion of female street youth self-reported as being non-drinkers or occasional drinkers; this proportion remained consistent across survey years. As shown in Figure 4, the frequency of drinking was fairly similar in younger and older street youth across the survey period.
Factors significantly associated with drinking for street youth include experiencing sexual and other types of abuse; involvement in the sex trade; having been in jail or a detention centre; and having been expelled from or dropped out of school.
4.3 Recent Alcohol Intoxication

Recent alcohol intoxication is captured in E-SYS as being “drunk” 1 or more days in the previous 3 months. Overall, among current drinkers, the proportion of street youth who reported recent intoxication was 42.0% in 2001 and 36.6% in 2003 (Figure 5).

Figure 5. Intoxication in the previous 3 months among street youth who reported drinking in the previous 3 months (2001 and 2003)

In 2003, male street youth were more likely than females to report recent intoxication (37.9% vs. 34.2%). The proportion of street youth who reported having sex after recent intoxication was consistently high (approximately 59%) in all phases of E-SYS data collection.

Risk factors significantly\(^5\) associated with recent intoxication in street youth in 2001 and 2003 include having been expelled from or dropped out of school; having experienced any type of abuse; involvement in the sex trade; and having been in jail or a detention centre.
4.4 General Drug Use Patterns

Results from E-SYS show that the proportion of street youth who reported ever using any type of drugs is very high (Figure 6). The combined proportion of overall drug use in this category was 95.2%, 93.8% and 95.3% in 1999, 2001 and 2003, respectively. Only a small proportion of youth reported never using any type of drugs. Furthermore, it was also evident that of those youth who used drugs by means of injection, the majority also used other drugs by non-injection means.

With respect to youth in the general population, the Canadian Addiction Survey (2004) revealed that about 37% of youth aged 15 to 24 years reported having used cannabis/hash in the previous 12 months and 61% reported having done so in their lifetime. It was also reported that cannabis (marijuana) was the most commonly used drug, and males were more likely to use it.

Similarly, the OSDUS describes changes in rates of substance use among youth in the 1980s, 1990s and currently. The results show that the usage rate for inhalants, cannabis hallucinogens other than LSD or PCP, and ecstasy decreased during the 1980s, increased during the 1990s and is currently stable at elevated rates. LSD use also decreased during the 1980s and increased during the 1990s but is currently showing downward trends. Cocaine use, and to a lesser extent crack, decreased in the 1980s and showed upward trends during the 1990s, while heroin, PCP and methamphetamine use have been at low and stable rates over time.
4.5 Non-Injection Drug Use

E-SYS revealed that the exclusive use of drugs by non-injection means (e.g. crack, cocaine, ecstasy or crystal meth but excluding alcohol and tobacco) has remained consistently high over the duration of the study (more than 70% in 2003) (Figure 7). The most commonly used drug in the previous 3 months by street youth who reported using drugs by routes other than injection was marijuana (Figure 8). Males were more likely to report marijuana use.

**Figure 7. Exclusive use of drugs by non-injection among street youth**

**Figure 8. Most commonly used non-injection drugs in the previous 3 months among street youth who reported using non-injection drugs (2001 and 2003)**

*Youth were allowed to report more than one drug; percentages therefore exceed 100%. They could also use any number of names for drugs (including street names).*
Figure 9 provides information on non-injection drug use patterns in street youth in 1999 and 2001. Overall, approximately 22% of non-injection drug users reported that they had quit using drugs in the 3 months prior to the interview. Half of those who quit reported doing so using drug treatment services.

Figure 9. Non-injection drug use behaviour in the previous 3 months among street youth (1999 and 2001)*

Risk factors associated§ with an elevated likelihood of reporting drug use by means other than injection include ever having a social worker; ever living in a group or foster home; being expelled from school; and ever being in a jail or detention centre. Street youth who had contact with either parent in the 3 months prior to the study were less likely to report non-injection drug use than those with no parental contact. Experiencing abuse was not significantly§ associated with non-injection drug use; neither was the mother’s or father’s own injection drug use. There also seems to be a relationship between the length of time spent on the street and the types of drugs used.

*Question not asked in 2003.
4.6 Injection Drug Use

The use of drugs by injection represents a major and increasingly important public health challenge. The general resurgence of drug use in youth and the emergence of injection drug use as a major risk factor for HIV, hepatitis viruses and other blood-borne pathogens are the main reasons for this conundrum.\textsuperscript{31} Although injection drug use ultimately impacts all of Canadian society, some sections of the population are disproportionately affected.\textsuperscript{30,31,32} Aboriginal Canadians, homeless people, incarcerated populations and street youth are the main high-risk groups when it comes to injection drug use.\textsuperscript{1}

E-SYS results show that about 20\% of street youth reported ever using injection drugs (20.8\% in 1999, 18.4\% in 2001 and 22.3\% in 2003; Figure 10). There were significant\textsuperscript{\$} differences between street youth who injected drugs and those who did not, as shown in Table 2.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure10.png}
\caption{Injection drug use among street youth}
\end{figure}
### Table 2: Characteristics of street youth with and without a history of injection drug use (2003)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Ever IDU</th>
<th>Never IDU</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%*† n=370</td>
<td>%*† n=1291</td>
</tr>
<tr>
<td><strong>Age</strong></td>
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<td></td>
</tr>
<tr>
<td>15-19 years</td>
<td>40</td>
<td>62</td>
</tr>
<tr>
<td>20-24 years</td>
<td>60</td>
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</tr>
<tr>
<td>Permanently dropped out of school</td>
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<td>38</td>
</tr>
<tr>
<td>Permanently expelled from school</td>
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<td>35</td>
</tr>
<tr>
<td>Not living with parents/caregivers because of abuse/neglect</td>
<td>60</td>
<td>52</td>
</tr>
<tr>
<td>Not living with parents/caregivers for at least 1 year</td>
<td>82</td>
<td>62</td>
</tr>
<tr>
<td>In contact with parent/caregiver in past 3 months</td>
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<td>83</td>
</tr>
<tr>
<td>Hanging out more than 40 hours/week</td>
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<td>44</td>
</tr>
<tr>
<td>Parents/caregivers characteristics*:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hit/assault one another</td>
<td>47</td>
<td>38</td>
</tr>
<tr>
<td>Father ever injected drugs</td>
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<td>Mother ever injected drugs</td>
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</tr>
<tr>
<td>Mother and father ever injected drugs</td>
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<td>5</td>
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<tr>
<td>Main theme of most arguments:</td>
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<tr>
<td>Youth’s drug/alcohol use</td>
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<td>9</td>
</tr>
<tr>
<td>Parent’s drug/alcohol use</td>
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</tr>
<tr>
<td>Youth ever lived on the streets all the time</td>
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<td>62</td>
</tr>
<tr>
<td>Ever had a social worker</td>
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<td>68</td>
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<tr>
<td>Ever been in foster care</td>
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<td>40</td>
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<tr>
<td>Ever been in a group home</td>
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<td>45</td>
</tr>
<tr>
<td>Ever been in a detention centre, prison, or jail</td>
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<td>56</td>
</tr>
<tr>
<td>Ever had a probation officer</td>
<td>73</td>
<td>51</td>
</tr>
<tr>
<td>Any illicit income over past 3 months (includes sex trade, stealing and selling drugs)</td>
<td>71</td>
<td>40</td>
</tr>
<tr>
<td>Primarily illicit income over past 3 months</td>
<td>45</td>
<td>19</td>
</tr>
<tr>
<td>Recent alcohol intoxication in past 3 months</td>
<td>38</td>
<td>25</td>
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<tr>
<td>Ever use non-injection drugs</td>
<td>99</td>
<td>94</td>
</tr>
<tr>
<td>Characteristic</td>
<td>Ever IDU</td>
<td>Never IDU</td>
</tr>
<tr>
<td>---------------</td>
<td>---------</td>
<td>-----------</td>
</tr>
<tr>
<td></td>
<td>%*† n=370</td>
<td>%*† n=1291</td>
</tr>
<tr>
<td>†Non–Injection drugs used most often in the past three months:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crystal methamphetamine</td>
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<td>6</td>
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<tr>
<td>Cocaine</td>
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<td>5</td>
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<tr>
<td>Crack</td>
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<td>Heroin</td>
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<td>2</td>
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<tr>
<td>Ketamine</td>
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<td>2</td>
</tr>
<tr>
<td>Speed</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

IDU=Injection drug use
*Percentages are based on the number of non-missing observations.
†Percentages are significantly different at a p value of <0.05.
△Characteristic has non–mutually exclusive categories.

Compared to street youth who had never injected drugs, injection drug users were older, more likely to be born in Canada and more likely to have permanently dropped out of school. In addition, parents or caregivers of injection drug users were more likely to be physically violent and to inject drugs themselves, with the main theme of most family arguments being drug and alcohol use. Drug-injecting youth were less likely to be living with their parents or caregivers because of abuse or neglect and were less likely to have contacted their parents in the previous 3 months.

Furthermore, and consistent with a more adverse family situation, injection drug users were more likely to have had a social worker, been in foster care, lived in a group home and lived full-time on the streets. They also reported more criminal behaviour, with 84% spending at least one night in a detention centre, prison or jail and 71% reporting illicit income sources such as the sex trade, stealing and selling drugs.

A greater proportion of injection drug users reported recent alcohol abuse and sex during binge drinking. Injection drug users were also more than twice as likely to report using crystal methamphetamine, cocaine, crack, heroin, ketamine and/or speed over the 3 months prior to the interview.
Despite variations in the most commonly injected drugs during the survey years, overall some of the most commonly injected drugs among youth were cocaine, heroin, morphine and speedballs (cocaine and heroin combination) (Figures 11 and 12). In 2003, about 31% of injection drug users reported that they had borrowed injection equipment.

*Youth were allowed to report injecting more than one drug; percentages therefore exceed 100%.
In 2003, nearly 40% of injection drug users reported that they had quit injecting drugs (Figure 13). Of these, 13% quit injecting drugs using drug treatment services (Figure 14).

**Figure 13. Injection drug use behaviour in the previous 3 months among street youth**

**Figure 14. Street youth who reported using Treatment services to quit Injection drug use 2001**
When comparing injection drug users to non-injection drug users or youth who reported no drug use of any type in multivariate analysis, independent risk factors for injection drug use were age, sex, having ever been in jail, dropping out of school, leaving home because of abuse, having a mother who injected drugs, ever living on the street and amount of time spent on the street.

In all survey years, older youth were at least nine times more likely to report using injection drugs than younger youth, and youth who used injection drugs were at least 15 times more likely to report that they had been in jail or a detention centre compared to non-injection drug users or youth who used no drugs at all.

In 1999, significant predictors of injection drug use were dropping out of school, leaving home because of abuse, ever living on the street and having a mother who injected drugs. In 2001 and 2003, youth who had spent 4 or more weeks on the street in the previous month were also more likely to report injecting drugs than youth who had spent 1 day or 1 week on the street.

### 4.6.1 Injection drug use and hepatitis C

Injection drug use is significantly associated with hepatitis C virus (HCV) infection. Figure 15 shows that the rate of HCV infection is about 4-5 times higher in street youth who reported injecting drugs compared to street youth overall. High-risk behaviours such as sharing injection equipment and having sex without protection are some of the reasons for the high rates of HCV infection in injection drug users.

![Figure 15. Rates of hepatitis C virus infection among street youth](image-url)
Often street youth are unaware of or express being unconcerned about the effects of drug use on their health or other dangers related to addiction and substance use. Drug use, especially injection drug use, is often associated with other high-risk behaviours, such as involvement in the sex trade, criminal activity, unsafe sex and sharing needles.  

The proportion of street youth who reported having sex while intoxicated with alcohol has remained consistently high: 56.8% in 1999, 59.5% in 2001 and 58.0% in 2003. There was no significant difference between gender and age group. Almost one-third (30.9%) of street youth report having received substances such as cigarettes, drugs or alcohol and then felt obliged to have sex.

Figure 16 describes the sexual behaviours of street youth who reported using injection or non-injection drugs. The proportion of youth who reported trading sex in the previous 3 months was 37.7% in 2001 and 36.3% in 2003. In addition, approximately, 60% of street youth reported that their sexual partner used alcohol regularly in 2001 and 2003. Half of the study participants also reported that their sexual partners were “high” on drugs during sex in 2003. A larger proportion of street youth also reported that their sexual partners used non-injection drugs (82.3% in 2001 and 78.5% in 2003).

Figure 16. Sexual behaviours in the previous 3 months among street youth who reported drug use (injection and non-injection) (2001 and 2003)

*Question not asked in 1999
Overall, STI rates were not found to be significantly higher in street youth with a recent history of alcohol intoxication than in those without such a history. In 1999, the rate of chlamydia was found to be significantly higher in youth who reported use of crystal methamphetamine than those who did not (17.2% vs. 8.2%), especially among females (33.3% vs. 9.4%). In 2003, the rate of gonorrhea was significantly higher in street youth who reported using crystal methamphetamine than those who did not (6.9% vs. 2.8%), while the rate of genital herpes (HSV-2) was significantly higher in street youth who reported any drug use (whether by injection or not) than those who reported no drug use (26.8% vs. 16.7%).

The proportion of youth who reported that their sexual partner had ever been told they had an STI remained high: 21.8% in 2001 and 16.2% in 2003 among youth who reported drug use, compared to 13.6% in 2001 and 11.6% in 2003 among youth who reported never using drugs.

Consistent with their greater risk-taking behaviour, injection drug users compared to non-injection drug users were almost twice as likely to have had an STI. They also had a greater number of sexual partners over their lifetime; were more likely to be sexually involved with high-risk partners, such as other injection drug users, individuals with STIs and sex trade workers; and reported a higher rate of unwanted sex, obligatory sex and the sex trade (Table 3).

Table 3. Sexual history of street youth with and without a history of injection drug use (2003)

<table>
<thead>
<tr>
<th>Sexual History</th>
<th>IDU †† N=370 (%)</th>
<th>Never-IDU †† N=1291 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever had sexual activities, %</td>
<td>99</td>
<td>96</td>
</tr>
<tr>
<td>Any same sex behaviour, %</td>
<td>34</td>
<td>20</td>
</tr>
<tr>
<td>Mean number of lifetime sexual partners, n</td>
<td>73.4</td>
<td>19.5</td>
</tr>
<tr>
<td>Did not use a barrier during most recent sexual encounter(s), %</td>
<td>59</td>
<td>49</td>
</tr>
<tr>
<td>Ever had an STI, %</td>
<td>38</td>
<td>23</td>
</tr>
<tr>
<td>Ever had unwanted sex, %</td>
<td>27</td>
<td>15</td>
</tr>
<tr>
<td>Ever had obligatory sex, %</td>
<td>32</td>
<td>14</td>
</tr>
<tr>
<td>Ever traded sex, %</td>
<td>37</td>
<td>15</td>
</tr>
</tbody>
</table>

IDU= injection drug use
*Percentages are based on the number of non-missing observations.
†Percentages are significantly different at a p value of <0.05.

Furthermore, a greater proportion of injection drug users reported not using a barrier for protection during their most recent sexual encounter(s), and a greater proportion of injection drug users reported having same-sex partners.
The results from this study have significant implications for intervention in the street youth population. Street youth reported use of substances such as cigarettes, alcohol and several drugs. The rates of non-injection and injection drug use among street youth make it clear that actions are needed to reduce the rates of substance abuse and lessen the impact of social and physical harms associated with use of these substances.

Harm reduction approaches — including providing information about safe drug use and safe sexual behaviours, facilitating a return to school or encouraging alternative education programs — also need to be available to street youth. There is also a need to work with the education system to identify youth who are at high risk of becoming street-involved and to offer preventive interventions.

A number of factors are associated with smoking in youth, including age, absence from school and exposure to smoking at home and among peers. E-SYS confirms this among street youth. Public health interventions aimed at reducing smoking in society, such as banning smoking in bars/restaurants/workplaces, may be less likely to reach street youth. Even broad-reaching media campaigns may be ineffective with this population, depending on how they are delivered, since TV commercials and newspaper ads may not reach street youth as they would the general population. Effective interventions need to be developed to target this section of the nation’s youth.

Alcohol, the most widely used and abused drug among youth, presents an interesting and unique challenge. Unlike other psychoactive substances, alcohol use is thoroughly integrated into the social customs and commerce of society. As such, initiatives aimed at preventing or reducing alcohol abuse in marginalized populations such as street youth need to be cognizant of their unique circumstances and modify them accordingly. Designing messages that are sensitive to street-life culture and subcultures with practical information or alternative solutions to meeting basic daily needs may be beneficial. The same street youth-centred approach could be used with respect to drug use in general.

An integrated approach to developing and implementing intervention programs for the street youth population would ensure that they are able to get the help they need in different areas. A multifaceted, gender-based approach addressing broader determinants of health is needed, as single-issue public health interventions are unlikely to address the root causes of risk behaviours. For example, street youth who have experienced family problems and abuse may require protection and mental health services as opposed to correctional services when they come in contact with the judicial system.

Findings from E-SYS show that overall, more than 20% of street youth reported injection drug use in all survey years. Infections such as hepatitis C most often occur as a direct result of injection drug use among street youth, caused by sharing needles. For instance, in 2003, only youth who used drugs by means of injection reported ever having hepatitis C infection.
This presents an opportunity for informative and preventive measures to reduce hepatitis C infection. Making treatment available and accessible to street youth and establishing educational preventive initiatives and programs on the risks associated with injection drug use in major urban centres may be useful in dealing with the issue.

Approximately one-fifth of street youth reported injecting drugs, such as cocaine, heroin or crystal methamphetamine. Injection drug use is often associated with other high-risk behaviours, such as involvement in the sex trade, criminal activity, unsafe sex and sharing needles. The amount of time spent on the street may be linked to the likelihood of youth using drugs by means of injection; early multifaceted interventions for street youth about the dangers of injection drug use and addiction could help prevent youth from beginning injection drug use. Finally, there is a need for continued research on Canada’s street youth to provide more detailed information regarding the most appropriate programs and acceptable method of delivery for this diverse group.
7. Conclusions

This report has presented a snapshot of the unique conditions that street youth are experiencing. Issues associated with elevated substance use are a major burden for all of Canadian society to deal with.

Substance abuse problems, especially in street youth, place a high financial burden on the health care and social infrastructure system. Canada’s youth incarceration rate is among the highest in the Western world. In 1989–90, approximately 37,000 young persons appeared in Canada’s courts, 62% of them for property offences, 18% for violent crime and 4% for directly drug-related offences. A study conducted in April 2002 by the Canadian Centre on Substance Abuse suggested that there may be a link between substance abuse and crime. All Canadians have an interest in reducing the rates of substance abuse among youth in general, and among street youth in particular, which in turn may result in better health, fewer run-ins with the law and lower rates of STIs or BBIs in Canadian youth overall.

Interventions aimed at street youth and substance abuse are often difficult to develop due to shifting or unstable living environments, lack of social infrastructure with which to implement prevention programming and lower school attendance compared to general youth populations. As such, more integrated approaches needs to be adopted to effectively address substance abuse in street youth. Targeting troubled youth before drug use and addictions begin may be the key to effectively dealing with substance abuse issues.

The results of this study show that street youth are an important and diverse segment of the Canadian population, and it is imperative that policy makers across Canada — in regional, provincial, territorial and national governments — ensure that Canadian street youth have access to education, social and health services that are tailored to meet their unique needs.
8. References


