

I-Track: Enhanced surveillance of HIV, hepatitis C, and associated risk behaviours among people who inject drugs in Canada - Phase 3 (2010-2012) Report

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Executive Summary

Introduction

The Public Health Agency of Canada (PHAC) is responsible for coordinating the federal response to HIV/AIDS, as described in The Federal Initiative to Address HIV/AIDS in Canada (FI). One of the key components of the FI is knowledge development, which includes establishing sentinel surveillance programs for vulnerable populations. Since 2002, PHAC's Centre for Communicable Diseases and Infection Control has developed and implemented the I-Track surveillance system in collaboration with local and provincial health departments and community-based organizations.

I-Track Primary Objectives (Phase 3)

I-Track is an enhanced surveillance system that monitors human immunodeficiency virus (HIV) and hepatitis C as well as the associated risk behaviours among people who inject drugs in Canada by combining behavioural and biological surveillance. I-Track's primary objectives aim to describe:

- the prevalence of HIV and hepatitis C;
- drug use, injecting, and sexual behaviours;
- HIV- and hepatitis C-testing behaviour;
- care and treatment history of HIV and hepatitis C;
- core knowledge of HIV-related risk behaviours, modes of transmission, and risk-reduction strategies; and
- trends in prevalence and core behavioural measures over time.

Overview of I-Track methods

The I-Track system involves implementing periodic cross-sectional surveys among people who inject drugs. These surveys are conducted in sentinel sites across Canada. Information on demographic characteristics, drug use, injecting and sexual risk behaviours, and HIV- and hepatitis C-testing and treatment history are collected through interviewer-administered, face-to-face questionnaires. A biological sample (dried blood specimen or oral fluid exudate) is then collected to test for HIV and hepatitis C antibodies.

Sentinel sites have the option of adding site-specific questions to address particular issues or program features in the target population.

Participants are recruited through venue-based convenience sampling. Participation, which is voluntary, is completely anonymous and requires informed consent.

Report Objective

This report presents descriptive findings from I-Track Phase 3 surveys conducted between April 26, 2010, and August 7, 2012, at participating sentinel sites in Canada. The results are intended to inform HIV prevention and control efforts, public health policy development, and program evaluation. They also provide a baseline for formulating questions for more complex analyses.

Data Analysis

A total of 2687 eligible participants with complete data were available for the analyses in this report. The data are shown in tabular format to allow for comparisons across sentinel sites and with the national I-Track sample as a whole. Unless otherwise stated, the results are based on the survey participants' report of their behaviours in the 6 months prior to their interview. Analyses were stratified by sex where numbers were large enough to facilitate meaningful interpretation. No statistical procedures were used to compare findings across sentinel sites or applied to any of the data in this report.

Summary of I-Track Phase 3 results

Participant overview and socio-demographic characteristics

- Of the 2687 I-Track Phase 3 participants, 68.2% were male and 55.6% had not completed high school. The average age was 39.4 years.
- The majority were born in Canada (96.0%), with varied ethno-cultural backgrounds; 36.1% identified as Aboriginal and 66.4% as White.
- Over one-third reported a monthly income of between \$500 and \$999 (39.7%). The main source of income reported was Social Assistance (40.3%).

- Nearly one-fifth reported living in more than one city during the 6 months prior to the interview (17.6%), indicating that this population was somewhat mobile.
- More than half reported living in stable housing sometime during the 6 months prior to the interview (61.3%).

Drug use and injecting behaviours

- The drugs commonly injected included cocaine (64.3%), hydromorphone (48.3%), non-prescribed morphine (47.0%), oxycodone (37.7%), heroin (26.7%), and crack (24.8%).
- Cocaine was the drug most often injected in the 6 months (29.4%) and the 1 month prior to the interview (24.8%).
- Just over half of the participants reported injecting drugs most often in their own apartment or house (53.6%); a large proportion of participants also reported injecting drugs in public places (street, park, squats, subway, underpass, washroom, stairwell, etc., 16.1%).
- Overall, 15.5% of the participants reported injecting with used needles and/or syringes in the 6 months prior to the interview. Of these, more than half reported borrowing most often from regular sex partners (50.5%).
- Just over one-third reported injecting with other used injection equipment such as water, filters, cookers, tourniquets, swabs, spoons, and acidifiers (34.5%); almost half reported most often borrowing this equipment from friends or people they knew well (46.8%).

Sexual behaviours

- The I-Track Phase 3 participants reported high-risk sexual behaviours, such as multiple sexual partners, inconsistent condom use, and sex trade work.
- The proportion who reported using a condom the last time they had sex was 36.6%, which was higher than the 2010 global rate reported by UNAIDS (27%)².
- In general, condom use during penetrative sex was more frequent than during oral sex. Condom use was less frequently practised with regular and casual sex partners than with client or paid sex partners.

HIV and hepatitis C seroprevalence and testing

- Of those who provided a biological sample large enough for testing, 11.2% tested HIV positive: from 0.5% in Kingston to 17.4% in the SurvUDI network.
- HIV seroprevalence was 10.4% among female participants and 11.6% among male participants. Among female participants, the proportion who tested positive for HIV was highest in Edmonton (24.5%). Among male participants, the proportion who tested positive for HIV was highest in Prince George (17.6%) and the SurvUDI network (18.6%).
- Of those who tested HIV positive according to laboratory results, just one-fifth were unaware of their HIV-positive status (20.0%).

- Of those participants who provided a biological sample large enough for testing, the lifetime exposure to hepatitis C infection was 68.0%: from 45.2% in Thunder Bay to 79.1% in London, with similar proportions in female and male participants.
- Of those who tested positive for hepatitis C antibodies according to laboratory results, one-fifth were unaware of their hepatitis C-positive antibody status (20.2%).
- The proportion of the participants seropositive for both HIV and hepatitis C was 9.5%. Those seropositive for HIV alone represented a small proportion (1.7%) while more than half were seropositive for hepatitis C only (58.4%).
- The majority of the participants reported ever being tested for HIV or hepatitis C (92.9% and 91.3% respectively).

Care and treatment history of HIV and hepatitis C

- Of the participants who reported ever receiving an HIV-positive test result, a large proportion reported being under the care of a doctor (89.9%), and 85.9% were currently taking medications prescribed for their HIV infection.
- Lower proportions for these measures were noted for participants who reported being positive for hepatitis C (42.5% and 15.3%, respectively).

Strengths and limitations

I-Track data are collected via cross-sectional surveys, and while it is not possible to examine causality directly, these surveillance data offer a valuable source of information critical to treatment and prevention services and programs at local, provincial, and national levels.

I-Track uses non-random, convenience sampling methods to overcome some of the inherent difficulties in accessing this hard-to-reach population. Given this, the surveillance findings may not be representative of all people who inject drugs in Canada.

With the exception of the laboratory results, this report's findings are based on self-reported data, which are subject to social desirability bias. Therefore, under-reporting of some risk behaviours may have occurred.

Standardized surveillance system core objectives, core questions, inclusion criteria, sampling, and recruitment strategies were consistently implemented, allowing for comparison across sentinel sites and over multiple survey implementation phases. However, the findings in this report should be interpreted with caution as the regional variations observed may not be reflected in national-level data and any differences in the cross-phase comparisons may be also due to temporal or regional variations. Further, no statistical procedures were used to compare findings across sentinel sites and no adjustments were made for variations in sentinel site sample sizes.

Conclusions

The results shown in this report provide an important reference point for monitoring trends in demographic characteristics, drug use, injecting and sexual risk behaviours, testing patterns, and prevalence of HIV and hepatitis C infection among people who inject drugs in Canada.

The results from the participating sentinel sites confirmed that the prevalence of HIV and hepatitis C infection remains high among people who inject drugs. Many people who inject drugs reported injecting practices that reduce risk as well as safe sex strategies; however, reported levels of injecting and sexual risk behaviours suggest that people who inject drugs continue to represent an important risk group for HIV acquisition and transmission in Canada. These findings also underscore the importance of routine and integrated HIV and hepatitis C testing for people who inject drugs.

Awareness of HIV-positive status among people who inject drugs is not as high as in the overall HIV-positive Canadian population. This knowledge gap could be addressed with appropriate health promotion communications, which may lead to higher levels of awareness for both HIV and hepatitis C infections, and may reduce the burden of HIV among injection drug users.