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Findings from the 2022 National Health Survey: Harm Reduction Services, Risk Behaviours, Institutional Drug Use, and Infectious Disease

Research Objectives

This study provides an overview of self-report responses from the 2022 National Health Survey. This study also included an examination of serological data to determine prevalence estimates of infectious diseases, including Human Immunodeficiency Virus (HIV), Hepatitis C Virus (HCV), and syphilis. Self-report responses were used to examine:

- infectious diseases diagnoses and testing,
- institutional drug use and attitudes towards drug use,
- risk behaviours that can increase risk for infectious diseases such as engagement in tattooing and unprotected sex while in prison, and
- knowledge of and access to harm reduction services and supplies.

Results of the study can be used to inform strategies and public health interventions regarding the incarcerated population's health needs, and ultimately improve the delivery of care.

Research Approach and Methodology

The 2022 National Health Survey consisted of two parts: 1) a self-report questionnaire, and 2) a dried blood spot (DBS) sample to test for infectious diseases. The study population comprised of people who were housed in Canadian federal prisons who met three eligibility criteria: they consented to participate, were able to participate in French or English, and had been continuously incarcerated in a federal prison for at least six months prior to the start of the study. This study included 1,404 participants with 1,285 housed in men's institutions and 119 housed in women's institutions. The largest proportion of participants self-identified as White (42%), followed by Indigenous (37%). A large proportion of participants were from the Quebec Region (33%), followed by the Ontario Region (23%), Prairie Region (17%), Pacific Region (15%), and Atlantic Region (11%).

Infectious Diseases Diagnosis and Testing

Key Findings

Through serological data, HIV antibodies were detected for less than 1% of participants, HCV antibodies were detected for 22.0% of participants, with 3.6% of participants found to have an active HCV infection, and syphilis antibodies were detected for 4.7% of participants. Notably, serology information was only available for a portion of the total sample. For instance, to examine prevalence rates of HCV antibodies, all 861 participants were included, whereas to examine the prevalence rates of HIV antibodies, 856 participants had sufficient DBS information for inclusion. In contrast, to examine syphilis prevalence, 837 participants had sufficient DBS information for inclusion.

In terms of self-reported diagnoses, 19% of the total sample ($n = 272$) self-reported being diagnosed with one of the three diseases, and 2% ($n = 29$) self-reported being diagnosed with at least two of the three infectious diseases. Twenty-two participants (2%) self-reported that they had been diagnosed with HIV at some point in their lives. A larger proportion of the sample self-reported that they had been diagnosed with HCV at some point in their lives ($n = 247$; 18%), of which about 5% indicated that they still currently have HCV ($n = 12/247$). With respect to syphilis, 4% of the sample indicated that they had been diagnosed with the disease at some point in their lives ($n = 63$).

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For infectious disease testing, HIV and HCV testing at any time while in federal incarceration was reported by 56% of the sample ($n = 788$ for both HIV and HCV), whereas just over 30% of the sample reported having been tested for syphilis while in federal incarceration ($n = 445$). Among those who indicated that they had not been tested, the three most common reasons were: “I’ve already been tested and I know I don’t have it” (HIV = 35%; HCV = 29%; syphilis = 13%), “I don’t think I’m at risk” (HIV = 29%; HCV = 28%; syphilis = 35%), and “I haven’t been offered a test” (HIV = 18%; HCV = 17%; syphilis = 27%). Proportions of participants who reported having been tested within the past six months were lower (HIV 19%, HCV 23%, and syphilis 14%). Reasons for not being tested in the last six months were comparable to those provided for not being ever tested.

Implications

Prevalence rates of HIV, HCV, and syphilis remain higher in federal institutions compared to the general Canadian population.^{1,2,3} Findings highlight the need to increase awareness on the importance of infectious diseases testing. Providing testing and treatments for infectious diseases allows CSC to fulfil its mission of ‘Changing Lives and Protecting Canadians’, by improving the health of incarcerated individuals, and ensuring that infectious diseases are not reintroduced in the community once individuals are released from custody.

Institutional Drug Use and Attitudes Towards Drug Use

Among the 1,404 people who participated in the 2022 National Health Survey, 23% smoked drugs, 18% snorted drugs, and 4% injected drugs in prison within the previous six months.

Key Findings

Among the 1,404 participants, 413 (29%) indicated that they had used drugs in federal prison within the last six months. Among these 413 participants, 323 (78%) said that they had smoked drugs in prison within the last six months, representing just under a quarter of the entire sample ($n = 323/1,404$; 23%). Among these 323 participants, the largest proportion ($n = 102/323$; 32%) reported smoking every day. Over half of these participants ‘never’ smoked using a device or tool that was previously used ($n = 167/323$; 52%), and over half ‘never’ passed on their device or tool to someone else after they had used it to smoke ($n = 165/323$; 51%).

Of the 413 participants who indicated using drugs in federal prison, 260 (63%) said that they had snorted drugs in prison within the last six months, representing 18% of the entire sample ($n = 260/1,404$). Among these participants, the largest proportion ($n = 59/260$; 23%) reported snorting one to three days a month. Just under one half of these participants ‘never’ snorted using a device or tool that was previously used ($n = 116/260$; 45%), and under one half ‘never’ passed on their device or tool to someone else after they had used it to snort drugs ($n = 119/260$; 46%).

Finally, of the 413 participants who indicated using drugs in federal prison, 51 (12%) said that they had injected drugs in prison within the last six months, representing 4% of the entire sample ($n = 51/1,404$). Among these participants, the largest proportion ($n = 13/51$; 25%) reported injecting one to three days a week; the same proportion also reported injecting less than one day a month. Over one-half of these participants ($n = 30/51$; 59%) indicated that they used a previously used needle and/or shared their used needle with someone else.

¹ Public Health Agency of Canada (2022a). Estimates of HIV incidence, prevalence and Canada’s progress on meeting the 90-90-90 HIV targets, 2020.

² Popovic, N., Williams, A., Périnet, S., Campeau, L., Yang, Q., Zhang, F., Yan, P., Feld, J., Janjua, N., Klein, M., Krajden, M., Wong, W., & Cox, J. (2022). National Hepatitis C estimates: Incidence, prevalence, undiagnosed proportion and treatment, Canada, 2019. *Canada Communicable Disease Report (CCDR)*, 48(11/12)

³ Public Health Agency of Canada (2023). *CCDR, Infectious syphilis and congenital syphilis in Canada, 2022*



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Attitudes towards institutional drug use were also examined among participants who provided responses using a four-point Likert scale with responses ranging from 'Strongly Disagree' to 'Strongly Agree'. It was found that 65% ($n = 379/584$) 'Agreed' or 'Strongly Agreed' that they worry that the drugs available in prison may be contaminated or cut with drugs they do not know about. A large proportion of respondents also indicated that they 'Agreed' or 'Strongly Agreed' that they want to try to stop using drugs while in prison ($n = 361/478$; 75%), that they have tried stopping while in prison ($n = 377/491$; 77%), and that they are comfortable talking to Health Services about their drug use ($n = 457/605$; 75%).

Implications

Compared to findings from CSC's 2007 National Inmate Infectious Diseases and Risk-Behaviours Survey (Zakaria et al., 2010), institutional drug use has decreased. One potential reason for this decrease in self-reported drug use could be CSC's expansion of harm reduction and substance use treatment options. These findings suggest that CSC should continue to provide and expand education and harm reduction initiatives that target knowledge, attitudes and beliefs about substance use so that incarcerated individuals are aware of how and where to seek treatment options. Further expansion of harm reduction initiatives and substance use treatments will help improve (1) health outcomes of incarcerated individuals, and (2) overall institutional safety.

Risk Behaviours: Tattooing and Unsafe Sex

Just under half of all participants had gotten a tattoo while in federal prison of which, two-thirds did not share devices. Most participants did not have sex while in federal prison. However, among those who did, many did not use protection.

Key Findings

Among the 1,404 participants, 626 (45%) reported getting a tattoo while in a federal prison. However, 186 participants reported getting a tattoo within the last six months (30%). Among those who indicated getting a tattoo in the last six months, the largest proportion ($n = 118/186$; 63%) used a modified tattoo gun, followed by 34% ($n = 64/186$) who used a beading needle, and 33% ($n = 61/186$) who used a sewing needle. Additionally, 67% of participants indicated that the device was never used by someone else prior to their tattoo ($n = 124/186$), whereas 83% ($n = 154/186$) indicated that the ink was never used by someone else prior to their tattoo. When asked about safer tattooing programs (i.e., a professional, sterile tattoo service), the majority of participants who got a tattoo over the last six months indicated that they would use this program if it were set up in their institution ($n = 168/186$; 90%).

A small proportion of participants ($n = 123/1,404$; 9%) indicated that they had sex (oral, vaginal, and/or anal) in the last six months while in federal prison. Thirty-two participants indicated having sex with a man, of which 28% ($n = 9/32$) rarely or never used a condom when having vaginal sex, and 66% ($n = 21/32$) never or rarely used a condom or dental dam when having anal sex or oral sex. In contrast, 87 participants indicated having sex with a woman, of which 58% ($n = 50/87$) rarely or never used a condom or dental dam when having vaginal sex or oral sex, and 34% ($n = 30/87$) of participants rarely or never used a condom during anal sex. Fourteen participants reported exchanging sex for goods while in federal prison ($n = 14/123$; 11%), of which eight participants indicated that this occurred frequently.

Implications

Compared to findings from CSC's 2007 National Inmate Infectious Diseases and Risk-Behaviours Survey (Zakaria et al., 2010), tattooing in federal prison has increased (from 38% to 45%). While most indicated that they did not have sex while in federal prison, of those who did, a large proportion indicated that they did not use protection some or most of the time. Findings suggest that risk-behaviours, including needle-sharing for the purpose of tattooing, as well as engaging in unsafe sex may contribute to an increased risk of infection. This highlights the need for effective prevention services and improving



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awareness of, and access to, harm reduction supplies such as condoms, dental dams, and bleach. Additionally, this emphasizes a need for improved harm reduction services in relation to tattooing. Results can be used to help improve harm reduction strategies and prevention practices.

Harm Reduction Services and Supplies

Few participants reported having issues accessing harm reduction supplies; those who had issues indicated that it was often due to insufficient quantities or an inability to locate supplies.

Key Findings

Among the 1,404 participants, 54% ($n = 753$) did not try to access any harm reduction supplies (condoms, lubricant, or dental dams). Conversely, 22% ($n = 304/1,404$) indicated that they were able to access the harm reduction supplies they needed, and 5% ($n = 70/1,404$) reported having difficulty accessing what they needed. For those who reported having difficulty accessing supplies, one of the biggest issues faced was an insufficient quantity of supplies. Specifically, 40% ($n = 28/70$) indicated that when they went to obtain condoms, there were none left, 36% ($n = 25/70$) experienced this problem with accessing lubricant, and 17% ($n = 12/70$) experienced this when accessing dental dams. Other common reasons for not accessing harm reduction supplies included not knowing where to find supplies (20% for condoms, 17% for lubricant and 13% for dental dams) or worrying that other people in custody could see them obtaining these supplies (19% for condoms, 20% for lubricant and 11% for dental dams).

Among the 1,404 participants, 80% ($n = 1,123/1,404$) indicated that they did not know that pre-exposure prophylaxis (PrEP), a medication taken to help prevent HIV before engaging in risk-behaviour, was available in federal prison. Nine percent ($n = 122/1,404$) indicated that they were aware that they could access PrEP in federal prisons. Among those who were aware of PrEP's availability in federal prison, 77% ($n = 94/122$) indicated that they have never been on PrEP while in federal prison, with more than half of them ($n = 63/94$; 52%) indicating that they did not need it or did not believe they were at risk for HIV. Among the 122 participants who were aware of PrEP, 8% ($n = 10/122$) stated that they have been on PrEP in federal prison.

With respect to post-exposure prophylaxis (PEP), a medication taken to help prevent HIV after engaging in risk-behaviours, 79% ($n = 1,108/1,404$) indicated that they did not know PEP was available in federal prison, whereas 7% ($n = 100/1,404$) indicated that they knew PEP was available. Among those who were aware of PEP's availability in federal prison, most (81%, $n = 81/100$) said they have never been on PEP in federal prison. Among these participants, 69% ($n = 56/81$) indicated that they have not been on PEP because they did not need it, or they did not believe they were at risk of HIV. Only 11% of participants who reported being aware of PEP ($n = 11/100$) had ever been on PEP while in federal prison.

Implications

Just under half of participants (46%) attempted to access harm reduction supplies. The more frequent issues faced were insufficient quantities and a lack of knowledge of where to find supplies. Correctional institutions should ensure that there are adequate harm reduction supplies available and that the location of supplies are well-known, easily accessible, and private (where feasible).



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For more information

Wanamaker, K., Filoso, D., Mahboob, W., Gendron, M-P., & Johnson, S. (2024). *Infectious Diseases, Risk-Behaviours, and Harm-reduction Approaches: A Summary of Findings from the 2022 National Health Survey*. (Research Report R-477). Ottawa, Ontario: Correctional Service of Canada.

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Related CSC Research Publications

- ERR-23-30 [Prevalence rates of infectious diseases among offenders in federal custody](#)
- RIB-23-33 [Serology results and self-reported diagnosis concordance: HIV, HCV, and Syphilis](#)
- RIB-23-32 [Prevalence of SARS-CoV-2 Antibodies among Federally Incarcerated Women](#)
- RIB-23-31 [Prevalence of SARS-CoV-2 Antibodies among Federally Incarcerated Men](#)
- R-332 [Self-Reported Physical Health Status of Incoming Federally-Sentenced Women Offenders](#) (Nolan and Stewart, 2014)
- R-314 [Self-Reported Physical Health Status of Newly Admitted Federally-Sentenced Men Offenders](#) (Stewart, Sapers, Nolan, and Power, 2014)
- R-259 [Relationships between Lifetime Health Risk-Behaviours and Self-Reported Human Immunodeficiency Virus and Hepatitis C Virus Infection Status among Canadian Federal Inmates](#) (Zakaria, 2012)
- R-254 [Relationships between Health Risk-Behaviours, Self-Perceived Risk for Infection, and Testing for Human Immunodeficiency Virus and Hepatitis C Virus Infections among Canadian Federal Inmates](#) (Zakaria, 2012)
- R-238 [Summary of the 2007 National Inmate Infectious Diseases and Risk-Behaviours Survey for Women](#) (Thompson, Zakaria, and Grant, 2011)
- R-237 [Aboriginal Men: A Summary of the Findings of the 2007 National Inmate Infectious Diseases and Risk-Behaviours Survey](#) (Thompson, Zakaria, and Grant, 2011)
- R-223 [Testing and Treatment for Human Immunodeficiency Virus and Hepatitis C Virus Infections among Canadian Federal Inmates](#) (Zakaria, Thompson, Jarvis and Smith, 2010)
- R-210 [Use of bleach and the methadone maintenance treatment program as harm reduction measures in Canadian Penitentiaries](#) (Zakaria, Thompson, and Borgatta, 2010)
- R-209 [Awareness and Use of Harm Reduction Measures for Sexually Transmitted Infections \(STIs\) in Canadian Penitentiaries](#) (Thompson, Zakaria, and Borgatta, 2010)
- R-207 [A Comparison of Drug-Related and Sexual Risk-Behaviours in the Community and Prison for Canadian Federal Inmates](#) (Zakaria, Thompson, and Borgatta, 2010)
- R-199 [Rates of Reported HIV and HCV Infections since Admission to Canadian Federal Prison and Associated Incarceration Characteristics and Drug-Related Risk-Behaviours](#) (Zakaria, Thompson, and Borgatta, 2010)
- R-211 [Summary of Emerging Findings from the 2007 National Inmate Infectious Diseases and Risk-Behaviours Survey](#) (Zakaria, Thompson, and Borgatta, 2009)

