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2022 National Health Survey in Federal Men's Institutions: 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 among participants housed in men's federal correctional institutions. 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, to 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 of which 1,285 were housed in men's institutions. Among those housed in men's institutions, the largest proportion of participants self-identified as White (42%), followed by Indigenous (36%). A large proportion of these participants were from the Quebec Region (34%), followed by the Ontario Region (22%), Prairie Region (18%), Pacific Region (16%), and Atlantic Region (10%). Chi-square, p-value, and Cramer's Phi (ϕ) statistics were used to determine the statistical significance, and effect size of the results. Cramer's Phi ranges from 0 to 1.0 where values between 0.10 and 0.20 are considered a weak association, values between 0.20 and 0.40 a moderate association, values between 0.40 and 0.60 a strong association, and values above 0.60 indicate a very strong association.¹

Infectious Diseases Diagnosis and Testing

Key Findings

Overall, 20% of the sample of participants housed in men's institutions ($n = 264$) reported being diagnosed with one of the three diseases, and only 2% ($n = 21$) with two or three infectious diseases. Seventeen participants (1.3%) self-reported that they had been diagnosed with HIV at some point in their lives. This proportion was slightly higher among Indigenous participants (1.5%; $n = 7/459$), and for the Black/Other ethnocultural group (1.8%; $n = 5/273$) compared to the White participants (0.9%; $n = 5/541$). A greater proportion of Indigenous participants indicated that they had been diagnosed with HCV at some point in their lives (24%; $n = 111/459$) compared to the total sample (17%; $n = 217/1,285$). This proportion was lower in the Black/Other ethnocultural group (8%; $n = 21/273$). For syphilis, 4% ($n = 53/1,285$) reported a lifetime infection. This proportion was higher among Indigenous participants (7%; $n = 34/459$), and in the Prairie Region (11%; $n = 25/226$),

¹ Rea, L. M., & Parker, R. A. (2005). Designing and conducting survey research: A comprehensive guide (3rd ed.). San Francisco, CA: Jossey-Bass.

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compared to the estimate from the total sample. Results were statistically significant ($p < .001$), but the association was weak ($\phi = 0.1$)

HIV and HCV testing at any time while in federal incarceration was reported by 56% ($n = 718/1,285$) and 55% ($n = 704/1,285$) of the sample, respectively, while 30% ($n = 387/1,285$) reported having been tested for syphilis. Proportions of participants indicating that they had been tested in the last six months were lower, at 18% for HIV, 21% for HCV, and 13% for syphilis. The proportion of Black participants who reported having been tested was always slightly greater compared to the total sample, for the three infections, at any time (58% for HIV, 55% for HCV, and 37% for syphilis), and in the last six months (25% for HIV, 26% for HCV, and 19% for syphilis).

Research Implications

Prevalence rates of HIV, HCV, and syphilis are higher in men's federal institutions compared to the general Canadian population.^{2,3,4} These estimates were generally higher among Indigenous participants. Findings highlight the need to increase awareness on the importance of infectious diseases testing among individuals incarcerated in men's federal institutions.

Institutional Drug Use and Attitudes Towards Drug Use

Among the 1,285 participants in men's federal institutions, 27% ($n = 351$) indicated that they had used drugs in federal prison within the last six months: 24% smoked ($n = 314$), 18% snorted ($n = 232$), and 4% injected drugs ($n = 49$).

Key Findings

A greater proportion of Indigenous participants reported having smoked drugs (33%; $n = 151/459$), compared to White participants (20%; $n = 108/541$), and to participants from the Black/Other ethnocultural group (18%; $n = 50/273$) but this difference was not statistically significant. Among those who smoked drugs, the largest proportion reported smoking four days a week or more (44%; $n = 137/314$). Over half of these participants 'never' smoked drugs using a device or tool that was previously used (52%; $n = 164/314$), while 13% ($n = 42/314$) 'always', and 31% ($n = 98/314$) 'sometimes' engaged in this practice.

A greater proportion of Indigenous participants reported having snorted drugs (27%; $n = 122/459$) compared to White participants (15%; $n = 80/541$), and to participants from the Black/Other ethnocultural group (10%; $n = 28/273$). Results were statistically significant ($p < .001$), and the association was moderate ($\phi = 0.2$). Among those who snorted drugs, the largest proportion (42%; $n = 97/232$) reported snorting one to three days a month or less. Almost half of these participants 'never' snorted drugs using a device or tool that was previously used (47%; $n = 110/232$), while 12% ($n = 28/232$) 'always', and 34% ($n = 79/232$) 'sometimes' engaged in this practice.

Finally, a greater proportion of Indigenous participants reported having injected drugs (5%; $n = 25/459$), compared to non-Indigenous participants (3%; $n = 23/814$)⁵ but this difference was not statistically different. This proportion was also larger in the Atlantic Region (13%; $n = 17/126$), compared to the other regions (Quebec/Ontario: 1%; $n = 10/726$, Prairie: 3%; $n = 8/226$, Pacific: 7%; $n = 14/207$). Among those who injected drugs, the largest proportion (55%; $n = 27/49$) reported injecting one day

² Public Health Agency of Canada (2022). *Estimates of HIV incidence, prevalence, and Canada's progress on meeting the 90-90-90 HIV targets, 2020*

³ Popovic, N., Williams, A., Périnet, S., Campeau, L., Yang, Q., Zhang, F., Yan, P., Feld, J., Janjua, N., Klein, M., Kraiden, 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)*

⁴ Public Health Agency of Canada (2023). *CCDR, Infectious syphilis and congenital syphilis in Canada, 2022*

⁵ One participant who injected drugs had their ethnocultural group missing.



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a week or more. Almost half of these participants (49%; $n = 24/49$) reported using a previously used needle, most of them being Indigenous (54%; $n = 13/24$).

Attitudes towards drug use were also examined among participants who provided responses using a four-point Likert scale. It was found that 76% ($n = 415/545$) indicated and that they 'Agree' or 'Strongly Agree' that they are comfortable talking to Health Services about [their] drug use, and 65% ($n = 342/523$) indicated that they 'Agree' or 'Strongly Agree' with being '[worried]' that the drugs available may be contaminated or cut with other drugs that [they] don't know about'.

Research Implications

Drug use is an important risk factor of infectious diseases in men's institutions. A larger proportion of people who used drugs in men's institutions tend to smoke their drugs. Findings suggest that among those who use drugs, risk-behaviours, such as the sharing of devices, tools, and needles continue to contribute to an increased risk of infection.

Risk Behaviours: Tattooing and Unsafe Sex

Just under half of participants housed in men's federal institutions (44%) had gotten a tattoo while in federal prison. Most of these participants (93%) did not have sex while in federal prison; however, among those who did, many did not use protection.

Key Findings

Among the 1,285 participants housed in men's federal institutions, 527 (44%) reported getting a tattoo at some point while in federal prison. Of those, 12% ($n = 161/570$) reported getting a tattoo within the last six months. Just under a quarter of those who had gotten a tattoo within the past six months (24%; $n = 39/161$) indicated that they had used a device previously used by someone else, and 6% ($n = 9/161$) used previously-used ink. Proportions of participants reporting ever getting a tattoo while in federal prison were higher among Indigenous participants (58.0%, $n = 266/459$), participants from maximum security institutions (61%; $n = 116/190$), and in the Atlantic (59%; $n = 74/126$), and Pacific (54%; $n = 111/207$) Regions. These differences were statistically significant ($p < .001$), and the associations were moderate ($\phi = 0.2$). Among those who indicated that getting a tattoo in the last six months, the largest proportion used a modified tattoo gun (63%; $n = 101/161$), followed by a beading needle (30%; $n = 49/161$), and/or a sewing needle (29%; $n = 47/161$). A large majority of participants who got a tattoo within the past six months (89%; $n = 144/161$) indicated that they would use a safer tattooing program if one were available.

A small proportion of participants (7%; $n = 93/1,285$) indicated that they had sex (oral, vaginal, and/or anal) in the last six months while in federal prison. This proportion was higher among Black (10%; $n = 10/101$), and Indigenous (8%; $n = 36/459$) participants than for White participants (7%, $n = 37/541$) and participants from the other ethnocultural groups (6%, $n = 10/172$), but the difference was not statistically significant. Among those who reported having had sex while in federal prison, 29% indicated having had sex with a man (slightly higher percentage, at 36%; $n = 13/36$, among Indigenous participants). Additionally, among those who reported having had sex while in federal prison, 66% indicated having had sex with a woman (53%, $n = 19/36$ among Indigenous participants). As participants were allowed to respond that they had sex with both a man and a woman, proportions do not add-up to 100%. No use of protection (never used condom or dental dams) was reported by 22% (vaginal, $n = 6/93$) to 52% (oral, $n = 14/93$) of those who had sex with a man. Similarly, no use of protection was reported by 28% (anal, $n = 17/93$) to 56% (vaginal, $n = 34/93$) of those who had sex with a woman. Finally, ten participants reported exchanging sex for goods while in federal prison (11%; $n = 10/93$). Note that in this sample of 1,285 individuals housed in men's institutions, 10 self-identified themselves as women, and 10 as an 'Other' gender.



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Research Implications

Tattooing is a frequently reported risk factor for infectious diseases in federal prison. The proportion of participants housed in men's institutions who reported having ever had a tattoo during incarceration increased compared to what was found in the CSC 2007 National Inmate Infectious Diseases and Risk-Behaviours Survey, from 38% to 44% (Zakaria et al., 2010)⁶, but is similar to what was observed in the 1995 National Inmate Survey, where 45.0% indicated engaging in this activity (CSC, 1996)⁷. This emphasizes a need for improved harm reduction services in relation to tattooing. While most participants 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. Findings suggest that risk-behaviours, including needle-sharing for the purpose of tattooing, as well as engaging in unprotected sex may contribute to an increased risk of infection.

Harm Reduction Services and Supplies

Slightly more than half of the participants from men's institutions (55%) did not try to access harm reduction supplies such as condoms, lubricant, or dental dams.

Key Findings

Among the 1,285 participants, 55% (n = 709) did not try to access any harm reduction supplies (condoms, lubricant, or dental dams). Conversely, 20% (n = 254/1,285) indicated that they were able to access the harm reduction supplies they needed. Only 5% (n = 59/1,285) reported having difficulty accessing what they needed, with Indigenous participants indicating this to be the case most frequently among the ethnocultural groups (Indigenous: 6%; n = 26/459, White: 4%; n = 22/541, Black/Other: 4%; n = 11/273), but this difference was not statistically significant. Among those who reported having difficulty accessing supplies, the biggest issue faced was an insufficient quantity of supplies. Specifically, 39% (n = 23/59) indicated that when they went to obtain condoms, there were none left, and 37% (n = 22/59) experienced this problem with accessing lubricant. Other common reasons for not accessing harm reduction supplies included being worried to be seen by other inmates getting them (17% for condoms, and 19% for lubricant) or not knowing where to get them (19% for condoms, and 17% for lubricant).

Among the 1,285 participants, 80% (n = 1,026/1,285) indicated that they did not know that PrEP, a medication taken to help prevent HIV before engaging in risk-behaviour, was available in federal prison. In contrast, between 6% (White: n = 31/541) and 14% (Black: n = 14/101) indicated that they were aware that they could access PrEP in federal prison. Among those who were aware of PrEP's availability in federal prison, 76% (n = 78/102) indicated that they have never been on PrEP while in federal prison, with more than half of them (69%, n = 54/78) indicating that they did not need it or did not believe they were at risk for HIV. Among the 102 participants who were aware of PrEP, 7% (n = 7/102) stated that they have been on PrEP in federal prison.

With respect to PEP, a medication taken to help prevent HIV after engaging in risk-behaviours, 78% (n = 1,009/1,285) indicated that they did not know PEP was available in federal prison, whereas 7% (n = 85/1,285) indicated that they knew PEP was available. White participants indicated less frequently that they knew they could get PEP in federal prison compared to other ethnocultural groups, but this difference was not statistically significant (5%, n = 27/541 versus Indigenous: 7%; n = 34/459, Black: 10%; n = 10/101, Other: 8%; n = 13/172). Among those who were aware of PEP's availability in federal prison, more than half (58%, n = 49/85) said they have never been on PEP in federal prison. Only 8% of participants who reported being aware of PEP (n = 7/85) had ever been on PEP while in federal prison.

⁶ Zakaria, D., Thompson, J. M., Jarvis, A., & Borgatta, F. (2010a). Summary of emerging findings from the 2007 National Inmate Infectious Diseases and Risk-Behaviours Survey (Research Report R-211). Ottawa, Ontario: Correctional Service Canada

⁷ Correctional Service of Canada (1996) 1995 National Inmate Survey: Final Report. Correctional Service of Canada Research and Development Branch. Ottawa. Archived

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Research Implications

Findings suggest that participants may not be accessing or consistently using harm reduction programs or services. Correctional institutions should ensure that there are sufficient and easily accessible supplies, in well-known and private locations. There is a need to improve knowledge of the PrEP and PEP availability in federal prison, to ensure that people who could benefit from it, are using it.

For more information

Gendron, MP., Wanamaker, K., Filoso, D., Mahboob, W., & Johnson, S. (2025). *Infectious Diseases, Risk Behaviours, and Harm-reduction in Men's Institutions: Findings from the 2022 National Health Survey*. (Research Report R-484). Ottawa, Ontario: Correctional Service of Canada.

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- RIB-23-31 Prevalence of SARS-CoV-2 Antibodies among Federally Incarcerated Men
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- 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)
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- 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)

