

CORRECTIONAL SERVICE CANADA

CHANGING LIVES. PROTECTING CANADIANS.

Prevalence rates of infectious diseases among offenders in federal custody

Rates of HIV and HCV have decreased over the past 15 years. Prevalence rates of syphilis are higher in women's institutions.

Why we are doing this study

In collaboration with the Public Health Agency of Canada (PHAC) and the University of Ottawa, Correctional Service Canada (CSC) conducted the 2022 National Health Survey. One of the study objectives was to determine the prevalence rates of infectious diseases among the in-custody federal offender population. The CSC requires information on the prevalence of infectious diseases, such as Human Immunodeficiency virus (HIV), Hepatitis C virus (HCV), and syphilis to plan for appropriate services. These infectious diseases can be transmitted through risky behaviours including unprotected sex and needle sharing, with evidence to suggest that risk-taking behaviours are particularly prevalent among the incarcerated population.

What we are doing

This study determined prevalence rates of three infectious diseases among offenders in custody. Institutional Health Services staff approached eligible offenders to participate in a self-report questionnaire, and to provide a dried blood spot sample (DBS) to test for infectious diseases. To participate, offenders must have been continuously incarcerated in a federal prison for at least six months prior to the start of the study. The DBS samples were collected between September 2022 and January 2023 and were mailed to PHAC to obtain serological results for HIV, HCV, and syphilis. Serology data were sent to CSC's Research Branch for linkage with questionnaire data. In total, 861 offenders (777 from men's institutions and 84 from women's institutions) across the five regions provided consent and were included in the DBS analyses. For HIV and syphilis, the assays were only able to detect presence of antibodies, which indicate either current or past infection for syphilis. However, for HCV, both presence of antibodies and rate of current infection were detected by the assays.

What we have found so far

Of the three infectious diseases being tested for, 25.5% of participants had antibodies for at least one ($n = 220/861$), with 1.6% ($n = 14$) having antibodies for at least two infectious diseases. A larger proportion of participants from women's institutions had antibodies for multiple infectious diseases (8.3%, $n = 7/84$) compared to men's institutions (0.9%, $n = 7/777$). There is a low prevalence rate of HIV, with less than 1% of participants testing positive. Overall,

under a quarter of participants tested positive for HCV antibodies, with higher prevalence rates for participants in women's institutions. However, the prevalence of current HCV infection was under 5% for participants from both men's and women's institutions. The prevalence of syphilis antibodies was higher among those in women's institutions (see Table 1).

Table 1. Prevalence rates of infectious diseases

Infectious Disease	Men's Institutions	Women's Institutions	Total Sample
	<i>n</i> (%) [95% CI]	<i>N</i> (%) [95% CI]	<i>n</i> (%) [95% CI]
HIV (<i>N</i> = 856)	--	--	6 (0.7) [0.3, 1.5]
HCV antibodies (<i>N</i> = 861)	162 (20.9) [18.0, 23.9]	27 (32.1) [22.4, 43.2]	189 (22.0) [19.2, 24.9]
Current infection (<i>N</i> = 850)	--	--	31 (3.6) [2.4, 5.1]
Syphilis (<i>N</i> = 837)	32 (4.3) [2.9, 6.0]	7 (8.3) [3.4, 16.4]	39 (4.7) [3.3, 6.3]

Note. CI = Confidence Interval. HIV and HCV (current) findings were not disaggregated, due to small cell count ($n < 5$). DBS tests without sufficient quantity for assay were excluded from calculation of prevalence rates (men's institutions = 24 for syphilis; women's institutions = no tests marked as insufficient quantities for assay; total sample = 5 for HIV, 11 for current HCV, and 24 for syphilis).

What it means

Prevalence rates of HIV and HCV have decreased over the past 15 years among the federally incarcerated population.¹ Prevalence rates for the current sample are similar to population estimates from the 2021 surveillance data (HIV and HCV), suggesting our sample is representative of the federally incarcerated population. Results indicate that women's institutions have a higher prevalence rate of HCV antibodies and syphilis antibodies than men's institutions, although confidence intervals overlapped. Findings suggest that CSC's harm reduction efforts may be assisting with the reduction in rates of HIV and HCV over time. This study will help identify effective practices and barriers to accessing harm reduction supplies and services.

For more information

For more information, please e-mail the [Research Branch](#). You can also visit the [Research Publications](#) section for a full list of reports and one-page summaries.

Prepared by: Kayla Wanamaker and Daniella Filoso

¹Thompson, S., & Gendron, M-P. (2022). HIV and HCV Surveillance at CSC and PNEP/OPS overview and update. Presentation at the Satellite SA037, 24th International AIDS Conference.

