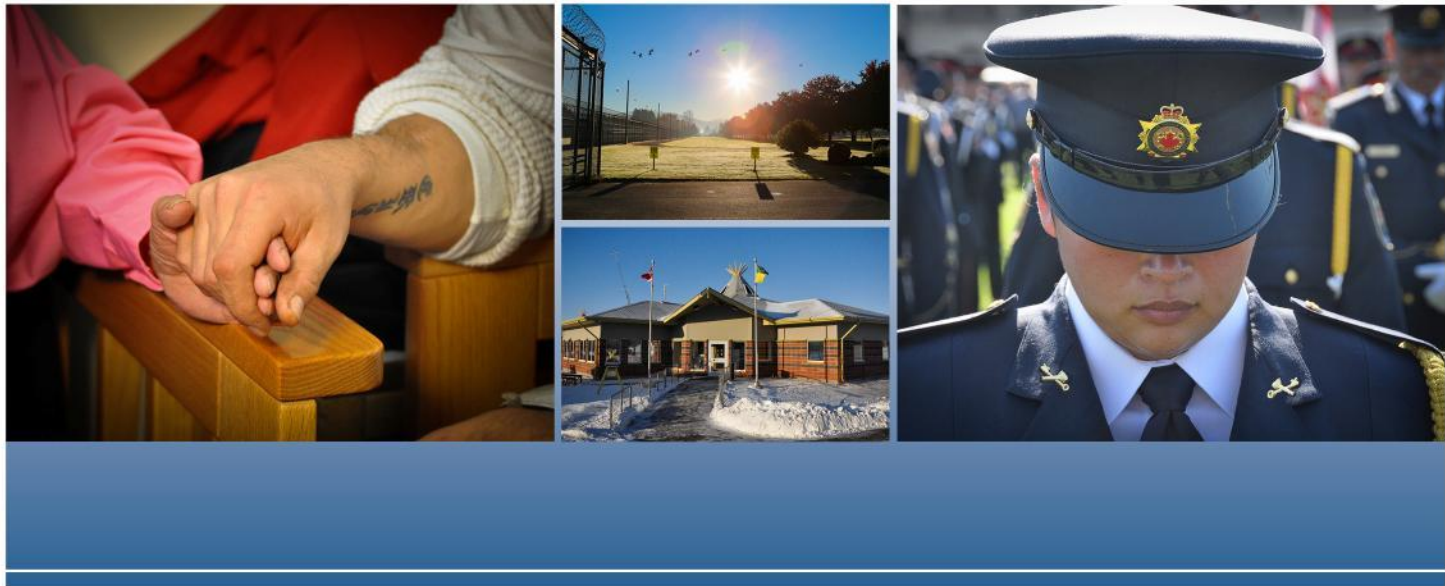




CORRECTIONAL SERVICE CANADA

CHANGING LIVES. PROTECTING CANADIANS.



HIV Acquisition among Federal Offenders in Canada 2005-2018

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Background

About CSC:

- Offenders sentenced to 2 years or more are sent to a federal institution to serve their sentence. CSC is responsible for the management of 43 institutions, including institutional health care units, regional mental health treatment centres and regional hospitals
- On a typical day in 2018-2019, CSC managed 13,996 incarcerated offenders¹
 - 26.9% were of Indigenous ancestry

HIV in CSC:

- The prevalence of HIV is higher among incarcerated populations compared to the general Canadian population.
- While the majority of infections are acquired prior to incarceration, there is still a risk of in-prison HIV transmission

¹ Source: CSC Departmental Plans and Priorities 2020-2021, (<https://www.csc-scc.gc.ca/publications/005007-2608-en.shtml#d2>)



Methods

HIV Surveillance in CSC:

- Offenders in CSC are routinely offered screening for HIV on admission and upon request throughout incarceration in accordance with national HIV screening and testing guidelines.
- On follow up assessment inmates are asked about risk behaviours since their last assessment. They are not asked whether risk behaviours take place in prison or in the community.
- Testing results and risk factor data are entered into the patient's electronic medical record (EMR).

Analysis:

- Enhanced HIV surveillance data between 2005 and 2018 were examined for repeat HIV serology testing. Data were extracted from the EMR in December 2019.
- HIV seroconversion was defined as a negative HIV antibody test result followed by a positive serology result.



Results

- A total of 14,453 inmates had repeat HIV laboratory tests available for analysis
- 36 offenders were identified as HIV seroconverters
 - Of the 36, n=34 (94%) were male and n=2 (6%) were female
 - The mean time between first negative test and subsequent positive laboratory result was 3.9 years (median 4.3 yrs, range 73 days to 8.5 yrs).
 - Based on the total number of days under observation in this open cohort, the incidence of HIV was estimated at 0.69 cases per 1,000 inmates at-risk per year
- 11 seroconverters (31%) were of Indigenous ancestry.
 - The incidence rate amongst Indigenous offenders was 0.68 cases per 1,000 at-risk per year, for an incidence rate ratio of 0.98 compared to non-Indigenous offenders
- Risk information was available for 42% of the records (23 of 36)
 - The estimated relative risk of HIV acquisition and population attributable fraction are shown in the table to the right

Risk	RR	95% CI	PAF [±]
Injection Drug Use	1.11	0.44, 2.81	2.6%
Snorted Drugs	0.76	0.32, 1.80	-10.8%
Tattoo	0.57	0.25, 1.30	-35.7%
Body Piercing	1.54	0.45, 5.27	12.8%
Fighting / Slashing	0.45	0.13, 1.53	-17.4%
Unprotected Sex	1.63	0.63, 4.24	27.1%
Sex Trade Work	2.46	0.73, 8.2	7.8%

[±] - Population Attributable Fraction



Conclusions

- Offenders in CSC seroconvert to HIV positive status at an estimated rate of 0.69 per 1,000 inmates at risk per year.
 - The risk is the same for Indigenous offenders at 0.68 per year
 - A similar analysis done on 2005-2012 data found an incidence rate of 1 per 1,000 inmates at-risk per year. This indicates that the risk of seroconversion has dropped between 2012 and 2018.
- Injection drug use, body piercing, unprotected sex, and sex trade work may be risk factors for acquisition, but due to small numbers associations were non-significant
- Understanding the attribution of risk behaviours in prison versus community requires further research
 - A bio-behavioural surveillance study is underway to help us better understand risk behaviours occurring within CSC institutions
- The findings from this study will help inform HIV prevention programs and delivery of effective healthcare services.