



BC Centre for Disease Control
Provincial Health Services Authority

HIV Screening and Co-infection Among Persons Diagnosed with Active Tuberculosis in British Columbia, 2009-2018

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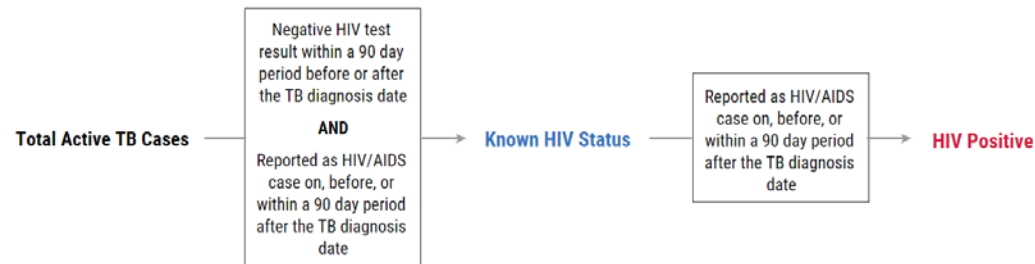
Background

- HIV infection is a notable risk factor for the progression of latent tuberculosis (TB) infection to active TB disease.
- Persons co-infected with TB and HIV are at greater risk of developing more severe outcomes from their TB disease.
- Canadian guidelines for TB prevention and control have set a target that HIV status be known for > 90% of active TB cases.
- We sought to develop an algorithm to link surveillance and laboratory data to monitor progress towards HIV testing targets and burden of HIV co-infection among active TB cases in British Columbia (BC).

Methods

- All active TB cases reported in BC from 2009 to 2018 were obtained from the surveillance database, Panorama.
- HIV co-infection was identified using surveillance data from the HIV/AIDS Information System (HAISYS) that includes all positive HIV test results reported in BC (new and previous diagnoses) and HIV infection identified through immigration screening.
- Negative HIV test results were obtained from the Sunquest Laboratory Information System that captures > 95% of all HIV screening tests in BC.
- Using an algorithm (Figure 1), active TB cases were linked to HIV surveillance and laboratory data.

Figure 1. HIV Screening and Co-infection Algorithm



Results

- From 2009 to 2018, the proportion of active TB cases with known HIV status generally increased but has not reached the target of 90% (Table 1, Figure 2).
- During this period, < 5% of active TB cases with known HIV status were co-infected with HIV.

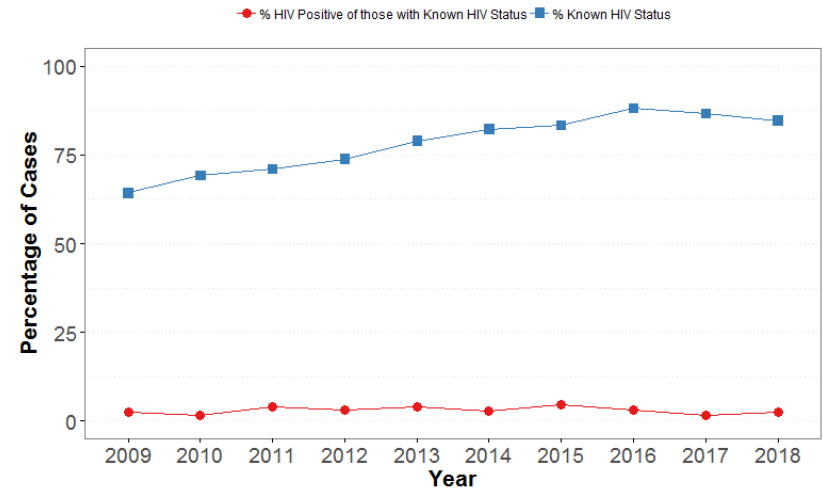
Table 1. Active TB Cases in BC by Known HIV Status, 2009 to 2018

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Active TB Cases	314	250	279	299	281	305	288	255	307	300
Known HIV Status* (%)	202 (64.3)	173 (69.2)	198 (71.0)	221 (73.9)	222 (79.0)	251 (82.3)	240 (83.3)	225 (88.2)	266 (86.6)	254 (84.7)
HIV Positive** (%)	5 (2.5)	3 (1.7)	8 (4.0)	7 (3.2)	9 (4.1)	7 (2.8)	11 (4.6)	7 (3.1)	4 (1.5)	6 (2.4)

* % Known status is obtained from new HIV/AIDS diagnoses and HIV testing history in BC.

** % HIV positive of those with known HIV status.

Figure 2. Percentage of Active TB Cases in BC by Known HIV Status, 2009 to 2018



Discussion

- Linking surveillance and laboratory systems can help us track progress towards achieving targets set in national guidelines.
- The increase in the proportion of active TB cases with known HIV status over time may reflect changes in provincial HIV testing guidelines, such as increased testing and decreased reliance on self-reported status.
- Strategies to increase HIV testing among persons diagnosed with TB, as well as approaches to monitoring HIV screening status, are needed to better understand the impact of this syndemic in Canada.

Limitations

- HIV data from HAISYS reflects only a proportion of the population in BC living with HIV. Active TB cases living with HIV, but not reported as a HIV/AIDS case in BC, would not be represented in this data.
- The percentage of known HIV status among active TB cases may be underestimated if individuals have:
 - not tested for HIV in BC or have their testing data outside of the BC Centre for Disease Control Public Health Laboratory;
 - completed their HIV testing anonymously or with a pseudonym at a low-threshold clinic.

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