



## HEALTH INNOVATIONS

NAME OF PRACTICE: Mobile IGRA (Interferon-Gamma Release Assays) Testing Program for TB

JURISDICTION: British Columbia

HEALTH THEME: Aboriginal Health, Patient Safety

HEALTH SECTOR: Health Systems

IMPLEMENTATION DATE: 2014

The Mantoux Tuberculin Skin Test (TST) is the standard tool used to diagnose Latent TB infection (LTBI). While an accurate screening tool, the TST is associated with a relatively high rate of false positives, specifically in people who were vaccinated with Bacille de Calmette et Guérin (BCG) outside of infancy and in clients exposed to other environmental non-tuberculous mycobacteria. The economic (cost of medications, follow up medical appointments) and psychosocial (medication side effects, stigmatization) consequences associated with a positive TST carry significant costs for both the individual and medical system. It is thus important to clarify that a positive TST represents a true positive.

New advances in the diagnosis of LTBI include Interferon-Gamma Release Assays (IGRA). Unaffected by BCG vaccination status, this blood test measures immune reactivity to *M. tuberculosis* and has been shown to have enhanced specificity in detecting Latent TB Infection (>95%) compared to the TST (~60%) in BCG vaccinated populations. Due to processing time and the need for specialized training and sophisticated equipment, IGRA blood tests were only available in five testing sites in BC. People with access issues (e.g. those in remote areas) were less likely to have access to IGRA testing.

In 2009, Tuberculosis Services for Aboriginal Communities (TBSAC) and community leaders from two remote northern communities in BC started discussing the feasibility of implementing this new test for detecting LTBI. TBSAC used portable incubators to bring these services into remote areas, thus removing access barriers to care, creating opportunities for more accurate and earlier preventative and curative interventions, and discussing issues of fear and stigma related to TB in the province of BC.

IGRA testing is only offered to community members who have had positive TB skin tests. To date, the TBSAC Program has gone to 8 First Nations communities and completed 73 IGRA tests on community members with positive TB skin tests. Of these 73 IGRA tests, 18 were reactive (25%) and 55 were nonreactive (75%), demonstrating that 75% of the positive TB Skin Tests were, if fact, false positives. These community members would have been offered preventative treatment for LTBI based on their positive TB skin test results; however, they now do not need this treatment as the IGRA confirmed that

they are nonreactive therefore avoiding the potential side effects of the medications. Additionally, resulting health system and personal cost avoidance include the cost of medications and follow up medical appointments, unnecessary treatment, side effects of medications, stigmatization, and travel costs.

The Mobile IGRA Testing Program was implemented in January 2012. To date it has been successfully implemented in 8 rural First Nations communities in BC. This service provides an opportunity, which would likely not otherwise exist, to have IGRA testing in rural and remote communities. The services provided in First Nations communities allows for convenience of testing closer to home with a supportive environment of trusted health care professionals.

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Information last updated on: N/A

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