

REPORT Regional Council

For Information

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REPORT TITLE: TUBERCULOSIS PROGRAM INNOVATIONS: THE COLLABORATIVE

TUBERCULOSIS CLINIC AND VIDEO DIRECTLY OBSERVED THERAPY

FROM:

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OBJECTIVE

This report provides information about two recent changes to Peel Public Health's Tuberculosis (TB) program: the first collaborative TB clinic in the Region of Peel with partner William Osler Health System. Brampton Civic Hospital site and the innovative Video Directly Observed Therapy.

REPORT HIGHLIGHTS

- The TB incidence rate in Peel Region is twice that of the province of Ontario.
- The 2008 Ontario Public Health Standards requires that Peel Public Health have effective partnerships with networks and community organizations to address the prevention and control of TB and that Peel Public Health mitigate the risk of TB transmission to others by observing clients who must take prescribed TB medication.
- Clinical studies support an integrated team approach to provide the best care for patients with TB.
- The first collaborative TB clinic in Peel was held in December 2010 at William Osler Health System's Brampton Civic Hospital.
- In late 2010, the TB program was the first in Canada to pilot the use of video technology to improve client compliance with medications and provide cost savings to Peel Public Health.

DISCUSSION

1. Background

Tuberculosis (TB) is a bacterial infection that can affect any part of the body. Although the spread of TB has decreased significantly over the last century in Canada, this is not the case in all parts of the world. Many newcomers to Peel arrive from countries where TB is still very common. If a person is infected with TB when they arrive in Canada, they are most likely to get sick within the first two years after arrival. If active TB is not treated, 50 per cent of patients will die within five years. Citizenship and Immigration Canada ensures that all newcomers from countries where TB is common have a medical exam to detect if they have active TB disease. Anyone with infectious TB disease will not be allowed entry to Canada until they are fully treated. Those with inactive TB who are at risk for developing active TB in

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the future are required to undergo medical follow-up in Canada (which is co-ordinated by local public health).

The rate of active TB in Peel is twice that of the Ontario rate. In 2010, Peel Public Health provided case and contact management to 110 new active TB cases and 647 contacts. In addition, 1817 non infectious TB clients were followed by Peel Public Health staff to prevent TB from becoming infectious. The City of Brampton has the highest incidence of active TB cases in Peel.

The 2008 Ontario Public Health Standards, require that Peel Public Health have effective partnerships with committees, advisory bodies, networks, and community organizations to address the prevention and control of TB and that there be mechanism in place to provide daily directly observed therapy of infectious TB clients for a minimum of eight weeks.

Clinical studies show better outcomes for TB clients with an integrated team approach to care. This comprehensive team approach should include experienced infectious diseases clinicians, public health practitioners, social work and pharmacists. Without the clinic approach, family physicians, infectious disease physicians and public health nurses see these clients in separate visits, decreasing efficiency and increasing the chance of error.

Directly observed therapy is the face to face observation of a client taking prescribed medications by a trained health care worker. Directly observed therapy ensures adherence to the prescribed drug regime and provides an opportunity to monitor the client for side effects and response to medication. Adherence to medical treatment is essential to cure TB, reduce the risk of transmission to others and to prevent drug resistance. Without directly observed therapy, many patients do not take medication as prescribed. Individuals with active TB take medication for at least six to twelve months.

Peel Public Health has provided face to face directly observed therapy since 2001. Typically, a public health worker travels to the home, school or workplace of an individual with TB and observes the client taking their prescribed medication, assesses the client for side effects and provides TB education. Peel Public Health provides an average of 530 visits per month. It is estimated that time spent during these directly observed therapy visits can range from 15 minutes to one hour depending on factors related to the client's severity of illness. Even though staff assignment is geographically based, travel time can be significant.

2. Outcomes and Successes

a) Peel Public Health and William Osler Health System's TB Clinic

Several proposals have been presented by Peel Public Health and hospital partners to the Ministry of Health and Long-Term Care and the Central West Local Health Integration Network to fund and operate a TB outpatient clinic, but without success.

In early 2010, meetings between management and physician partners at William Osler Health System's Brampton Civic Hospital and Peel Public Health were established with the goal to launch a TB clinic that was cost neutral to both parties. A Memorandum of Understanding was signed and a new integrated TB clinic was operational by December, 2010. It is expected that 20 per cent of active TB cases in Peel will be cared for at this clinic in 2011. This is a first step toward developing a more comprehensive model for TB care throughout Peel.

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Prior to opening this TB clinic, clients would be seen by the physician in the office and later by the nurse at a home visit. Now they are seen by both the physician and the public health nurse during one appointment and receive medications, testing and counselling. This contributes to a reduction in the time from diagnosis to initiation of treatment, and thus the time that a client is infectious and can potentially transmit TB to others. Earlier treatment may also reduce the need to hospitalize some clients.

Feedback from clients, physicians and public health staff has been positive and a formal evaluation is in progress. Preliminary findings are showing that, with the collaborative clinic, there is a potential saving of one hour of nursing time per client visit.

An advisory committee is in place with representatives from each organization to communicate and evolve the clinic processes.

b) Video Directly Observed Therapy

Peel Public Health is the first health unit in Canada to provide directly observed therapy through video. This innovative approach uses a video connection to allow a health care worker and client to meet "virtually" to accomplish the goals of directly observed therapy. Since this technology was proven to be effective in the United States, staff investigated this to determine how it could be used locally to enhance services to the TB clients in Peel region.

A privacy impact assessment, risk assessment, environmental scan of available technology, and selection of hardware and a secure system to protect privacy were undertaken. In August 2010, a pilot was initiated to evaluate the effectiveness of this strategy.

Currently, there are seven clients using the new approach out of 52 requiring directly observed therapy. Once using the video technology, the client and health care worker continue to assess whether video is the right method for the client. The TB health care worker still provides home visits once every six weeks to provide TB medication.

Verbal and written feedback from clients indicates that the use of this technology provides increased autonomy and greater privacy. The video directly observed therapy approach saves the client time and eliminates the daily disruption of a visitor coming to their home.

Early findings show that 36 visits per month will be saved as a result of the new technology. A formal evaluation is in progress to further monitor client satisfaction and the efficiency of human and technical resources.

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CONCLUSION

The implementation of the collaborative TB clinic and of the video directly observed therapy are significant accomplishments for Peel Public Health TB program, resulting in improved client outcomes and cost benefits. Peel Public Health TB program will continue to explore new and improved methods and innovations in the treatment and care of TB clients.

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