

For questions concerning the content of the  
**Alberta Tuberculosis Control Manual** contact:

Population Health Strategies Branch  
Alberta Health and Wellness  
23<sup>rd</sup> floor, TELUS Plaza North Tower  
P.O. Box 10025 - Jasper Avenue  
Edmonton, Alberta T5J 2N3  
Phone: (780) 415-2760  
Fax: (780) 422-6663

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Additional Copies of the **Alberta Tuberculosis Control Manual**  
are available at the above address.



# INTRODUCTION





**This manual was written as reference guide for tuberculosis (TB) screening, diagnosis, prevention, treatment and community follow-up.** It describes protocols, standards and recommendations for the management of TB in Alberta. These protocols are based on the recommendations of the Tuberculosis Committee of the Canadian Thoracic Society in the 5<sup>th</sup> edition of the Canadian Tuberculosis Standards and the opinions of local and national experts in TB diagnosis, treatment and control.

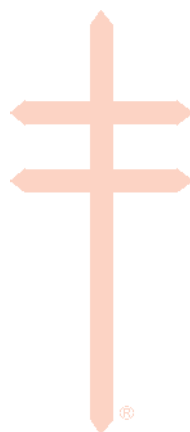
Although an attempt has been made to address all relevant TB issues in some detail, the manual will not duplicate information readily available in other publications:

- Guidelines for Preventing the Transmission of Tuberculosis in Health Care Facilities and Other Institutional Settings
- Tuberculin Skin Test Guidelines
- Tuberculosis Teaching Package

This manual, when used in conjunction with the previously published companion documents, forms a package that describes Alberta's Tuberculosis Control Program and Management Guidelines. It provides the direction required under the *Alberta Public Health Act, Communicable Disease Regulation.*

While protocols cannot and should not substitute for clinical judgement, adherence to these clinical protocols will, in most instances, result in improved patient care and the consequent control of TB.

The co-operation of all those involved in the management of tuberculosis is critical to the success of the provincial program.





# Alberta's Tuberculosis Control Program

The Tuberculosis Control Program in Alberta follows guidelines consistent with national standards. It is linked to the Centre for Infectious Disease Prevention and Control (CIDPC) program of Health Canada, through representation on the Canadian Tuberculosis Committee of CIDPC, and the national reporting system.

Direction of the program is structured to be in accordance with the *Alberta Public Health Act and Communicable Disease Regulation* (Appendix 2)

## Mission

The mission of the Tuberculosis Control Program is to prevent and control the spread of tuberculosis in Alberta.

## Goal

The ultimate goal of the Program is the elimination of tuberculosis, defined as one infectious case per million population per year. This goal can only be achieved by:

- ▶ diagnosing TB cases early and supervising treatment until cure is achieved
- ▶ identifying contacts of infectious cases promptly and providing preventive medication before disease develops
- ▶ maintaining tuberculosis surveillance and providing preventive therapy to high risk groups of persons with latent infection

Public health/communicable disease control responsibilities for TB are shared between Alberta Health and Wellness, the First Nations and Inuit Health Branch of Health Canada (FNIHB), and Alberta's Regional Health Authorities (RHAs). Within this collaborative system, each partner has important roles and an important contribution to make toward the individual client and the community.

Partners have representation on the Tuberculosis Control Committee of Alberta (TCCA), which functions as an advisory to the Provincial Health Officer of Alberta Health and Wellness, and the Alberta Advisory Committee on Communicable Disease Control. The TCCA provides a forum to collectively discuss tuberculosis control issues, develop priority strategies and provincial program initiatives and evaluate outcomes.

The partners are also represented on the Alberta Tuberculosis Working Committee, a committee of public health tuberculosis control nurses that meets quarterly to discuss program issues and share educational opportunities.

The TB Program in Alberta has evolved in response to several realities such as:

- ▶ the regionalization of Alberta's health care system
- ▶ the demographics of the disease across the province (cases are distributed approximately equally between the Calgary Region, Capital Health Region, and the remaining RHAs which include the areas serviced by FNIHB)
- ▶ the move to transfer health services to First Nations communities
- ▶ tuberculosis in the foreign-born
- ▶ emerging issues, such as HIV/TB co-infection

It is recognized that each RHA has somewhat different operational structures and reporting mechanisms, and that roles may differ where specialized services are available. However, the general responsibilities and guidelines for the Alberta Tuberculosis Control Program are consistent across the province.

### **Regional Health Authority (RHA)**

Delivery of the TB program including, surveillance, case finding, contact investigation, and supervision of treatment of both active TB disease and latent TB infection occurs at the regional and local levels through the office of the Medical Officer of Health. Each of Alberta's 9 regional health authorities and the Alberta region of FNIHB are responsible for developing guidelines for regional programming based on provincial recommendations.

Linkages between the medical officer of health (MOH), Public Health Nurses (PHNs), primary care physicians, acute care, continuing care, correctional facilities and others who provide services to at-risk groups, as well as with Alberta Health and Wellness, ensure a multidisciplinary approach in the care of individuals at risk.

All individuals with infectious tuberculosis must be isolated until sputum specimens indicate they are no longer infectious. While some patients can be managed and isolated from new contacts at home, all regions must have access to appropriate in-patient respiratory isolation beds when necessary. Where facilities with appropriate engineering controls exist within the region, the individual may be admitted locally. However, when the services of a specialized tuberculosis physician are needed and not available regionally or no adequate regional isolation capacity exists, referral to another centre may be necessary.

All regional laboratories should have the capacity to properly collect specimens for acid-fast bacilli (AFB) examination. Specimens are forwarded to the Provincial Laboratory for smear and culture identification and susceptibility testing.

Regional radiology departments need to have the capacity to review and report on relevant radiographs prior to their submission to Alberta Health and Wellness or the TB Clinic. Radiographs showing active disease, particularly cavitary disease must be forwarded to Tuberculosis Control promptly.

## Health Canada, First Nations and Inuit Health Branch (FNIHB)

FNIHB (formerly known as Medical Services Branch) within Health Canada is responsible for the delivery of health programs and services to First Nations and Inuit peoples. FNIHB is active in the areas of community and family health, substance abuse prevention and treatment, disease prevention and control, environmental health, non-insured health benefits and health information and analysis.

The delivery of First Nation Community Health services is conducted through regional offices, zone offices and a network of nursing stations, health centres and various other health facilities, many of which are situated in remote and isolated locations. In Alberta Region, the zone offices correspond with 3 treaty areas – Treaty 6 (central Alberta), Treaty 7 (southern Alberta) and Treaty 8 (northern Alberta).

FNIHB has invested support in a National TB Elimination Strategy focused on reducing the incidence of TB in First Nations and Inuit peoples of Canada. Alberta Region has dedicated a position, the TB Elimination Program Co-ordinator, to facilitate the implementation of TB elimination strategy activities in Alberta's First Nations communities. Alberta Region has 2 Regional Community Medicine Consultants, one of whom oversees the TB Elimination Strategy and functions in the capacity of a Medical Officer of Health in responding to tuberculosis related events occurring in First Nations communities.

Tuberculosis control activities in First Nations communities in Alberta are co-ordinated, in collaboration with the TB Elimination Program Co-ordinator and the Regional Community Medicine Consultant, through a contractual agreement with the Alberta Health and Wellness TB Control Program. TB Program activities are delivered via the Community Health Program with administrative linkages to the Health Director, the Nurse in Charge (NIC) and the Zone Nursing Officer (ZNO).

## Alberta Health and Wellness, Tuberculosis Control

Alberta Health and Wellness, Tuberculosis Control provides central co-ordination of management and control measures for cases, contacts, and others at risk of developing tuberculosis, as recommended by the Tuberculosis Committee of the Canadian Thoracic Society. This includes the control and provision of free drugs for treatment of active disease and latent infection, as well as tracking patient compliance with medication (as reported by regional staff). It also includes co-ordination of contact investigation, administration of the provincial TB Registry database, and reporting of cases nationally.

The role of Alberta Health and Wellness, Tuberculosis Control is to:

- ▶ support RHAs and FNIHB in the delivery of the tuberculosis program, including treatment of active tuberculosis, co-ordination of contact investigation, and preventive therapy
- ▶ work with RHAs and FNIHB in the co-ordination of case management, including monitoring treatment and compliance with medication regimens
- ▶ ensure the spirit and provisions of the *Public Health Act* and *Communicable Disease Regulation* are met
- ▶ report all cases of disease to Health Canada's Canadian Infectious Disease Control and Prevention national database, and prepare annual reports for provincial distribution

The Provincial Tuberculosis Medical Consultant serves as the Director of the TB Program in Alberta, provides leadership for the program, and is instrumental in providing a "vision" for programming in the province.



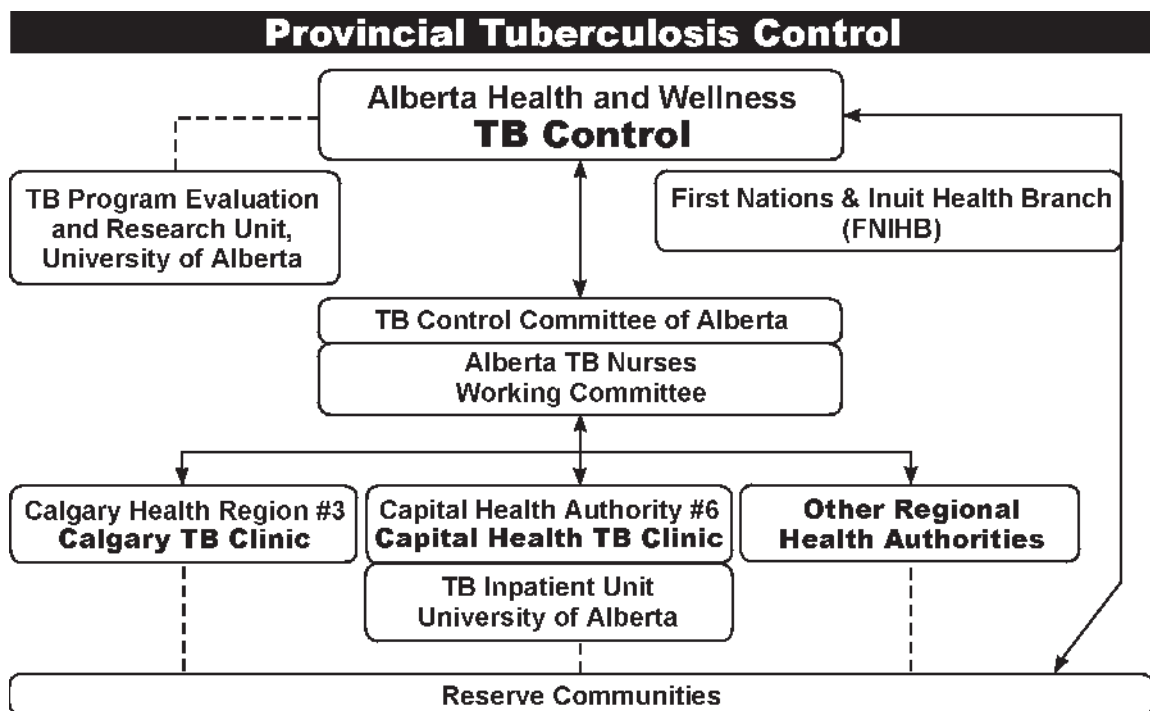
In practical terms, 3 major “delivery arms” may be considered to flow from Alberta Health and Wellness; the 2 large urban regions, Calgary and Capital Health, and a third arm consisting of all other regions.

Each of the 2 RHAs with the largest populations (Calgary Health Region and Capital Health Authority) has a university affiliated tuberculosis physician identified to provide medical leadership within a specialized tuberculosis clinic. They provide liaison between inpatient and outpatient activities and public health services within the region, and see out of region clients for assessment as necessary. The clinics manage surveillance, screening, contact investigations, prevention and treatment regimens (including entering regional data into the provincial database) within their regions.

The other regions include many small- to moderate-sized urban communities, almost all of the on-reserve and many of the off-reserve aboriginal groups, and sparsely populated farming communities. Tuberculosis control in these regions is co-ordinated through Alberta Health and Wellness. The Provincial Tuberculosis Medical Consultant, the Alberta Health and Wellness TB/STI Team Co-ordinator and Case Management/Contact Investigation Co-ordinator, the regional Medical Officers of Health and their Tuberculosis Co-ordinators, and First Nations and Inuit Health Branch all have roles to play in the management of tuberculosis in these areas.

### TB Education

Education regarding tuberculosis, both for professionals and for the public, is *primarily* the responsibility of the MOH and/or the Regional TB Co-ordinator. Alberta Health and Wellness staff is available as needed to assist with educational programming as identified by the regional co-ordinator. They also conduct workshops when needed to ensure education co-ordinators have the most up-to-date information.



Alberta Health and Wellnes	Regional Health Authority / FNIHB / Medical practitioner			
Tuberculosis Control *	Medical Officer of Health †	Regional TB Co-ordinator †	Other RHA/FNIHB TB Program Public Health Nurses	Attending Physician
<p><b>Standards/Policy</b></p> <p>Sets provincial standards according to accepted national and international guidelines.</p>	<p>Provides direction (through representation on the Tuberculosis Control Committee of Alberta) for provincial policy development.</p> <p>Directs policy and procedure development at the regional level.</p>	<p>Provides input into regional policy and procedure development.</p> <p>Provides TB program direction to healthcare workers at the regional level.</p>		
<p>Monitors tuberculosis control activities (on behalf of the PHO) to ensure provisions of the <i>Public Health Act</i> and <i>Communicable Disease Regulations</i> are met.</p>	<p>Ensures the appropriateness of Regional TB programs based on local demographics, in consultation with Tuberculosis Control.</p> <p>Has the final responsibility for TB program activity at the regional level.</p>	<p>Works with MOH to develop regional TB programming and ensures smooth functioning of the programs.</p> <p>Liaison between facilities and Tuberculosis Control.</p>	<p>Carries out TB program at local level (screening, referral, treatment, contact investigations, and prevention).</p>	<p>Refers clients to PHN for screening when appropriate (example, administration of TST).</p> <p>Assesses individuals who have been referred by self, MOH or PHN.</p>
<p><b>Reporting</b></p> <p>Ensures MOH is aware of all cases reported directly to Tuberculosis Control.</p> <p>Maintains a provincial registry of all TB cases and suspect cases that have been committed to treatment.</p> <p>Reports all cases annually to the Canadian Infectious Disease Control and Prevention national database.</p>	<p>Reports all confirmed and probable cases to the office of the Provincial Health Officer within 48 hours of notification.</p>	<p>Ensures MOH has received written notification of all known cases of TB in the region.</p> <p>Ensures information on all Notifiable Disease Forms is complete, including demographic information such as date of birth and date of arrival in Canada if foreign-born.</p>	<p>Works through regional TB Co-ordinator to ensure all confirmed and known probable cases have been reported.</p>	<p>Reports all known cases to regional MOH within 48 hours of diagnosis.</p> <p>Reports probable cases to the MOH as soon as they are committed to treatment.</p>

\* Both the CHA and CHR have roles in TB Management which significantly overlap with those of TB Control, though specialized TB Clinics staffed by TB specialists.

† It is recognized that there may be delegation of some of these roles to others at the regional level.

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Tuberculosis Control *	Medical Officer of Health †	Regional TB Co-ordinator †	Other RHA/FNIHB TB Program Public Health Nurses	Attending Physician
<p><b>Active Disease</b></p> <p>Prescribes treatment for active disease based on clinical and laboratory assessments. As per the footnote, such activity is regularly performed by the tuberculosis experts staffing the TB clinics of the CHA and CHR.</p> <p>Provides TB drugs free of charge for treatment of active disease.</p>	<p>Works with TB Co-ordinator and regional administration to ensure adequate resources are available for treatment. This includes medication administration and hospitalization when necessary (including transportation to an appropriate facility).</p> <p>Liaison with local physicians regarding their role in TB management and to ensure active cases receive appropriate treatment to rapidly render them non-infectious, prevent drug resistance and provide lasting cure.</p> <p>Liaison with local pharmacists to ensure notification when local physicians, who may be unaware of the central supply of anti-TB drugs, prescribe these drugs for a suspect active case.</p> <p>Ensures all local hospitals have a supply of intravenous pyridoxine available in case of an overdose of INH.</p>	<p>Receives medications from Tuberculosis Control and forwards to appropriate staff for distribution.</p> <p>Assists with monitoring and reporting of medication administration and compliance.</p> <p>Communicates with Tuberculosis Control and local PHN as needed regarding adverse effects and monitoring.</p>	<p>Provides education regarding tuberculosis, the need for compliance with medication, and the necessity of routine monitoring for adverse reactions.</p> <p>Administers medication in the community.</p> <p>Regularly assess clients for signs of treatment failure and adverse reactions from medication (symptom inquiry, arranging for routine lab work, etc.).</p> <p>Communicates with regional TB Co-ordinator</p> <ul style="list-style-type: none"> <li>● monthly regarding routine compliance</li> <li>● when adverse effects suspected.</li> </ul>	<p>Consults with TB specialist (facilitated through the office of the MOH) before beginning treatment for active or suspect active cases.</p> <p>Ensures all TB medications are supplied only through the provincial supply.</p> <p>Assesses clients for treatment failure and/or adverse reaction to medication.</p> <p>Encourages HIV testing of all patients with active TB.</p>

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<p><b>Recalcitrant Patients</b></p> <p>Conducts consultation with regional MOH regarding need for detention in the case of non-compliance with treatment.</p> <p>Assists when necessary with definition of “stepped intervention.”</p> <p>Appropriate enforcement of <i>Public Health Act</i> for recalcitrant patients.</p>	<p>Works through regional staff to ensure appropriate interventions, and enforcement of the <i>Public Health Act</i>, including issuing detention order if necessary.</p> <p>Education of RHA staff and local physicians regarding need for interventions prior to any thought of detention.</p>	<p>Provides information to regional staff regarding stepped interventions and need for patient education.</p> <p>Assists with arrangements to carry out the <i>Public Health Act</i> for recalcitrant patients.</p>	<p>Educates clients regarding the need to take medication for active disease, and consequences of not doing so, including detention.</p> <p>Works with client, family physician and other agencies to try to remove barriers to compliance.</p> <p>Assists with gathering information to assist in locating recalcitrant patients when possible (description of client, last location known, etc.).</p>	<p>Works with Public Health staff to educate clients regarding need for compliance with treatment.</p> <p>Works with public health staff and other agencies to attempt to remove barriers to compliance.</p> <p>Supports MOH and Public Health staff when there is a need for enforcement of the <i>Public Health Act</i>.</p>
<p><b>Contact Investigation</b></p> <p>Co-ordinates contact investigation relating to each infectious case identified (to facilitate cross-regional and interprovincial follow-up). Much of this activity may be performed out of the TB Clinics.</p> <p>Liaison with CIDPC to ensure out of country contacts are notified.</p>	<p>Working under the <i>Public Health Act</i>, conducts (or ensures) investigations of the source of infection and all contacts.</p>	<p>Submits contact lists to Tuberculosis Control within 1 week of notification of an infectious case (to assist with co-ordination of activities and data input for TB registry database).</p>	<p>Locates individuals for treatment and/or contact investigation.</p> <p>Submits contact lists to regional TB Co-ordinator and/or Tuberculosis Control.</p>	<p>Provides information to PHN to assist in locating clients.</p> <p>Supports the need for contact investigations and assists with client education as necessary.</p>

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<p><b>Client assessment</b></p> <p>Consult with RHA staff and local physicians regarding TB investigations (need for radiograph investigation, tuberculin skin testing, sputum collection, etc.).</p>	<p>Ensures services (laboratory, radiology, public health) are available in the region or are accessible through another region.</p> <p>Ensures all clients who have significant TST results are appropriately referred for assessment for disease. This may include ordering radiographs and lab work.</p>	<p>Monitors appropriateness of referrals for assessment of significant reactors.</p> <p>Ensures regional radiology departments forward radiograph films with radiology reports and referral forms to Tuberculosis Control or the appropriate TB Clinic for assessment.</p>	<p>Administers and reads TST</p> <p>Refers clients (or client information) to appropriate source for assessment (Tuberculosis Control or physician).</p> <p>Refers as appropriate for radiograph, blood-work, sputum, etc.</p> <p>Communicates referral activity with TB Co-ordinator.</p>	<p>Assesses referred individuals for TB with physical exam, chest radiograph, sputum.</p> <p>Consults with Regional TB Co-ordinator, MOH and/or Tuberculosis Consultant regarding concerns related to assessment.</p>
<p><b>Prevention</b></p> <p>Recommends preventive therapy for those referred who are at higher risk of developing disease.</p> <p>Provides preventive therapy drugs free of charge.</p> <p>Recommends alternative follow-up when medications are refused or not tolerated.</p>	<p>Liaison with local physicians to ensure understanding of prevention programs.</p> <p>Ensures programs are in place to achieve as high a compliance rate as possible.</p> <p>Ensures TB medications are not dispensed through local pharmacies.</p>	<p>Co-ordinates return of “Recommendation for Preventive therapy” form with PHN and physician signature.</p> <p>In some regions, forwards medication to the appropriate office for distribution to client.</p> <p>Consults with field staff regarding adverse reactions and compliance.</p>	<p>Discusses recommendation with client and physician.</p> <p>Signs and returns recommendation form through TB Co-ordinator (if client and physician agree).</p> <p>Dispenses drugs and monitors client for compliance and adverse effects of medication.</p> <p>Arranges for other follow-up as recommended by Tuberculosis Control.</p>	<p>Discusses recommendation (including alternate recommendations) with client to assist with decision making.</p> <p>Assesses any concern with interaction with TB drugs and other medications.</p> <p>Signs recommendation form if in agreement, and forwards it to the appropriate PHN.</p> <p>Assists with monitoring for adverse effects.</p>

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<p><b><i>TB Education</i></b></p> <p>Provides training as necessary to ensure Regional TB Educators have up-to-date information for presentation locally.</p> <p>Participates in, and supports the development of, educational resources to assist RHAs to respond to needs in the community.</p> <p>Collaborates with RHA staff to assist with workshops for staff and/or the public when invited.</p> <p>Distributes relevant TB articles to MOH and regional co-ordinators as appropriate.</p> <p>Ensures continuation of provincial TB working group to support continuing education, maintain awareness of TB issues and introduce new information.</p>	<p>Assists and supports Regional TB educators with training workshops/ inservices for staff and/or the public when appropriate.</p> <p>Circulates education articles to others involved in the TB program regionally.</p> <p>Works with family physicians and pharmacists to ensure understanding of the fundamentals of tuberculosis control in Alberta.</p>	<p>Supports regional appointment of specialized TB Educator (and may fulfil this function).</p> <p>Assists educator when needed.</p> <p>Circulates articles of interest whenever possible.</p> <p>Attends quarterly Provincial TB Working Group meetings and disseminates information to regional health staff.</p>	<p>Provides education for clients relating to TB infection and disease, assessment, treatment and prevention.</p> <p>Assists with regional education as appropriate.</p> <p><b><i>Regional TB Educators:</i></b></p> <p>These individuals are appointed at the regional TB Program level. They take on the role of providing education regarding tuberculosis to clients, communities, other regional staff and physicians.</p> <p>Educational support is available through Alberta Health and Wellness for training and resources.</p>	<p>Takes advantage of regional workshops/in-services to become more familiar with provincial and regional TB programs.</p> <p>Provides education regarding TB to clients as needed.</p> <p>Supports regional public health staff in relation to client education.</p>

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