



Canadian Tuberculosis (TB) Standards 8th Edition

HIGHLIGHTS

In this 8th edition of the Canadian TB Standards (the *Standards*), a large group of authors from across Canada have extensively reviewed evidence and rewritten the entire *Standards*. All chapters contain updated evidence, recommendations and practical guidance for front-line providers caring for patients with TB infection or disease anywhere in Canada. This may be helpful for many providers in Canada, who receive little formal training in TB and may see only a few individuals with TB in their careers.

The 8th edition of the *Standards* begins with the basics, with chapters on epidemiology and pathogenesis, then a section on clinical aspects describing new and updated methods for the diagnosis and treatment of TB infection and disease, and finally public health aspects including contact investigation and outbreak management, TB in Indigenous populations, screening of high risk populations, infection control and prevention. The new *Standards* concludes with a new chapter on performance indicators and standards to help TB programs achieve the long-term goal of eliminating TB throughout Canada.

In the first chapter, a disturbing finding is that national incidence of TB has not declined significantly over the last decade and the actual number of patients diagnosed with TB disease has increased over the past 5 years. In the second chapter, new insights into the pathogenesis of latent TB, and mechanisms of immune response are discussed; these may inform development of new vaccines, for TB and other respiratory infectious diseases, including COVID-19.

In the chapter on diagnosis of TB disease, there is substantial new information on rapid molecular diagnostics along with recommendations for their universal adoption to confirm disease, and to predict drug resistance. Rapid diagnosis of drug resistance can allow more effective treatment to be initiated promptly. For the diagnosis of TB infection, the interferon-gamma release assays are recommended more broadly. However, these tests have the same limitation as tuberculin skin testing of poor ability to identify those with TB infection who are at highest risk of developing TB disease.

Treatment of TB disease, including for patients with extra-pulmonary forms, or patients with comorbid illnesses, such as HIV infection, diabetes, or liver or kidney insufficiency is covered in detail in three chapters, which provide practical guidance to clinicians on management of these conditions. The chapter on Pediatric TB provides important updates on drug dosing and aspects of diagnosis and treatment of TB infection and disease that are specific to children and adolescents. Treatment of drug-resistant TB has been revolutionized over the past decade with the use of new drugs that are safer and more effective. These new drugs include bedaquiline, clofazimine, linezolid and later generation of fluoroquinolones. Together, these drugs

have resulted in much more effective and safer treatment of drug-resistant TB. In the new chapter, injectable drugs, which have been a core part of treatment of drug-resistant TB for over 50 years, are no longer recommended as part of initial treatment. Since administration of these drugs required painful injections daily for six months or longer, no doubt these new recommendations will be welcomed by providers and patients alike. However, timely manufacturer regulatory submissions and regulatory changes are needed to facilitate access to these new drugs. Finally, the treatment of TB infection has also been revolutionized over the past decade. The Canadian *Standards* now recommend four months daily Rifampin (self-administered) or three months Isoniazid and Rifapentine given once a week, (usually directly observed). These two regimens are shorter and significantly safer than Isoniazid for six to nine months, which had been the mainstay of TB prevention treatment since the first edition of the Canadian TB Standards in 1972.

The last five chapters deal with public health aspects. Chapters on contact investigation and outbreak management, surveillance and screening of high risk groups, particularly the foreign-born provide important updates and guidance. One notable new recommendation is enhanced testing and treatment of TB infection among newly arrived migrants from countries with TB incidence greater than 50/100,000. A chapter on tuberculosis in Indigenous Peoples, provides valuable First Nations, Inuit and Métis perspectives on this topic, having been co-written by Indigenous authors. This chapter should be considered required reading for all providers who will work with Indigenous populations. A chapter on infection prevention and control in hospitals and healthcare settings no longer recommends routine periodic testing for most health care workers except those at highest risk of exposure, and has also amended guidelines for respiratory isolation. These new recommendations are supported by a detailed evidence review which is in a new Appendix.

The 8th edition of the *Standards* closes with a new chapter on indicators and standards for TB programs themselves. The targets for program performance are intended to help programs achieve the milestones needed, if we are to succeed in the long-term goal of TB elimination in Canada.

The *Standards* are jointly funded by the Canadian Thoracic Society (CTS) and the Public Health Agency of Canada, edited by the CTS and published by the CTS in collaboration with AMMI Canada.