Yukon Communicable Disease Control – TB Control
4 Hospital Road, Whitehorse, YT Y1A 3H8
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CHAPTER 1: INTRODUCTION

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1.1 Purpose

This manual is a reference guide for health professionals in Yukon. It is intended to inform and support consistent and appropriate TB screening, diagnosis, prevention, and treatment practices. Consistent and appropriate TB practices not only ensure the best possible outcomes for people with TB in Yukon, they also contribute to, national, and global efforts to eliminate TB.

The TB prevention, care, and control guidelines and strategies included in this manual have been adapted from the International Standards for TB Care, the Canadian Tuberculosis Standards (2014), and other recognized TB practice guidance documents.

This manual will be updated at regular intervals to reflect new developments in TB practice. Readers are encouraged to access the manual online at http://www.hss.gov.yk.ca/health_professionals_guidelines.php to ensure they are using the most current information.

An attempt has been made to address all relevant TB issues in some detail, however the manual does not duplicate detailed information available elsewhere (e.g., in the Canadian Tuberculosis Standards). Where information or detail beyond what is presented is required, practitioners are advised to consult with YCDC TB Control.

Please note that the guidelines in the Yukon TB Manual take precedence over guidelines that might be found in other reference materials or from other sources.

1.2 Epidemiology of TB

1.2.1 Global TB[1]

TB continues to be a major global health problem. The World Health Organization (WHO) estimated that in 2012 there were:

- 8.6 million cases of active TB disease worldwide
- 1.1 million cases of active TB disease (13% of the total) occurring among those with HIV infection

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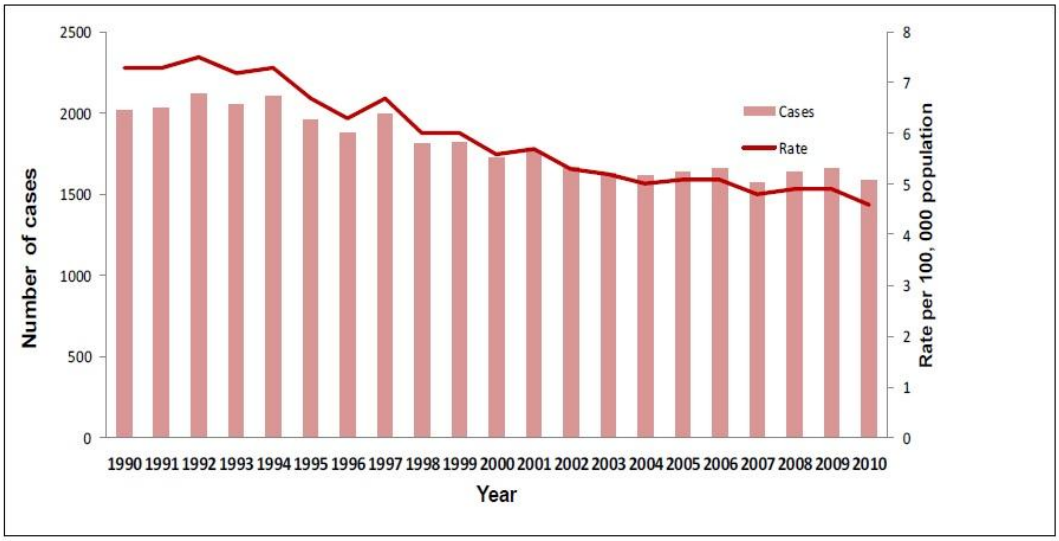
According to WHO estimates, 80% of TB cases each year originate from 22 countries, with India and China accounting for 26% and 12% of total cases respectively.

Growing numbers of cases with drug-resistant TB disease is also of concern. Drug resistance surveys and surveillance suggest 3.6% of newly diagnosed cases had multi-drug resistant TB disease (MDR-TB), with highest levels found in Eastern Europe and Central Asia. By the end of 2012, 92 countries had reported at least one case of extensively drug resistant TB (XDR-TB).

1.2.2 TB in Canada[2]

The number of TB cases and the overall incidence rate of TB disease in Canada continues to decrease slowly (Figure 1-1).

Figure 1-1, Reported TB cases and incidence rates in Canada, 1990- 2010



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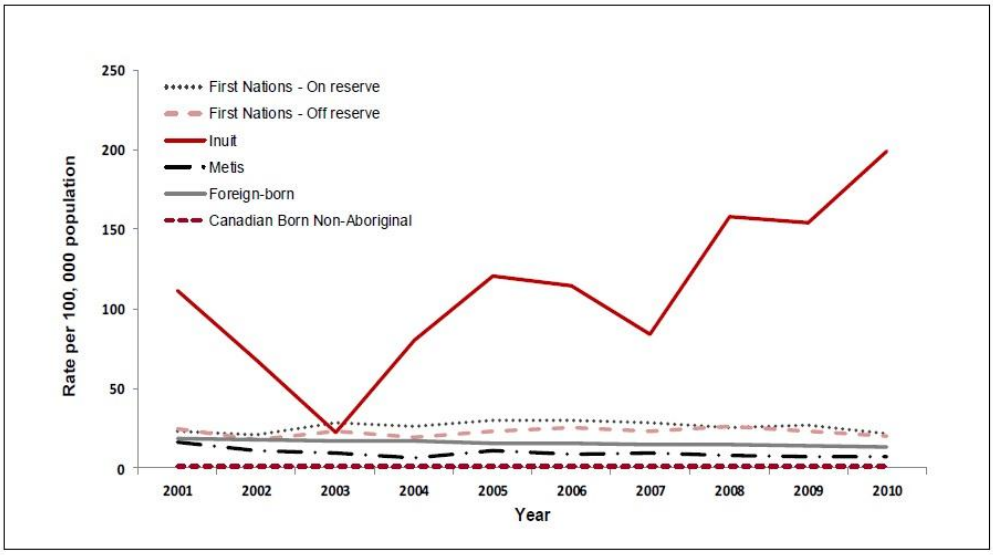
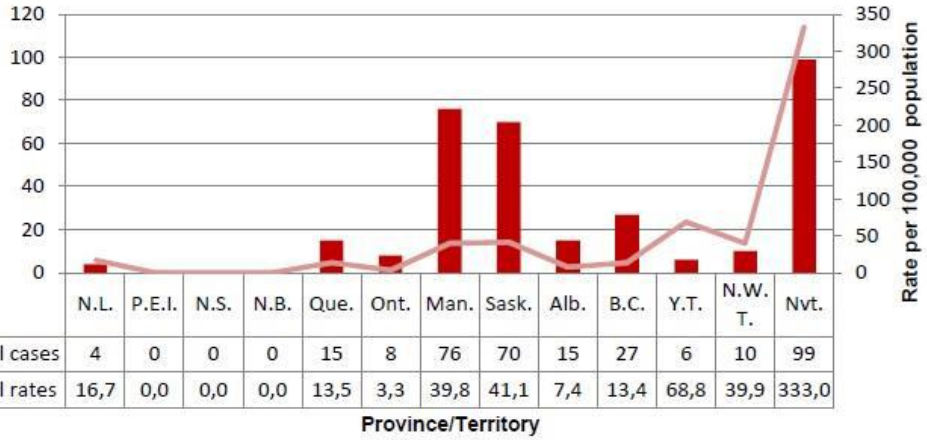
Despite ongoing reductions in TB cases and rates of TB disease, some populations in Canada continue to be disproportionately affected, specifically Canadian-born Aboriginal peoples and the foreign born (Figure 1-2).

Figure 1-2, Reported TB disease incidence rates in Canada by population group, 2001-2010



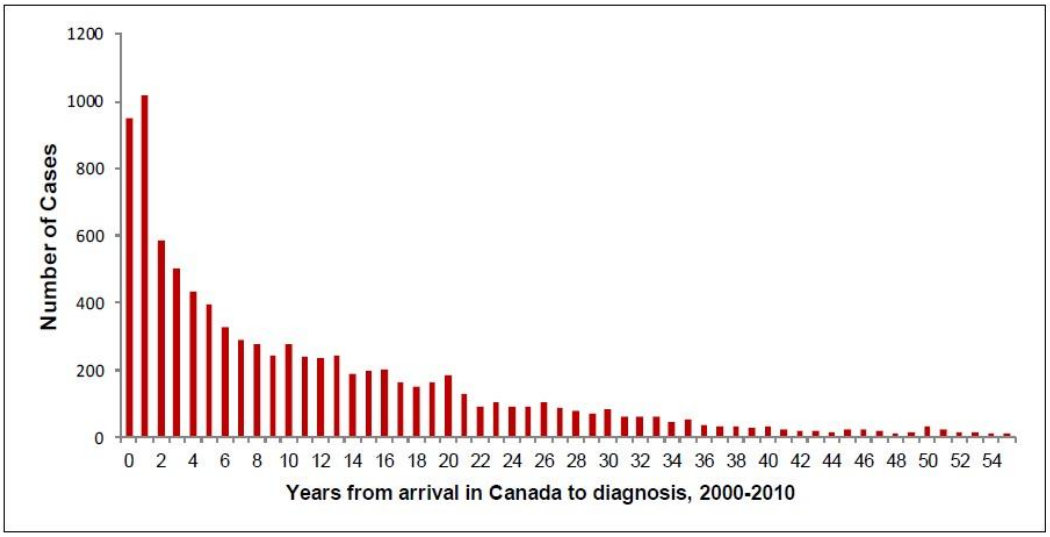
Among Canadian-born Aboriginal peoples, the incidence of TB disease varies by population group and by jurisdiction, with the highest rates being seen among Inuit and in Nunavut (Figure 1-3).

Figure 1-3, Distribution of active TB cases and incidence rates for Aboriginal populations, 2010



TB disease among the foreign-born in Canada tends to occur within the first few years of arrival (Figure 1-4).

Figure 1-4, Reported foreign-born TB cases in Canada, 2000-2010: time from arrival in Canada to diagnosis, in years



Drug-resistant TB disease continues to be unusual in Canada. Risk factors include previous TB treatment and foreign birth.

1.2.3 TB in Yukon[3]

On average, Yukon's TB incidence was 2.9 times the national average, with average incidence in Yukon of 13.9 cases per 100,000 population between 2006-2011 compared to an average incidence of 4.8 cases per 100,000 population in Canada for the same time period.

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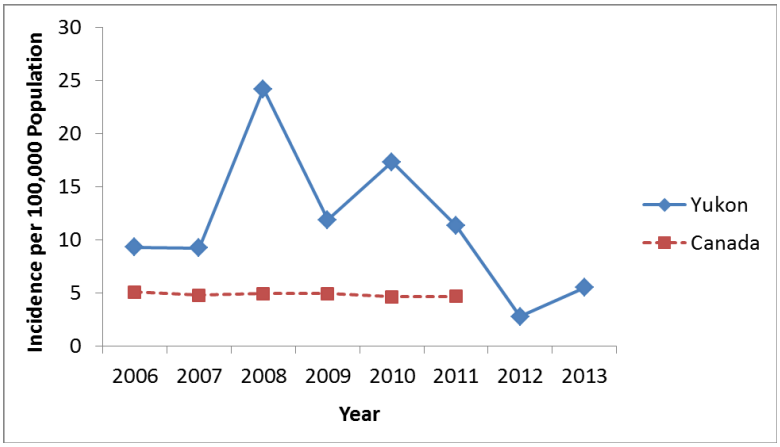
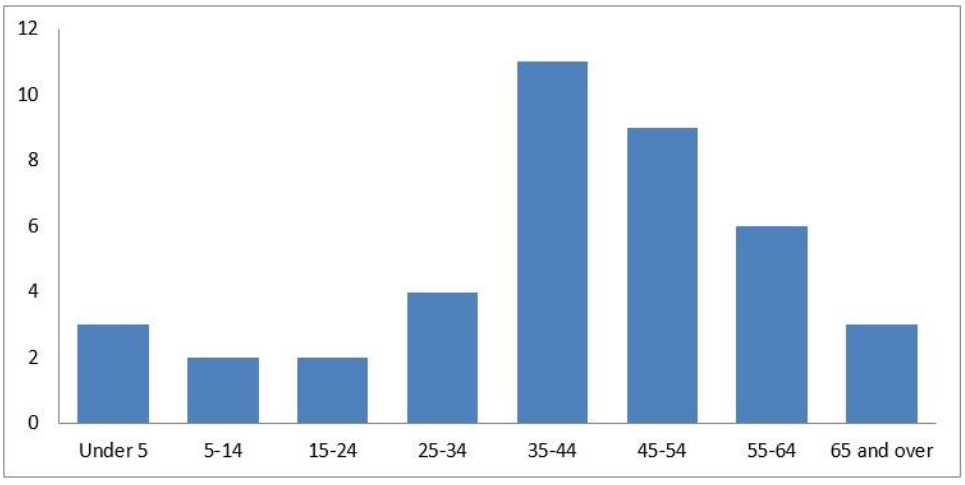
Between 2006 and 2013, peak TB incidence in Yukon occurred in 2008 at 24.2 cases per 100,000 population (Figure 1-5).

Figure 1.5, Reported TB incidence rates in Yukon (2006-2013) and Canada (2006-2011)



The majority of cases in Yukon have respiratory TB disease, with 50% of cases being diagnosed in those 35-54 years of age (Figure 1-6).

Figure 1.6, Number of cases of active TB disease by age group, 2003-2013, Yukon



The highest rates of TB in Yukon occur within the Canadian-born Aboriginal population, which is consistent with the epidemiology of TB in Canada's north. There is a disproportionate incidence of active TB in rural Yukon communities versus Whitehorse where the bulk of the population

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resides. When examining the distribution of disease within rural Yukon communities, there is also a disparate burden of disease in certain communities versus others, representing what appears to be three distinct clusters representing smouldering outbreaks in three different regions of Yukon.

Between 2006 and 2013, Yukon's TB incidence decreased by 41.0%; whether this down turn represents a significant change, a simple fluctuation, or the effect of clusters of cases seen in 2008 & 2010, is unknown at this time. With ongoing commitment in Yukon to early diagnosis of active TB disease, consistent use of effective and directly observed treatment regimens, and ongoing emphasis on identification and treatment of latent TB infection, the potential exists for this to represent a an ongoing change.

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2. Halverson J, Ellis E, Gallant V, et al. Epidemiology of tuberculosis in Canada. In: Menzies D. ed. *Canadian Tuberculosis Standards* (7th edition). Canada: Canadian Lung Association, 2014;7-23.
3. Yukon Communicable Disease Control (2014) Yukon Communicable Disease Report: A summary of Reportable Diseases 2014; draft dated March 31, 2014, p38-40.