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CHAPTER 6: TB SCREENING

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TB screening is a systematic process for identifying people with active TB disease and people with latent TB infection (LTBI). Finding and treating people with active TB disease or LTBI improves health outcomes for those individuals and also helps to stop or prevent TB transmission in Yukon.

The TB screening and testing pathways described in this chapter provide frameworks through which clients can be screened for TB disease or LTBI with tests that are appropriate to their risks for being infected with TB bacteria and for developing active TB disease if they are infected. **Management and testing of TB contacts is described in Chapter 10.**

Guidelines to target TB screening efforts and resources in Yukon were developed in October, 2013 (see Appendix B). **These guidelines apply to clients who would routinely have been offered a TST.** At this time, there are no changes to TB screening for clients where a chest x-ray is recommended (e.g., individuals with a prior positive TST or history of active TB disease).

6.1 Indications for TB Screening

TB screening is available to anyone who requests it.

Some examples of people that should receive TB screening include:

- Those with signs or symptoms of active TB disease
- Known contacts to infectious cases (TB contacts)
- Household contacts and caregivers of children less than 5 years old diagnosed with active TB disease (any site)
- Foreign-born people referred to YCDC TB Control Program for medical surveillance by Citizenship and Immigration Canada (CIC)
- Those with medical conditions that put them at increased risk for developing active TB disease if infected with TB bacteria (see Table 4-3)
- Those recommended for TB screening by YCDC TB Control/BCCDC TB Services

Some examples of people that might benefit from TB screening include:

- Employees in health care professions or other professions that work closely with populations at high-risk for TB infection or disease

- Staff and residents of institutional settings, including the Whitehorse Correctional Centre (see 6.4), Alcohol and Drug Services Live-In Treatment Program, and long-term, respite, and adult day care facilities
- Those from or living in, communities with a high incidence of TB
- Some travelers (see Chapter 4, section 4.6)

6.1.1 Serial TB Screening

There are no recommendations for serial TB screening, such as annual testing, for clients or HCP in Yukon. This includes persons who are immune-compromised due to chronic medical illness (ie HIV infection) or due to medications (ie TNF therapy for rheumatoid arthritis). Persons who are immune-compromised should initially be screened to ascertain TB infection and prevention therapy be recommended if LTBI is found (see Chapter 8).

Further TB screening should be offered to this population based on a change in their medical status or risk factors for the development of TB disease (see Chapter 4, section 4.6 and 4.7). Special attention should be paid to prompt TB screening with any new contact with a person who is diagnosed to active TB disease as well as the presence of TB related symptoms (see Chapter 4, section 4.3).

6.2 Risk-Based TB Screening

In Yukon, a risk-based approach is being utilized for all individuals seeking TB screening, including but not limited to:

- Those in need of TB clearance for employment purposes, such as: RCMP, day care workers, health care providers, public service employees, employees of community care facilities (e.g., detox, group homes), and community-based outreach services (e.g., Salvation Army)
- Clients entering treatment programs
- Students

Under this approach, decisions on which TB screening and/or testing pathway to use for individual clients are informed by:

- The reason TB screening is being sought
- Whether the client has signs or symptoms of active TB disease
- Whether the client has risk factors for development of active TB disease

The risk-based approach and the TB screening pathway for clients considered at low-risk for TB is described in Figure 6-1. Figure 6-2 describes the TB testing pathway for clients at higher risk, and Figure 6-3 describes the TB testing pathway for clients referred to YCDC TB Control by CIC for immigration medical surveillance (**NOTE:** CIC referrals are managed and coordinated by YCDC TB Control, regardless of where the client lives in Yukon). Refer to Chapter 10 for information on management and testing of TB contacts.

Tests most commonly used in TB screening include:

- Tuberculin skin test (TST) and/or interferon gamma release assay (IGRA)
- Laboratory examination of specimens for TB (e.g., acid-fast bacilli [AFB] smears and mycobacterial culturing of sputum specimens)
- Chest x-rays

Information on these tests is provided in Chapter 7.

6.3 Documentation

The *Tuberculosis Screening Program* form should be used as a guide to the TB screening process, and for recording and communicating information and findings. Refer to Chapter 5 and Appendix A for information on the *Tuberculosis Screening Program* form, and to Appendix K-1 for a sample form.

When TB screening is completed by verbal assessment only - Low risk for TB disease (see Appendix B) the white copy of the Yukon TB screening form should be sent to YCDC by mail.

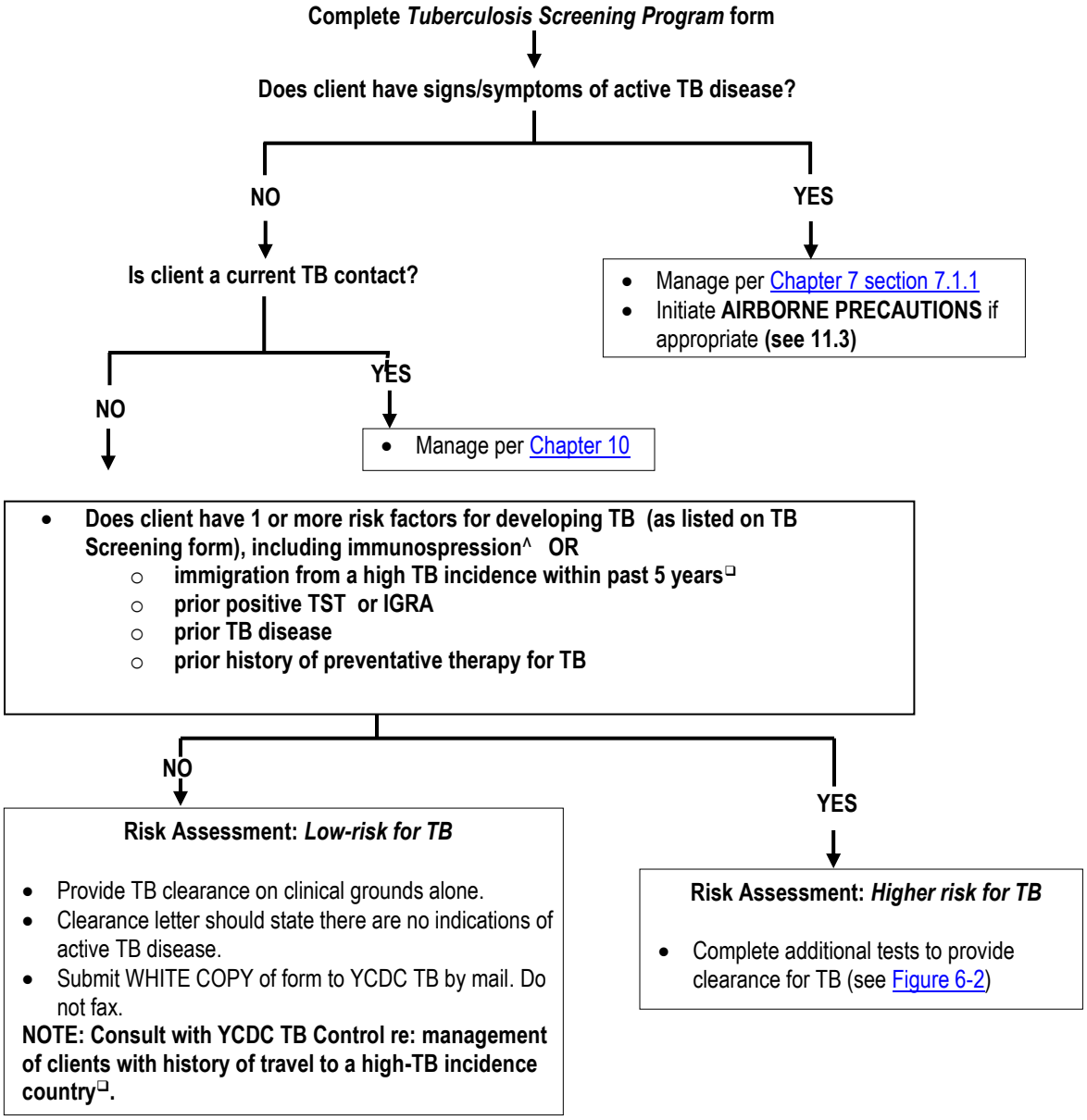
When TB screening is completed for persons whom the health care provided is concerns has active TB (ie symptoms combined with risk factors) and for all contacts to TB, white copy of the Yukon TB screening form and corresponding CXR should faxed to YCDC. As the results have been faxed, do not send these by mail.

6.4 TB Screening and Surveillance in Whitehorse Correctional Centre

Routine TB screening is not recommended within Whitehorse Correctional Centre.

Individuals who require TB screening due to other rationale (e.g., signs or symptoms of active TB disease, contacts to infectious cases, medical conditions that put them at increased risk for developing active TB disease) should be screened within this setting in consultation with YCDC TB Control.

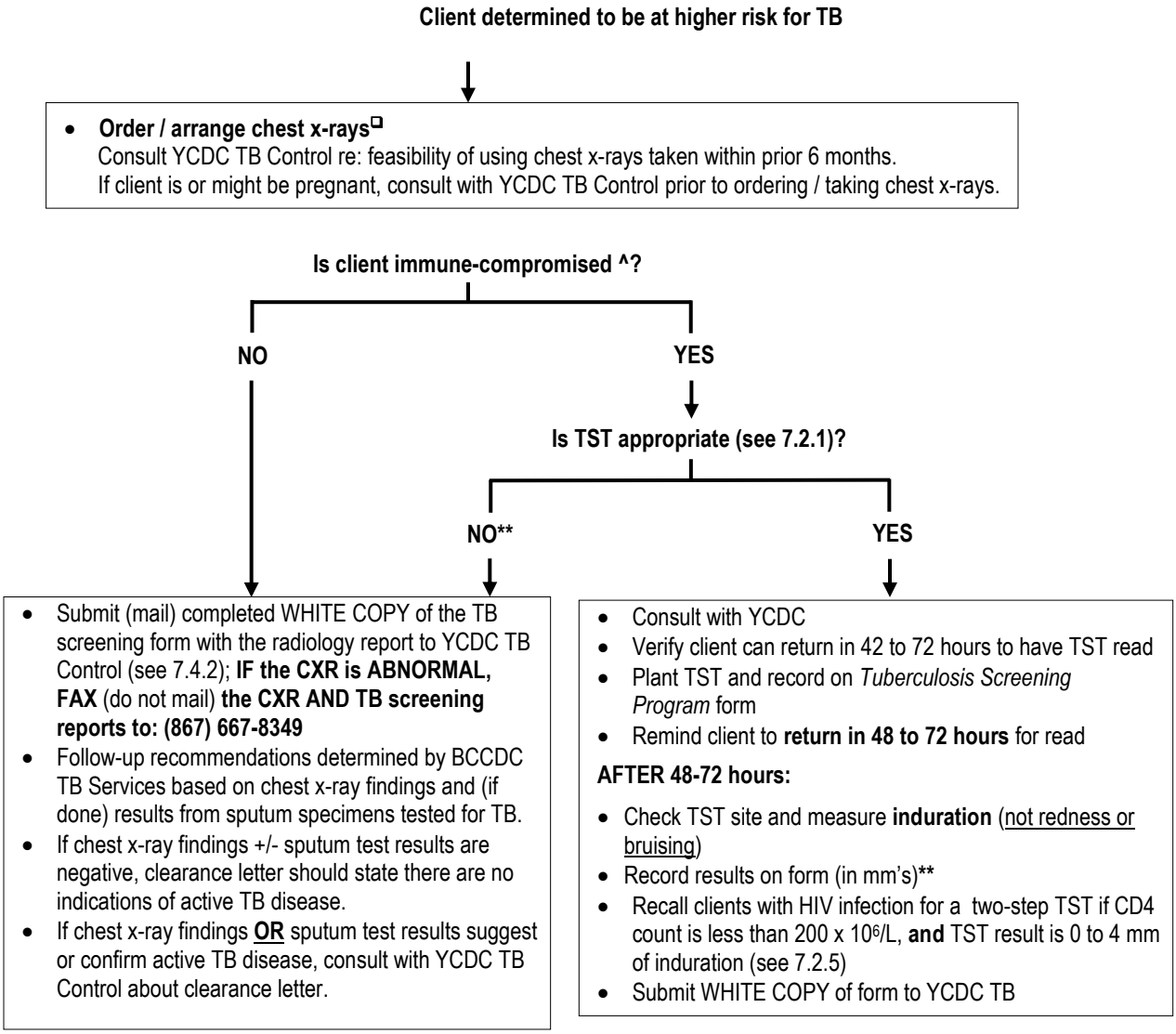
Figure 6-1, Risk-based TB screening



^ For the purposes of determining the appropriate TB screening/testing pathway, "immune-compromised" includes: HIV infection, end-stage renal disease, organ transplant (related to immune suppressive therapy), and/or treatment with TNF alpha inhibitors and/or other immune suppressive drugs/therapies such as chemotherapy or systemic corticosteroids (equivalent of ≥ 15 mg / day of prednisone for 1 month or more)

❑ Countries with a TB incidence ≥ 30 cases per 100 000 population / year. TB incidence of specific countries is available from WHO, see figure 6.4 on page 8 for instruction.

Figure 6-2, TB testing pathway for people at higher risk for TB with no signs/symptoms of active TB disease

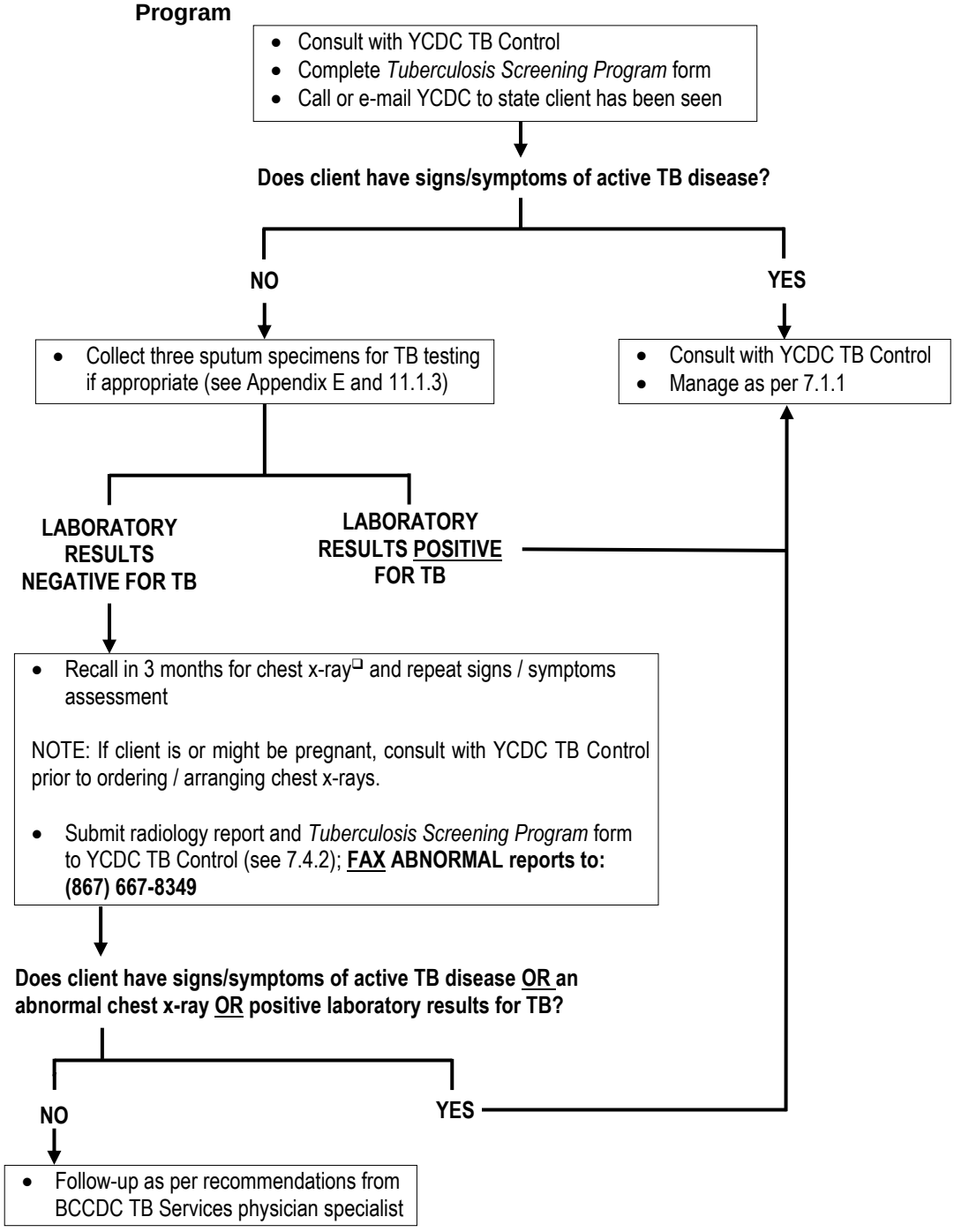


❑ Order / arrange PA **AND** lateral views for clients that are immune-compromised or less than 5 years of age. PA view is sufficient for immigrants from countries with a TB incidence ≥ 30 cases per 100 000 population / year. TB incidence of specific countries is available from WHO, see figure 6.4 on page 8 for instruction.

^ For the purposes of determining the appropriate TB screening/testing pathway, "immune-compromised" includes: HIV infection, end-stage renal disease, organ transplant (related to immune suppressive therapy), and/or treatment with TNF alpha inhibitors and/or other immune suppressive drugs/therapies such as chemotherapy or systemic corticosteroids (equivalent of ≥15 mg/day of prednisone for 1 month or more)

** Clients with HIV infection **AND** well-documented prior positive TST, or new positive TST or IGRA results should submit three sputum specimens for TB testing (see Appendix E and 11.1.3)

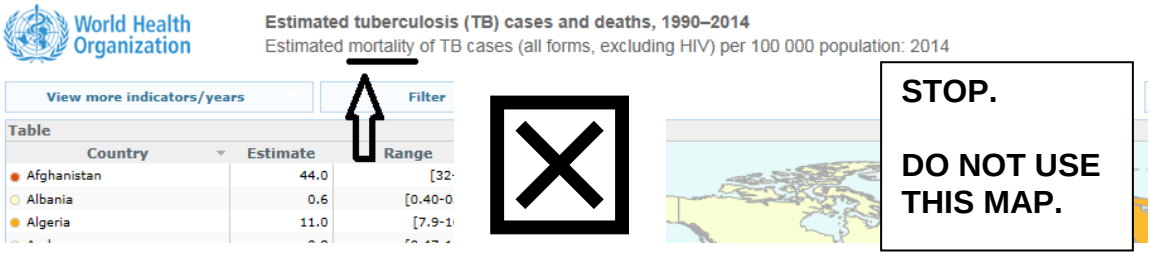
Figure 6-3, TB testing pathway for Citizenship and Immigration Medical Surveillance Program



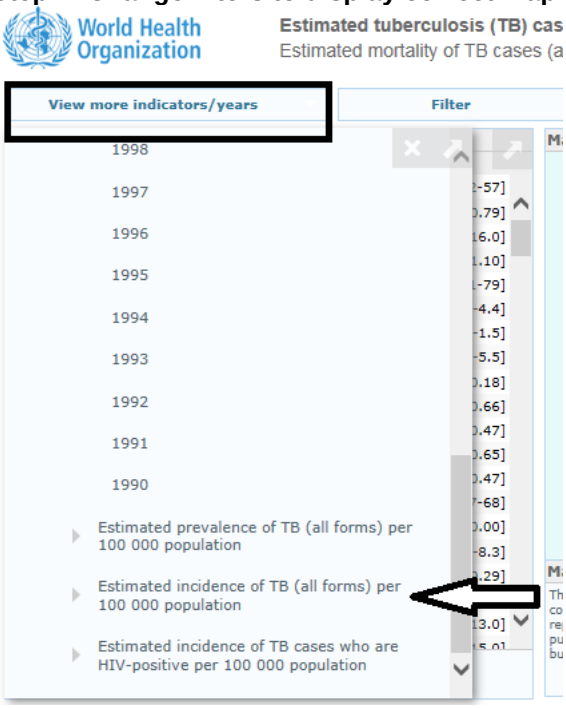
❑ Order / arrange PA **AND** lateral view chest x-rays for clients with HIV infection

Figure 6-4 Using WHO map for determining high TB incidence countries

Step 1: Go to WHO site, the <u>mortality</u> map is displayed by default
http://gamapserver.who.int/gho/interactive_charts/tb/cases/atlas.html

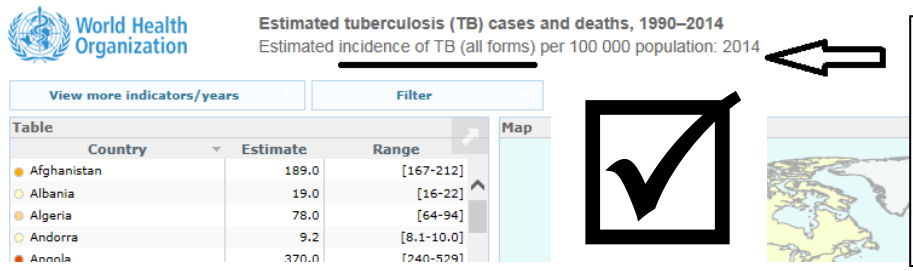


Step 2: Change filters to display correct map



- Click on *"view more indicators/years"*
- Select *"estimated incidence of TB (all forms) per 100 000 population"*
- Select most recent year available (ie 2014)

Step 3: CORRECT map is displayed <u>(incidence)</u>, use this map



Now the correct information is viewable.
Select the country or use the interactive map on the right.