B Notifications

CONTENTS

Introduction

Purpose

Use this section to

- follow up on B1 and B2 notifications and
- evaluate and treat immigrants with B1 and B2 notifications.

B notifications are sent by the Centers for Disease Control and Prevention (CDC) to the Alaska Tuberculosis Program as follow-up to the screening mandated by US immigration law. The CDC and the Advisory Council for the Elimination of Tuberculosis (ACET) recommend screening high-risk populations for TB, including recent arrivals from areas of the world with a high prevalence of TB. Therefore, screening of foreign-born persons is a public health priority.[1] On the basis of its very high success rate of detecting TB cases, domestic follow-up evaluation of immigrants and refugees with Class B1 and B2 TB notification status should be given highest priority by all TB control programs.[2] Legal immigrants and refugees with Class B1 and B2 TB notification status are also a high-priority subpopulation for screening for latent TB infection (LTBI).[3]

The purpose of mandated screening is to deny entry to persons who have either communicable diseases of public health import or physical or mental disorders associated with harmful behavior, abuse drugs or are addicted to drugs, or are likely to become wards of the state.[4]

Pre-Arrival Medical Screening for Tuberculosis

Not all foreign-born persons who enter the United States go through the same official channels or through the screening process.[5] For a summary of which groups of foreign-born persons are screened, refer to Table 1: **Numbers of Foreign-Born Persons Who Entered the United States, by Immigration Category, 2002**. Persons entering in the nonimmigrant category do not require pre-entry screening, but as a condition of entry, persons migrating as immigrants, refugees, and asylees are required to be screened outside the United States for diseases of public health significance, including TB.[6,7]

Table 1: **NUMBERS OF FOREIGN-BORN PERSONS WHO ENTERED THE UNITED STATES, BY IMMIGRATION CATEGORY, 2002**[8,9]

Category	Number	Percentage of Total	Screening Required?
Immigrants are defined by the Office of Immigration Statistics (OIS) as persons legally admitted to the United States as permanent residents.	384,000	1.38%	Yes
Refugees and asylees, as defined by OIS, are persons admitted to the United States because they are unable or unwilling to return to their country of nationality due to persecution or a well-founded fear of persecution. Refugees apply for admission at an overseas facility and enter the United States only after their application is granted; asylees apply for admission when already in the United States or at a point of entry.	132,000	0.46%	Yes
Nonimmigrants are aliens granted temporary entry to the United States for a specific purpose (most common visa classifications for nonimmigrants are visitors for pleasure, visitors for business, temporary workers, and students).	27,907,000	98.18%	No
The foreign-born population, as defined by the Census Bureau, refers to all residents of the United States who were not US citizens at birth, regardless of their current legal or citizenship status.	28,423,000	100%	See above
Unauthorized immigrants (also referred to as illegal or undocumented immigrants) are foreign citizens illegally residing in the United States. They include both those who entered without inspection and those who violated the terms of a temporary admission without having gained either permanent resident status or temporary protection from removal.[10]			

Sources: Congress of the United States, Congressional Budget Office. *A Description of the Immigrant Population*. Washington, DC: Congressional Budget Office; November 2004; and ATS, CDC, IDSA. Controlling tuberculosis in the United States: recommendations from the American Thoracic Society, CDC, and the Infectious Diseases Society of America. *MMWR* 2005;54(No. RR-12):46.

Overseas Screening of Applicants for Immigration

Applicants for immigration, including immigrants, refugees and asylees, who plan to relocate permanently to the United States are required to have a complete medical evaluation prior to entering the country. Additional screening recommendations for overseas panel physicians are summarized in Table 2: **Overseas Screening of Applicants for Immigration**.

Significant changes in the 2009 Technical Instructions for Tuberculosis Screening and Treatment Using Cultures and Directly Observed Therapy include requiring:

- Tuberculin skin tests (TST) or IGRA for applicants 2-14 years of age in countries with a World Health Organization (WHO)-estimated tuberculosis incidence rate ≥ 20 cases per 100,000.[11]
- A chest radiograph for all applicants >15 years of age.
- Collection of three sputum smears and cultures for *M.tb.*
- Completion of treatment prior to immigrating to the United States, according to American Thoracic Society/CDC/Infectious Diseases Society of America guidelines.
- Treatment under a directly observed therapy (DOT) program.

Table 2: **OVERSEAS SCREENING OF APPLICANTS FOR IMMIGRATION** [12,13]

Applicant age and country of origin	Medical History & Physical Examination	TST or IGRA	Chest radiograph	History, exam or CXR suggestive of TB or HIV	Three sputum smears and cultures	Drug susceptibility testing on positive culture
≥ 15 years of age in countries with WHO-estimated TB incidence <20 cases/100,000	Yes	N/A	Yes	Yes	Yes	Yes
2 - 14 years of age in countries with WHO-estimated TB incidence ≥20 cases/100,000	Yes	Yes	Yes, if TST/IGRA positive	Yes	Yes	Yes
≥ 15 years of age in countries with WHO-estimated TB incidence ≥20 cases/100,000	Yes	N/A	Yes	Yes	Yes	Yes

Sources: Centers for Disease Control and Prevention (CDC) Division of Global Migration and Quarantine (DGMQ). "CDC Immigration Requirements: for "Tuberculosis Technical Instructions for Panel Physicians". 2016. Available at: https://www.cdc.gov/immigrantrefugeehealth/pdf/TB-panel-tech-instructions-h.pdf and WHO. 2009 Global Tuberculosis Control Report. March 2009 no longer available on line. 2019 Global Report Available at: https://www.who.int/tb/publications/global_report/en/

Additional information on overseas TB screening and treatment technical instructions using cultures and DOT implementation is available at: https://www.cdc.gov/immigrantrefugeehealth/exams/ti/panel/tuberculosis-implementation.html

Applicants who are identified as having abnormalities in their chest radiographs consistent with TB are classified according to the criteria in Table 3: **Classification of Immigrants and Refugees in the B Notification Program**. An applicant whose chest radiograph is compatible with active TB but whose sputum AFB smear results are negative is classified as having Class B1 status and may enter the United States. If the chest radiograph is compatible with inactive TB, no sputum specimens are required, and the applicant enters the country with Class B2 status.[14] If abnormalities are present in a chest radiograph and if sputum AFB smears are positive, the applicant must receive a Class A waiver before entry into the United States. Very few persons with A waivers enter the United States, so A waivers are not covered in these guidelines.

The Class B notification system follows up on medical screenings of persons with B1 and B2 classifications after their arrival in the United States.[15] Immigrants with a Class A waiver or with Class B1 or B2 status are identified at ports of entry to the United States by the US Citizenship and Immigration Services (USCIS) on entry to the United States and reported to CDC's Division of Global Migration and Quarantine (DGMQ). The DGMQ notifies state and local health departments of refugees and immigrants with TB classifications who are moving to their jurisdiction and need follow-up evaluations. Persons with a Class A waiver are required to report to the jurisdictional public health agency for evaluation or risk deportation. For persons with Class B1 and B2 status, however, the stipulated evaluation visits to the health agency are voluntary.[16]

Table 3: **CLASSIFICATION OF IMMIGRANTS AND REFUGEES IN THE B NOTIFICATION PROGRAM**[17]

Immigrant/ Refugee Classification	Overseas Chest Radiograph	Overseas Sputum Acid-Fast Bacilli Smears	Restrictions
A Waiver*	Abnormal, suggestive of active tuberculosis (TB) disease	Positive	May not enter the United States unless started on antituberculosis therapy and sputum smears are negative **and** apply for a waiver signed by the local health department in their intended US destination (A Waiver) **or** ▪ Complete TB therapy overseas
B1	Abnormal, suggestive of active TB disease	Negative	Instructed to voluntarily report to the local health department in the United States for further medical evaluation within 30 days of arrival
B2	Abnormal, suggestive of inactive TB disease	Negative	Same as above
* Very few persons with A waivers enter the United States, so they are excluded from these guidelines.			

Source: California Department of Health Services (CDHS)/California Tuberculosis Controllers Association (CTCA). Guidelines for the follow-up and assessment of persons with Class A/B tuberculosis. *CDHS/CTCA Joint Guidelines* [CTCA Web site]. 2015. Available at: https://ctca.org/wp-content/uploads/2018/11/TB_A_B_guidelines_revised_April-2016_clean_for_CTCA_EC1.pdf

Policy

Newly arrived refugees and immigrants with Class B1/B2 TB will receive thorough and timely TB evaluations and appropriate treatment to ensure prompt detection of TB disease and prevention of future cases.[18] In Alaska, public health nurses are frequently the first and only point of contact for immigrants and refugees needing clearance.

For roles and responsibilities, refer to the “Roles, Responsibilities, and Contact Information” topic in the Introduction **1.11**.

Follow-up of B1 and B2 Tuberculosis Arrivals

Division of Global Migration and Quarantine Forms

The Centers for Disease Control and Prevention (CDC) Division of Global Migration and Quarantine (DGMQ) generates the following Class B notification forms:

- *TB Follow-up Worksheet*
- DS-2053: *Medical Examination for Immigrant or Refugee Application*
- DS-3024: *Chest X-Ray and Classification Worksheet*

The DGMQ sends the notifications to the Alaska TB Program. The DGMQ also sends a letter to any immigrant or refugee with a tuberculosis (TB) condition, indicating that a follow-up is needed in the United States.

The Alaska TB Program sends the notification form to the public health nurse (PHN) closest to the residence listed on the form. The PHN attempts to locate the immigrant and schedule a visit either at the public health center or with a private provider (see Patient Follow-up below).

After the immigrant has been evaluated, the PHN or private provider should complete the *TB Follow-up Worksheet* and return via mail or fax to the Section of Epidemiology, Alaska TB Program, 3601 C Street, Suite 540, Anchorage, AK 99503

Section of Epidemiology, Alaska TB Program Fax Number: 907-563-7868.

A blank copy of the *TB Follow-up Worksheet* is available in the Forms Section of the Manual **(18)**

Electronic Disease Notification Process Overview

The Alaska TB Program receives notification of newly arrived immigrants, refugees and asylees electronically from the Centers for Disease Control and Prevention (CDC) through the Electronic Disease Notification (EDN) system. Records from overseas medical examinations are downloaded and sent to local public health centers.

The PHN ensures the evaluation of the new arrival and returns a completed Follow-*Up Worksheet to* the Alaska TB Program via mail or fax. Follow-up worksheets may need to be submitted more than once: upon initial completion of the medical evaluation for tuberculosis; when culture results come back; and when therapy for active disease or latent tuberculosis infection is completed.

If the local PHN is unable to locate the new arrival, the new arrival has moved, or they fail to come to scheduled appointments; the paperwork is returned to the Alaska TB Program with an explanation as to why the evaluation was unable to be completed.

At the Alaska TB Program a designated staff member enters data from the returned *TB Follow-up Worksheet* into the Electronic Disease Notification database and submits it to the CDC. The Alaska TB Program tracks the status of the evaluation of each new arrival and will contact local PHNs about missing or incomplete “TB Follow-up Worksheets”.

Patient Follow-up

The immigration paperwork may make it appear that a patient has had a complete evaluation for TB disease. However, the overseas evaluation is designed only to detect abnormal radiographs and determine infectiousness at the time of travel and does not rule out disease. Remember that all B1 and B2 arrivals need a new diagnostic evaluation for active disease, including a tuberculin skin test or interferon gamma release assay (IGRA) and new chest radiograph. Even if active TB disease is ruled out, most B1 and B2 arrivals are priority candidates for treatment of latent TB infection.

Follow-up on each B1 and B2 arrival is described below.

1. Check to see if the immigrant has already visited the public health center or a private provider.
2. If not, then make a telephone call to the home of the immigrant’s sponsor or relative within five business days after receiving the notification. Arrange for the immigrant to come in during clinic hours at the public health center and/or arrange for the patient to see a private provider. Whenever possible, communications should be made in the immigrant’s first language.
3. If the immigrant does not visit the public health center or a private provider within 10 business days (two weeks) of the telephone call, send a letter to the home of the immigrant’s sponsor or relative. Whenever possible, communications should be made in the immigrant’s first language.
4. If the immigrant does not visit the public health center or a private provider within 10 business days (two weeks) of the letter, make a visit to the home of the immigrant’s sponsor or relative. Take a representative who speaks the immigrant’s first language if at all possible (if needed).
5. Every effort should be made to locate B1 or B2 arrivals as these immigrants are considered high risk for TB disease. Call the Alaska TB Program for consultation when an immigrant is not located.
6. Complete Class B follow-up within one month.
7. Be sure to indicate the final TB Diagnostic Classification in *D3. Diagnosis on the TB Follow-up Worksheet. .* Refer to Table 4 for additional information.

8. Complete and return the *TB Follow-up Worksheet* to the Alaska TB Program. This form is essential for the Alaska TB Program to conduct statewide surveillance and follow-up on all B1 and B2 arrivals and report results to the CDC.

Table 4: **TB Diagnostic Classification**[19]

Classifications of Persons Exposed to and/or Infected with *M. tuberculosis*	Description	Comments
Class 0	No TB Exposure	• Negative reaction to tuberculin skin test or IGRA • No history of exposure
Class 1: TB exposure, no evidence of infection	Exposure to TB but no latent TB Infection	• Negative reaction to tuberculin skin test or IGRA • No evidence of infection. • History of exposure to tuberculosis but negative reaction to the tuberculin skin test
Class 2: TB infection, no disease	Latent TB Infection	• Positive reaction to the tuberculin skin test • Negative microscopy/bacteriology results • No clinical or radiographic evidence of tuberculosis

Class 3: TB, active disease	Active TB disease	• Clinically active tuberculosis
		• Person must have clinical and/or radiologic evidence of tuberculosis
		  ○ Established most definitively by isolation of *M. tuberculosis*
		  ○ In absence for a positive culture for *M. tuberculosis*, person in this class must have a positive reaction to the tuberculin test or IGRA
		• Class 3 is further defined as pulmonary, extra-pulmonary, both sites on the follow-up form.

Class 4: Tuberculosis, inactive disease	Old, healed, inactive TB disease	• History of previous episode(s) of tuberculosis or abnormal stable radiographic findings • Positive reaction to tuberculin skin test or IGRA • Negative microscopy/bacteriology • No clinical and/or radiographic evidence of current disease[20]

Evaluation of B1, B2, and B Tuberculosis Arrivals

Evaluation Activities

B1 arrivals had negative sputum acid-fast bacilli results overseas and have overseas chest radiographs that are abnormal and suggestive of **active TB disease**

B2 arrivals had negative sputum acid-fast bacilli results overseas and have overseas chest radiographs that are abnormal and suggestive of **inactive TB disease**.

Highlights of the major changes to the 2008 "Tuberculosis Component of the Technical Instructions for the Medical Examination of Aliens in the United States"[21] include:
:

- **Sputum cultures for *M. tuberculosis*, and drug susceptibility testing for positive cultures, are required for applicants with chest radiograph findings suggestive of active TB disease.**

- **Applicants with Class A (either smear or culture positive) TB must complete a full course of TB treatment.** Completion of therapy is required prior to medical clearance for TB by the civil surgeon, for purposes of this examination and the United States Immigration and Citizenship Services (USCIS).

- **A chest radiograph is required for all applicants with a tuberculin skin test (TST) reaction of 5 mm or greater of induration, including pregnant (or possibly pregnant) women.**

- **A chest radiograph is now required for applicants with a TST reaction of less than 5 mm of induration (including no induration) who have:**
    - **Signs or symptoms** consistent with active TB disease.
    - **Immunosuppression** for any reason (e.g., HIV+; immunosuppressive therapy ≥ 15 mg/day of prednisone for one month or longer; or history of organ transplantation).

- **Definitions of chest radiograph findings** that are suggestive of TB disease are provided to assist in determining the proper TB classification.

- **A new TB classification (Class B: Latent TB Infection Needing Evaluation for Treatment)** should be used for all applicants who are recent arrivals to the United States (less than 5 years) from countries with a high TB prevalence, with a TST reaction of ≥ 10 mm induration, and no evidence of TB disease.

Refer to Table 5: **Evaluation and Follow-Up Recommendations for B1, B2, And B Tuberculosis Arrivals in Alaska** to determine which evaluation tasks should be done. While IGRAs are recommended for persons 2 years of age and older, they are not available statewide and are not provided or paid for by the Alaska TB Program.

Table 5: **EVALUATION AND FOLLOW-UP RECOMMENDATIONS FOR B1, B2, AND B TUBERCULOSIS ARRIVALS IN ALASKA**[22]

Classification	Overseas Diagnostic Criteria	TB Follow-up Recommendations
Class B1 TB – Pulmonary TB, Active, Non-infectious	• Abnormal, chest radiograph suggestive of active TB • Three sputum smears negative for AFB and three cultures negative for *MTB*	□ Review TB treatment history. □ Evaluate for signs and symptoms of TB. □ Do TST or IGRA regardless of BGC history, unless reliable documentation of previous positive test. Induration of ≥ 5 mm is positive in persons with abnormal chest radiographs. □ Do CXR regardless of TST/IGRA result, or if overseas CXR done ≥ 3 months ago. Submit films for review. □ Collect three sputa for AFB and culture, to determine TB diagnosis (i.e. LTBI, inactive or active TB).
Class B1 TB – Extrapulmonary TB, Active, Non-infectious	• Radiographic or other evidence of extrapulmonary TB; no pulmonary TB	□ Review TB treatment history. □ Evaluate for signs and symptoms of TB. □ Do TST or IGRA regardless of BGC history, unless reliable documentation of previous positive test. Induration of ≥ 5 mm is positive in persons with abnormal chest radiographs. □ Do CXR regardless of TST/IGRA result, or if overseas CXR done ≥ 3 months ago. Submit films for review. □ Collect three sputa for AFB and culture, to determine TB diagnosis (i.e. LTBI, inactive or active TB).
Class B2 TB – Pulmonary TB, Inactive, Non-infectious	• Abnormal chest radiograph suggestive of inactive TB disease • No sputum AFB smears or cultures required	□ Review TB treatment history. □ Evaluate for signs and symptoms of TB. □ Do TST or IGRA regardless of BGC history, unless reliable documentation of previous positive test. Induration of ≥ 5 mm is positive in persons with abnormal chest radiographs. □ Do CXR regardless of TST/IGRA result, or if overseas CXR done ≥ 3 months ago. Submit films for review. □ Collect three sputa for AFB and culture, to determine TB diagnosis (i.e. LTBI, inactive or active TB).
Class B – Latent TB Infection needing evaluation for treatment (LTBI)	• TST reaction ≥ 10 mm in recent U.S. arrivals • TST reaction ≥ 5 mm in specific groups • No evidence of active TB disease	□ Consider patient to have LTBI. Evaluate for signs and symptoms of TB. □ Consider repeat TST or IGRA, if indicated, to confirm or rule-out overseas diagnosis of LTBI. □ Do CXR if overseas CXR done > 3 months ago or if HIV+. □ Collect three sputa for AFB and culture, if symptomatic, to rule out active TB disease. □ Offer treatment for LTBI after provider evaluation.

Source: Adapted from Centers for Disease Control and Prevention (CDC) .2018. "Tuberculosis Technical Instructions for Civil Surgeons". Available at https://www.cdc.gov/immigrantrefugeehealth/pdf/TB-civil-tech-instructions.pdf

Treatment

Prescribe medications as appropriate. *Do not start patients on single-drug therapy for latent TB infection (LTBI) until tuberculosis (TB) disease is ruled out.* If sputa have been collected, wait for final negative culture before initiating LTBI treatment. B1/B2 immigrants with positive tuberculin skin tests and for whom active TB has been ruled out are priority candidates for treatment of LTBI because of the increased probability of recent infection and subsequent progression to active TB disease. Patients with fibrotic lesions on a chest radiograph suggestive of old, healed TB are candidates for treatment of LTBI, regardless of age.

The overseas diagnosis of clinically active TB disease is based on the abnormal chest radiograph. Reevaluation in the United States may show the patient to actually have old, healed TB. According to current CDC/American Thoracic Society (ATS) recommendations, old, healed TB can be treated with four months of isoniazid and rifampin using a combined pill, Rifamate (if available), or with nine months of isoniazid.[23]

For more information on treatment, see the Treatment of Latent Tuberculosis Infection **(8.2)** and Treatment of Tuberculosis Disease **(6.2)** sections.

Resources and References

Resources

- California Department of Health Services (CDHS)/California Tuberculosis Controllers Association (CTCA). "Guidelines for the Follow-up and Assessment of Persons with Class A/B" *(CDHS/CTCA Joint Guidelines;* 2016). Available at: https://ctca.org/wp-content/uploads/2018/11/TB_A_B_guidelines_revised_April-2016_clean_for_CTCA_EC1.pdf
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