MMWR
Recommendations and Reports
December 28, 1990 / 39(RR18);1-13,18-21

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Tuberculosis Among Foreign-Born Persons Entering the United States -- Recommendations of the Advisory Committee for Elimination of Tuberculosis

Summary

In 1989, the Department of Health and Human Services Advisory Committee for Elimination of Tuberculosis published a plan for eliminating tuberculosis from the United States by the year 2010. This plan gives a top priority to implementing strategies to prevent tuberculosis in high-incidence groups. Foreign-born persons (as a group) residing in the United States have higher rates of tuberculosis than persons born in the United States. In 1989, the overall U.S. tuberculosis rate was 9.5 per 100,000 population; for foreign-born persons arriving in the United States, the estimated case rate was 124 per 100,000. In the period 1986-1989, 22\% (20,316) of all reported cases of tuberculosis occurred in the foreign-born population. A majority of foreign-born persons who develop tuberculosis do so within the first 5 years after they enter the United States.

The ACET recommends that all foreign-born persons applying for permanent entry into the United States continue to be screened for disease. Deficiencies in the current screening methods should be corrected. The policy requiring that persons found to have infectious tuberculosis (known or suspected) be prevented from entering the country until treatment has rendered them noninfectious should be continued; however, persons with noninfectious tuberculosis should be permitted to enter the United States. Tuberculin skin testing and preventive therapy programs for foreign-born persons must be expanded both overseas and domestically if the goal of eliminating tuberculosis from the United States by the year 2010 is to be met.

I. INTRODUCTION

The recommendations in this document are intended to prevent infectious tuberculosis among foreign-born persons* at the time of, and after, entry into the United States. In developing these recommendations, the Department of Health and Human Services Advisory Committee for Elimination of Tuberculosis (ACET)** sought advice from governmental agencies--including the Immigration and Naturalization Service (INS), Department of Justice, and the Department of State--and from the tuberculosis control officers from selected state and local health departments. In addition, the ACET consulted with representatives of the Association of State and Territorial Health Officials, the National Association of County Health Officers, the U.S. Conference of Local Health Officials, and the American Immigration Lawyers Association. However, the ACET neither requested nor received endorsement of this statement. *The recommendations are not intended for U.S. citizens who are born abroad, because such persons are not subject to the provisions of the U.S. Immigration and

Nationality Act. *New regulations for excludable medical conditions under the Immigration Act of 1990 are being developed and will be published in the Federal Register. **Current members are as follows: Dr. James L. Hadler, Chairman; Dr. John B. Bass, Jr.; Ms. Zenda J. Bowie; Dr. Jerrold J. Ellner; Ms. Sue C. Etkind; Dr. Michael D. Iseman; Dr. Reynard J. McDonald; Dr. Robert J. Reza; Dr. Gisela F. Schecter; Dr. William W. Stead. Ex officio members: Dr. Sotiros D. Chaparas (FDA); Dr. Darrel D. Gwinn (NIH); Dr. Bruce Tempest (IHS); Dr. William A. Robinson. Liaison members: Dr. Norbert P. Rapoza (AMA); Mr. Shane McDermott (ALA); Dr. Laurence S. Farer; Dr. Dixie E. Snider, Jr., Executive Secretary.

II. DEFINITIONS OF TERMS

In these recommendations, use of the terms ``alien'' and ``foreign-born'' depends on whether the context is based on the Immigration and Nationality Act (alien) or on CDC's epidemiologic data base (foreign-born).

The following definitions were developed by CDC in consultation with INS. They have not been modified to conform to MMWR style.

Alien: Defined in the U.S. Immigration and Nationality Act as any person not a citizen or national of the United States.

Undocumented Alien: Any alien who entered the United States without inspection, or someone in the United States in violation of the Immigration and Nationality Act or any other law of the United States.

Immigrant: An alien who has been issued an immigrant visa by a consular officer outside the United States and has been lawfully accorded the privilege of residing permanently in the United States as an immigrant in accordance with the immigration laws.

Non-immigrant: An alien who has been issued a non-immigrant visa and has been admitted to the United States for such time and under such conditions as the Attorney General may by regulations prescribe.

Adjustment of Status of Non-immigrant to That of a Person Admitted for Permanent Residence: Under certain conditions, the status of an alien who was inspected and admitted or paroled into the United States may be adjusted by the Attorney General to that of an alien lawfully admitted for permanent residence. Also, under the Immigration Reform and Control Act of 1986, certain undocumented aliens already in the United States may apply for adjustment of status and undergo a medical examination similar to that for non-immigrants already in the country who apply for adjustment of status.

Refugee: Any person who is outside any country of such person's nationality or, in the case of a person having no nationality, is outside any country in which such person last habitually resided, and who is unable or unwilling to return to, and is unable or unwilling to avail himself or herself of, the protection of that country because of persecution or a well-founded fear of persecution on account of race, religion, nationality, membership in a particular social group, or political opinion; or any person who is within the country of such person's nationality or, in the case of a person having no nationality, within the country in which such person is habitually residing, and who is persecuted or who has a well-founded fear of persecution on account of race, religion, nationality, membership in a particular social group, or political opinion.

Entrant: An immigration designation given to a national of Cuba or Haiti who arrived in the United States between April 20, 1980, and October 11, 1981, and for whom a record was established by INS prior to January 1, 1982.

Parolee: An alien, appearing to be inadmissible to the inspecting officer, allowed to enter the United States under emergency (humanitarian) conditions or when that alien's entry is determined to be in the public interest. Parole does not constitute formal admission to the United States and confers temporary admission status only, requiring parolees to leave when the conditions supporting their parole cease to exist. Definitions of parolees include:

- Indefinite parolee--Parole is usually set for a specified

period of time according to the conditions of parole. In some cases, as conditions warrant, the period of parole is specified as indefinite.

- Deferred inspection--Parole may be granted to an alien who appears not to be clearly admissible to the inspecting officer. An appointment will be made for the alien's appearance at another Service Office where more information is available and the inspection can be completed.

- Medical and legal parolee--Parole may be granted to an alien who has a serious medical condition which would make detention or return inappropriate or who is to serve as a witness in legal proceedings or is subject to prosecution in the United States.

Excludable Medical Condition*: Aliens shall be ineligible to receive a visa and shall be excluded from admission into the United States if found to have a condition described in Section 212(a)(l)-(6), Immigration and Nationality Act: ``(1) Aliens who are mentally retarded; (2) Aliens who are insane; (3) Aliens who have had one or more attacks of insanity; (4) Aliens afflicted with psychopathic personality, or sexual deviation, or a mental defect; (5) Aliens who are narcotic drug addicts or chronic alcoholics; (6) Aliens who are afflicted with any dangerous contagious disease. (Public Health Service (PHS) Regulations define tuberculosis, active, as a \`dangerous contagious disease.')"

Waiver of Excludable Medical Condition:

- For immigrants--Section 212(g), Immigration and Nationality Act, gives the Attorney General the authority to waive certain medical conditions, i.e., mental retardation, tuberculosis, and a past history of mental illness, for an alien who has been found to have one of these excludable medical conditions if the alien has certain relatives who are United States citizens or lawful permanent residents of the United States.

- For refugees--Section 207(c)(3), Immigration and Nationality Act, gives the Attorney General the authority to waive any of the health provisions listed in Section 2l2(a)(l)-(6) for humanitarian purposes, to assure family unity, or when it is otherwise in the public interest.

- For non-immigrants--Section 212(d)(3), Immigration and Nationality Act, provides that an alien who has been found to have an excludable medical condition and is thus ineligible to receive a non-immigrant visa may, after approval by the Attorney General of a recommendation by the Secretary of State, be granted such a visa and may be admitted into the United States temporarily as a non-immigrant.

Abnormal Chest Radiograph As Defined by the ACET: All pulmonary parenchymal abnormalities suggestive of tuberculosis except when calcified granulomas are the sole abnormality. BACKGROUND

A. Overview of the Problem of Tuberculosis Among the Foreign-Born

The ACET has published a plan for eliminating tuberculosis from the United States (1). This plan gives a top priority to implementing strategies to prevent tuberculosis in high-incidence groups. Foreign-born persons (as a group) residing in the United States have higher rates of tuberculosis than persons born in the United States. B. Foreign-Born Persons Entering the United States

In fiscal year (FY) 1988, 643,025 persons were accorded immigration status and were admitted as immigrants into the United States. (Of these, 377,885 were new arrivals who were admitted in 1988 and 265,140 were admitted in previous years, under other immigration categories, and were granted adjustment of status to permanent residence in 1988.) Immigrants from Asia accounted for the highest number of admissions (39.6\%), followed by the Caribbean (17.3 percent), North America (17.3\%), Central and South America (11.3\%), and Europe (11.1\%). The five countries with the largest number of immigrants, based on the country of birth, were Mexico (95,039), the Philippines (50,697), Haiti (34,806), Korea (34,703), and the People's Republic of China (28,717). Six states were designated as the intended destination of nearly three-fourths of all immigrants (California, New York, Florida, Texas, New Jersey, and Illinois).

In addition, 14,767,035 non-immigrants entered the United States in FY 1988, primarily tourists (73\%) or business travelers (16\%). A total of 312,363 persons entered the United States as students, accompanied by 25,540 spouses and children. Another 166,659 persons entered as exchange visitors to study, teach, or conduct research in the United States, bringing with them 36,267 spouses and children. There were 80,382 refugee admissions and 94,918 parolee admissions. No specific numbers are available regarding illegal immigration; however, INS apprehended about 1 million deportable aliens in FY 1988. C. Tuberculosis Morbidity Among the Foreign-Born

In 1989, the overall U.S. tuberculosis rate was 9.5 per 100,000 population; for foreign-born persons arriving in the United States, the estimated case rate was 124 per 100,000. In the period 1986-1989, 22\% (20,316) of all reported cases of tuberculosis occurred in the foreign-born population (CDC, unpublished data). A majority of foreign-born persons who develop tuberculosis do so within the first 5 years after they enter the United States (2).

In 1989, six countries accounted for almost 3,000 cases (63\%) of all the U.S. foreign-born persons with tuberculosis. These six countries were Mexico, the Philippines, Vietnam, South Korea, Haiti, and the People's Republic of China. With the exception of Vietnam, these countries correspond to the top five countries of birth for immigrants who entered the United States in FY 1988.

Eighty-two percent of the tuberculosis cases among the foreign-born were reported by eight states: California (2,456), New York (566), Texas (428), Florida (283), New Jersey (206), Massachusetts (197), Illinois (168), and Hawaii (144). The proportion of cases reported among the foreign-born in these states ranged from 15.1\% in Illinois to 76.2\% in Hawaii.

Nearly all (91\%) of the reported tuberculosis patients among Asians and Pacific Islanders were foreign-born, and 52\% of all Hispanic tuberculosis patients were foreign-born. IV. CURRENT HEALTH SCREENING AND FOLLOW-UP REQUIREMENTS FOR ALIENS

PHS requirements and guidelines for the medical examination of aliens seeking entry into the United States are based on the Immigration and Nationality Act and on INS and PHS regulations that exclude aliens with certain health conditions from entering the United States. (Note: New regulations for excludable medical conditions under the Immigration Act of 1990 are being developed and will be published in the Federal Register.)

A. Excludable Conditions

Currently, immigrants and refugees coming to the United States must have a physical and mental examination abroad. These examinations are performed by local ``panel'' physicians designated by Embassies and Consulates of the Department of State. The medical examinations are performed to identify, for the Department of State and the INS, those applicants for admission who have excludable mental and physical conditions, as specified in the Immigration and Nationality Act. Examining physicians follow a PHS medical examination manual. Required examinations done abroad include: --A brief history of present and past illness. --A chest X-ray examination for tuberculosis for persons greater than or equal to 15 years of age. --A tuberculin skin test for persons less than 15 years of age if the person is ill or has a family member with suspected tuberculosis.

Any excludable or nonexcludable medical condition that is suspected or detected as a result of the screening examination may require a more comprehensive medical evaluation and may necessitate hospitalization or treatment before a visa is issued. Tuberculin skin testing has not been required as part of the medical examination for several reasons. First, it would be difficult to ensure quality control of testing materials and procedures. Second, there is a potential for fraudulent testing. Third, in most countries the medical examination is offered in one location and takes only 1 day. Requiring a return visit for reading a tuberculin test in 2-3 days would substantially increase the cost of the examination for the applicant (e.g., hotel stay and return travel). B. Active Tuberculosis

The PHS medical examination manual specifies that the following criteria be used to diagnose ``active tuberculosis'': --An abnormal chest radiograph or series of chest radiographs suggestive of current pulmonary tuberculosis, with or without compatible clinical symptoms, or --a pathological condition suggestive of current

extrapulmonary tuberculosis.

If the radiograph suggests current pulmonary tuberculosis, the panel physician is instructed to determine if a previous chest radiograph (at least 3 months old) is available for comparison. If no changes are evident from the previous film, the condition is classified as ``Class B'' or ``Tuberculosis, not considered active,'' and the applicant may receive a visa and proceed to the United States. If changes are evident or if no previous film is available, the panel physician is instructed to perform two sputum smears. If both smears are negative for acid-fast bacilli (AFB), the condition is to be classified as ``Class A'' or ``Tuberculosis, active, non-communicable for travel purposes,'' and the applicant is sent back to the United States Consular Officer for the determination of eligibility for a waiver of excludability.

Travel is permitted for waiver cases only after negative sputum smears have been obtained on 2 consecutive days. In addition, a local health-care provider in the United States is identified in advance at the place of intended residence, and the provider's endorsement is obtained on the waiver application from the local health authority. When the immigrant or refugee with tuberculosis arrives in the United States, the quarantine officer at the port of entry notifies the local health department and instructs the immigrant or refugee to report for evaluation after reaching the final destination.

Because of limited diagnostic and therapeutic capabilities in many countries, PHS recommends that antituberculosis medications not be started abroad unless a positive smear is obtained, so that the immigrant can be evaluated in the United States by the local health-care provider and a decision made concerning the appropriate treatment regimen to be prescribed.

This procedure was designed to permit aliens with suspected tuberculosis to proceed to the United States with a minimum of delay and expense. The entire process--with its provisions for screening abroad, selected waivers of excludability, notification of arrival, and referral to the local health authority for evaluation upon reaching the destination in the United States--was designed to aid in the control of tuberculosis in the United States. However, some problems exist with the current process, as discussed in the following section. V. PROBLEMS ASSOCIATED WITH CURRENT SCREENING AND FOLLOW-UP REQUIREMENTS

A. Aliens enter with active tuberculosis that was missed during the required medical examination.

Misdiagnosis of tuberculosis may occur because of failure to correctly interpret the radiograph, poor quality of radiographs, improper performance of smear examinations, and other reasons related to equipment or technical competence. Administrative irregularities (e.g., clerical errors that occur during the visa medical examination process) may cause misclassification. Misclassification on the medical examination document may also occur as the result of intentional fraud. On occasion, there have been problems with X-ray or sputum substitutions when aliens with tuberculosis have sent someone else for the X-ray or have purchased a normal X-ray that they submitted to the panel physician instead of their own. In addition, applicants have sometimes been reluctant to produce a sputum specimen because they fear the implications of a positive result.

Finally, because a medical examination is valid for an entire year, a visa applicant who was free of tuberculosis at the time of examination may have developed tuberculosis in the interval before arriving in the United States. B. Persons with tuberculosis may enter the United States under a waiver but fail to comply with waiver provisions calling for further examinations and/or therapy.

Active tuberculosis or suspected active tuberculosis is an excludable (Class A) condition. If an alien with tuberculosis is granted a waiver of excludability and is allowed to enter the United States, there is a requirement that medical care be sought immediately upon arrival in the United States. Local health departments are notified that an alien with tuberculosis will be arriving in the community so that appropriate evaluation can be undertaken. Despite these requirements, no federal mechanism exists for assuring that these aliens report for evaluation or comply with treatment recommendations. Although some health departments attempt to locate and refer such aliens, no federal action is taken if they do not comply.

The PHS currently notifies state or local tuberculosis control officials of the arrival of aliens with Class A or

Class B tuberculosis and requests that necessary follow-up be provided within 30 days. The PHS asks for a report of the follow-up, indicating the diagnosis made by the local physician. In FY 1988, health departments returned confirmation follow-up reports for 67\% of Class A arrivals and for 65\% of Class B arrivals; however, the absence of a follow-up report on a tuberculosis notification does not necessarily mean that evaluations were not done. C. Class A and Class B: The classification system does not accurately distinguish between active and inactive disease.

The problem is twofold. First, current procedures are not sensitive enough to identify all cases of active disease (i.e., some persons with active disease are not assigned Class A status). Second, current procedures are not specific enough to single out only those persons with active disease (i.e., some persons assigned Class A status do not have active disease).

Follow-up examinations completed in the United States reveal that 12\% of the aliens assigned Class A status had active disease, and 1.2\% of those assigned Class B status actually had active tuberculosis. Of the 1,161 Class A notifications in FY 1988 for which a report of follow-up was received and a diagnosis established, only 143 (12.3\%) were in agreement with the overseas classification. The remaining notifications reported inactive tuberculosis (59.8\%), extrapulmonary tuberculosis (0.4\%), nontuberculous abnormality (13.9\%), or normal (13.6\%).

Of the 9,544 Class B notifications for which a report of follow-up was received and a diagnosis established, 5,603 (58.7\%) were in agreement with the overseas classification. The remainder were found to be active tuberculosis (1.2\%), extrapulmonary tuberculous abnormality (0.4\%), nontuberculous abnormality (14.1\%), or normal (25.6\%). D. Some aliens arrive in the United States with inadequately treated or drug-resistant tuberculosis.

Some applicants have had tuberculosis diagnosed before they applied for admission. Because resources for health care are severely limited in many countries where tuberculosis is highly prevalent, applicants from these countries with a history of past tuberculosis may have received delayed, inadequate, or inappropriate treatment and are at risk of relapsing with drug-resistant disease. In addition, applicants classified as having active or suspected active tuberculosis and who are not eligible for waivers must be treated abroad until rendered ``not active'' before a visa can be issued. Aliens who have positive sputum smears must be treated abroad until they convert to negative before a waiver can be issued. Although adequate treatment regimens are recommended in the PHS Guidelines, with the exception of certain persons with refugee status, no mechanism exists for ensuring that aliens with tuberculosis are treated in accordance with these guidelines, or that such treatment is available to them, or that they will comply. Inadequate treatment at this stage may also result in the development of drug-resistant disease or a high risk of relapse among aliens after they arrive in the United States. E. Aliens in certain classifications may enter the United States for extended periods without being required to have a medical evaluation for tuberculosis.

Although the Immigration and Nationality Act, Section 212(a)(1-6), provides for the exclusion of aliens with certain health conditions and subjects all aliens to these health exclusion provisions, PHS regulations (42 CFR, Part 34) and Department of State regulations (22 CFR, Part 41.108, and 22 CFR Part 42.66) establish which categories of aliens are routinely required to be medically examined as part of the visa application process. Currently, only aliens seeking permanent residence in the United States are required to be medically examined. Others, such as students and exchange visitors, are examined at the discretion of a consular officer (generally when a consular officer believes an applicant may have an excludable medical condition).

Several such categories of aliens may enter the United States for protracted stays (greater than or equal to 1 year) without being required to undergo a medical examination before entry. In 1988, there were approximately 1 million such persons; they sometimes enter with active tuberculosis or develop tuberculosis while in the United States and then may infect others. College students pose a special problem because they often stay for greater than or equal to 4 years, and transmission may occur in dormitory settings. F. Aliens with tuberculosis disease come to the United States as visitors specifically to obtain treatment for tuberculosis.

Some aliens enter the United States as temporary visitors for the sole but undisclosed purpose of obtaining treatment for tuberculosis. Since non-immigrants are not routinely required to have a medical examination to obtain a visa, the number of such persons entering the United States is not known. G. Aliens enter the United States infected with tubercle bacilli but do not have current disease.

Many tuberculosis cases in the United States occur among foreign-born persons who had asymptomatic infection but did not have current disease when they entered the United States. A large proportion of these persons are from countries where, according to available data, one-half or more of the adult population is infected and at risk of developing tuberculosis. Tuberculin skin testing is the only available method for identifying such persons. H. Some undocumented aliens may have tuberculosis when they enter the United States or may develop it after entry.

Data are not available on the number of undocumented aliens who develop tuberculosis in the United States. The problems presented by undocumented aliens with tuberculous infection or clinical disease who illegally enter the country are much more difficult to address because a) no mechanism exists for identifying them when they enter, and b) they tend to avoid official public agencies because of fear of deportation.

I. Foreign-born persons who enter the United States often have language, cultural, and financial adjustment problems that can be barriers to obtaining recommended tuberculosis treatment and follow-up.

Many local health departments do not have sufficient numbers of culturally sensitive outreach staff who speak foreign languages to effectively identify, follow up, and manage cases involving foreign-born patients (e.g., immigrants, refugees, and undocumented aliens). VI. RECOMMENDATIONS FOR IMPROVING PREVENTION AND CONTROL EFFORTS AMONG ALIENS SEEKING PERMANENT RESIDENCE IN THE UNITED STATES

The ACET supports continued tuberculosis screening for immigrants and refugees seeking entry into the United States. A. Immigrants (Figure 1, page 14)

1. Tuberculosis pre-entry screening for all immigrant visa applicants should continue to be required, including:

    a. A chest radiograph for all applicants greater than or equal to 15 years of age.

    b. A tuberculin skin test for applicants less than 15 years of age who are close contacts of persons known to have or suspected of having tuberculosis, or if for any reason tuberculous infection is suspected. 2. All immigrant visa applicants with abnormal radiographs consistent with tuberculosis should be assigned Class A status. Although this approach will require a change in regulations, it will increase the sensitivity of the process to detect active disease (i.e., many active cases that erroneously would have been given Class B status will now be given Class A status). Follow-up work load for local health departments may increase substantially. However, the use of more standardized, rigorous, and restrictive criteria in the reading of chest radiographs as suggestive of active tuberculosis will focus the process on those persons at high risk of tuberculosis (see definition for abnormal chest radiograph). The degree to which local health departments can respond to an increased Class A work load will depend upon how well the upgraded classification procedures can reduce the number of false-positives and what priority can be given to this work load, considering available resources and other local needs.

    c. The requirement that all applicants for admission who have an abnormal chest radiograph and a positive smear for tuberculosis be started on a CDC/American Thoracic Society (CDC/ATS)-recommended antituberculosis regimen for persons at increased risk of drug-resistant disease (3) should be continued. Fully supervised therapy is strongly encouraged. After applicants have two consecutive negative sputum smears obtained on different days, the ACET recommends that they be granted a waiver of excludability and issued a visa for admission. This recommendation would require a change in law, since some of these persons are now ineligible for waivers.

d. Other applicants who have an abnormal chest radiograph and who have had two consecutive negative sputum smears obtained on different days may be granted a waiver for conditional entry into the United States. The ACET recommends that antituberculosis medications not be started abroad unless a positive smear is obtained, so that the immigrant can be evaluated by a local health-care provider in the United States and a decision made concerning the appropriate regimen to prescribe. This recommendation would require a change in law, since some such persons are now ineligible for waivers.

e. The recommendation to broaden the definition of Class A tuberculosis should not be implemented until legislative changes are made to broaden waiver authority. Otherwise, many persons who are now designated as having Class B tuberculosis would not be eligible for waivers. 3. Currently, immigrants with diagnosed tuberculosis or suspected tuberculosis entering the United States with a waiver of excludability (see section VI.A.2.a and b, above) are required to make advance arrangements with a local U.S. physician provider and local health department official who agree to be responsible for necessary follow-up and treatment. Approval of this follow-up and treatment arrangement should be obtained from the official state or local health department at the site of intended residence. (Applicants known to have drug-resistant tuberculosis who are granted waivers should be identified to local health authorities and initiated on a regimen containing at least two antituberculosis drugs to which the organisms are likely to be susceptible.) 4. Quarantine officers at ports of entry should continue to notify local health departments of the arrival of immigrants who enter with a waiver, and the officers should instruct the immigrants to report to the agreed-upon health-care provider. Copies of the health department notification should be sent to the health-care provider. 5. Immigrants entering the United States with a waiver should be required to present themselves to the identified health-care provider for examination and evaluation for therapy within 10 days after arrival. 6. Providers not associated with a health department should notify local health departments within 1 week if an immigrant with an infectious case (smear-positive) undergoing treatment fails to report for necessary examinations and follow-up or does not comply with therapy recommendations. For other immigrants referred for examination, providers should notify the health department within 30 days if the immigrant fails to report. The provider should also keep the health department informed on a timely basis as to the outcome of necessary examinations and the progress of treatment. 7. Immigrants who refuse to complete recommended tuberculosis treatment, after repeated attempts to encourage compliance through education, incentives, and directly supervised therapy, should be subject to the same quarantine provisions as U.S. citizens, according to state and local laws and regulations. 8. The Department of State should continue to designate physicians abroad to perform required initial medical examinations for visa applicants. The PHS should establish a written procedure for quality assurance and training concerning these examinations performed abroad and should conduct annual reviews of physician reports for accuracy and compliance with established guidelines. Written results of these reviews should be provided to the Department of State and to state and local health departments, as appropriate. Corrective action should be taken when necessary. B. Refugees (Figures 2 and 3, pages 15-16)

1. The following tuberculosis screening procedures should be required for all aliens applying for refugee status:

    a. A chest radiograph for all refugees greater than or equal to 15 years of age.

    b. A chest radiograph for all Southeast Asian refugee children ages 2-14 years.

    c. A tuberculin skin test for all refugee children less than 15 years of age who are close contacts of persons known to have or suspected of having tuberculosis, or if for any reason tuberculous infection is suspected. 2. Refugees with abnormal radiographs consistent with tuberculosis should be assigned Class A status. 3. Refugees having an abnormal chest radiograph who are smear-positive and who have been approved for resettlement in the United States should be

started on a CDC/ATS-recommended antituberculosis regimen for persons at increased risk of drug-resistant disease (3). Southeast Asian refugees who are required to receive English-language training and U.S. cultural orientation in overseas processing centers should continue to complete treatment, under supervision, before coming to the United States. Smear-positive refugees who receive care from designated examining physicians may be granted entry into the United States after they have been placed on a CDC/ATS-approved treatment regimen and have had two consecutive negative sputum smears obtained on consecutive days. Refugees with abnormal X-rays and negative sputum smears should be allowed to enter the United States and should be referred to the local health department for necessary evaluation, follow-up, and treatment. (Note: In many states, refugees are eligible for Medicaid assistance.) 4. Refugees less than 35 years of age from high-prevalence countries who are sent to overseas processing centers (for language training and cultural orientation) should be Mantoux-tuberculin tested, and those with positive reactions should be given a minimum of 6 months' preventive therapy for tuberculosis unless medically contraindicated. In addition, refugees greater than or equal to 35 years of age who have tuberculosis risk factors, including abnormal radiographs, should be tuberculin tested and considered for preventive therapy. The therapy regimen for tuberculin-positive refugees having abnormal chest radiographs should be initiated only after active disease has been ruled out. Refugees on preventive therapy should be monitored closely because of the possible existence of isoniazid-resistant disease in this group. 5. Refugees who enter the United States and who are known to have tuberculosis due to drug-resistant organisms should be identified to local health authorities and started on a regimen that contains at least two antituberculosis drugs to which the patient's organisms are likely to be susceptible. 6. Quarantine officers at the port of entry should continue to notify appropriate health departments about all refugees who arrive in the United States, including those who have normal and abnormal chest radiographs (currently required by law). 7. Occasionally, refugees will enter the United States while on tuberculosis treatment or preventive therapy. In such instances, PHS should continue to forward this information to the appropriate health department at the site of current residence. The Department of State's Reception and Placement Cooperative Agreements specify that voluntary agencies are responsible for advising, encouraging, and assisting refugees in obtaining appropriate health screening and follow-up. Similarly, voluntary agencies should provide appropriate and timely information to state or local health departments regarding these examinations. Voluntary agency adherence to these recommendations should continue to be a part of the ongoing State Department review of initial resettlement service delivery. 8. Refugees who enter the United States and fail to comply with recommended treatment for tuberculosis should be subject to quarantine, as are U.S. citizens. C. Non-immigrants Residing in the United States Who Request Permanent Residence (Figure 4, page 17)

Section 245(a) of the Immigration and Nationality Act provides for adjustment of status in the United States to allow certain aliens who have been admitted or paroled into the United States to become permanent residents without the inconvenience and expense of having to go abroad to obtain immigrant visas. The aliens must be eligible to receive an immigrant visa and must be admissible to the United States for permanent residence, and an immigrant visa must be immediately available at the time the application is filed. Alien crewmen, aliens admitted in transit without a visa, and aliens who entered the United States without inspection are precluded by law from filing for this benefit.

The Immigration Reform and Control Act also permits certain undocumented aliens to apply for official status and permanent residency in the United States.

Applicants for adjustment of status and permanent residency in the United States should receive a Mantoux tuberculin skin test. Those with positive skin tests should receive a chest radiograph. In addition, persons with symptoms compatible with tuberculosis should receive a chest radiograph regardless of tuberculin test results. Those with active tuberculosis should be treated with a CDC/ATS-recommended antituberculosis regimen for persons at increased risk of drug-resistant disease (3). Persons less than 35 years of age with positive reactions

should be given a minimum of 6 months' preventive therapy for tuberculosis unless medically contraindicated. In addition, those greater than or equal to 35 years of age who have tuberculosis risk factors, including abnormal radiographs, should be considered for preventive therapy.

Examinations should continue to be performed by physicians appointed by INS and designated as ``civil surgeons.'' The ACET recommends that INS and CDC develop procedures for consulting with state or local health departments before designating a civil surgeon so that health department officials may help identify physicians who are willing to collaborate in tuberculosis follow-up and treatment. VII. RECOMMENDATIONS FOR THE SCREENING, PREVENTION, AND CONTROL OF TUBERCULOSIS AMONG FOREIGN-BORN PERSONS AFTER ARRIVAL IN THE UNITED STATES

A. Therapy for Infection and Disease

Immigrants and refugees less than 35 years of age who enter the United States and have a positive tuberculin test should be started on preventive therapy unless contraindicated. Those of any age having abnormal chest radiographs and who are infected but without disease should be started on preventive therapy within 30 days after their arrival unless they have a history of previous adequate therapy or unless there are medical contraindications. The preventive therapy regimen for tuberculin-positive refugees with abnormal chest radiographs should be for at least 12 months and should be initiated only after active disease has been ruled out. Preventive therapy should be monitored closely because of the possible development of drug-resistant organisms in this group. Persons with diagnosed active tuberculosis should be started on a CDC/ATS-recommended antituberculosis drug regimen for persons at risk of drug-resistant disease. B. Health Departments

1. State and local health departments should ensure the provision of appropriate tuberculosis screening, prevention, and treatment when persons arrive in the United States from abroad. Immigrants, refugees, undocumented aliens, and other foreign-born persons who arrive in the United States often have linguistic, cultural, financial, or other barriers that impede their taking medication as prescribed or seeking necessary health care. Failure to seek appropriate examinations and treatment may lead to the spread of tuberculous infection in the United States. For this reason, these barriers to compliance must be addressed by health department officials when designing and providing tuberculosis services for the foreign-born. Many health departments have refugee health-care programs that can serve as models for providing tuberculosis-related services to all foreign-born persons, not just refugees. Such programs use outreach workers hired from the same cultural/ethnic/linguistic background as the patient populations they serve. These outreach staff members work closely with community, religious, and other organizations to set up appropriate screening and referral activities. They also work with individual patients to ensure necessary examinations and to provide directly observed therapy. Often, these outreach staff members work through government and community organizations to solve individual and family problems that hinder compliance (e.g., assist in providing housing, food stamps, transportation, and employment). All health departments that serve large numbers of foreign-born persons should have outreach workers for this purpose. Compliance should be further encouraged by health departments' use of incentives and enhancers for selected patients (e.g., cab fare, bus tokens, and child care). Effective health department record and follow-up systems must also be in place to ensure effective prevention and control procedures for new arrivals in the United States. To carry out these recommendations, health departments serving large numbers of refugees, immigrants, and other entrants will require additional outreach resources. In the United States, the Federal Government determines immigration policies; however, the impact of immigration is not felt equally by all states. A few states and many cities are heavily impacted by tuberculosis among the foreign-born. The ACET feels that the whole nation is responsible for helping heavily impacted areas deal with the problem and thus recommends that specific federal resources be made available for this purpose.

2. Local and state health departments, as part of routine tuberculosis-control activities, should analyze tuberculosis-morbidity patterns among foreign- born populations, including undocumented aliens. Screening and prevention activities should be carried out in identified high-risk groups. To facilitate this screening, the INS should set up a procedure to provide, when requested by state health departments, information on all new immigrants including the person's age, sex, family unit, and destination address,

and the originating country. Health departments should work with community leaders and other organizations in planning programs to reach these groups. To encourage participation in such programs, health departments should provide free services and should not question the immigration status of participants. Since these recommended activities will substantially increase the work load for many health departments, resources should be identified to carry them out. Health departments should also work with other groups or individuals who provide health-care services to foreign-born persons and should encourage them--through training, consultation, and the provision of supplies--to carry out programs for tuberculosis screening and preventive therapy. 3. Health departments should make every effort to provide direct observation of tuberculosis therapy and preventive therapy prescribed for foreign-born persons after they arrive in the United States. Directly observed therapy should take place at a convenient location for the patient. The first choice should be the tuberculosis clinic or a satellite office of the health department, but if the patient is unable to come there, arrangements should be made for the therapy to be given elsewhere (e.g., the patient's residence or worksite). Culturally sensitive outreach workers who speak the same language as the new arrivals should be hired and trained to work with these persons. Responsibility for directly observing therapy should not be given to a family member or friend. C. Schools and Colleges

3. Programs should be established by state and local governments or universities and colleges to make tuberculin-test screening mandatory for foreign-born students, their family members, and others who accompany foreign-born students entering the country. Requirements should state that the tuberculin test, reading, and initiation of appropriate follow-up and treatment should be completed within the first 6 weeks that a student starts school. Arrangements should be made for tuberculin-positive students to complete a full course of tuberculosis-preventive therapy unless medically contraindicated.

4. Programs should be established throughout the United States to require tuberculin-test screening at the preschool, elementary, and secondary levels for foreign-born students who enter the United States. Arrangements should be made for tuberculin-positive students to complete a full course of tuberculosis-preventive therapy unless medically contraindicated. D. Medical-Care Providers

Medical-care providers, including those in community health centers and migrant and occupational health-care programs, should tuberculin test foreign-born persons under their care. Those with positive tuberculin reactions should receive preventive therapy unless it is contraindicated. VIII. ORGANIZATIONAL GUIDELINES

A. Domestic

Regional staff of both INS and CDC should convene regional and subregional meetings among state and local health departments and INS staff at immigration entry points. These meetings should address operational issues relating to instructions given to Class A arrivals, the flow of information (e.g., implementing the recommendations listed above), information given to other foreign-born arrivals about tuberculosis, and other pertinent matters. CDC and INS should also promote the development of interagency cooperative programs at the local level that are tailored to local circumstances. The local staff should be instructed that time committed to such cooperative programs is a legitimate and priority use of staff resources. B. International

The Office of the Assistant Secretary for Health, with input from appropriate components of the Department of Health and Human Services (e.g., the Office of International Health and CDC) should explore with the Department of State (including the Agency for International Development and the Peace Corps) and international health organizations (e.g., the World Health Organization, the Pan American Health Organization, and the International Union Against Tuberculosis) opportunities to upgrade the standards and levels of tuberculosis control programs. Particular attention--especially in the areas of quality assurance and training--should be given to the countries from which most immigrants may be expected over the next 10-20 years (e.g., Mexico, the Philippines, and selected Southeast Asian countries).

The ACET recommends that all foreign-born persons applying for permanent entry into the United States continue to be screened for disease. Deficiencies in the current screening methods should be corrected. The policy requiring that persons found to have infectious tuberculosis (known or suspected) be prevented from

entering the country until treatment has rendered them noninfectious should be continued; however, persons with noninfectious tuberculosis should be permitted to enter the United States. Tuberculin skin testing and preventive therapy programs for foreign-born persons must be expanded both overseas and domestically if the goal of eliminating tuberculosis from the United States by the year 2010 is to be met.

References

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