

# Promoting Cultural Sensitivity

A Practical Guide for Tuberculosis Programs That Provide Services to Hmong Persons from Laos



**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES**  
**CENTERS FOR DISEASE CONTROL AND PREVENTION**





*Hla dej yuav hle khau; Tsiv teb tsaws chaw yuav hle hau.  
“When you cross a river, take off your sandals;  
when you emigrate from one country to another, take off your hat.”  
—Hmong Proverb*

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Female elder. © Frank Carter.

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## **For Additional Information**

For more information or for a list of available guides, please contact:

Division of Tuberculosis Elimination  
National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention  
Coordinating Center for Infectious Diseases  
Centers for Disease Control and Prevention  
1600 Clifton Road, NE, Mailstop E-10  
Atlanta, GA 30333

Phone: (404) 639-8120

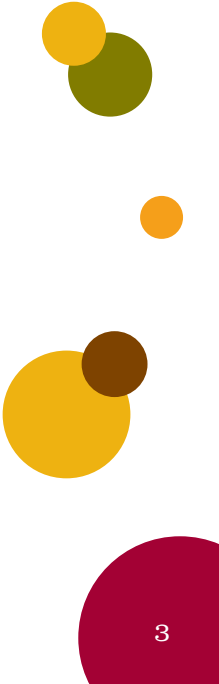
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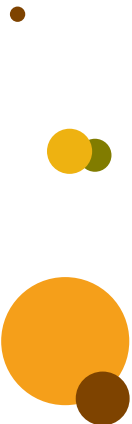
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# Introduction

*Promoting Cultural Sensitivity: A Practical Guide for Tuberculosis Programs That Provide Services to Hmong Persons from Laos* is one guide in a series that aims to help tuberculosis (TB) program staff provide culturally competent TB care to some of our highest priority foreign-born populations. Other guides in the series focus on people from China, Mexico, Vietnam, and Somalia.

## Intended Audience

This guide is intended for health care providers, community-based workers, program planners, administrators, health educators, and resettlement agencies that work with Lao Hmong (pronounced “Mung”) communities. This guide is designed to increase the knowledge and cultural sensitivity of health care providers, program planners, and any others serving Hmong people from Laos. The ultimate aim is to foster culturally competent TB care and services for the Lao Hmong in the United States.

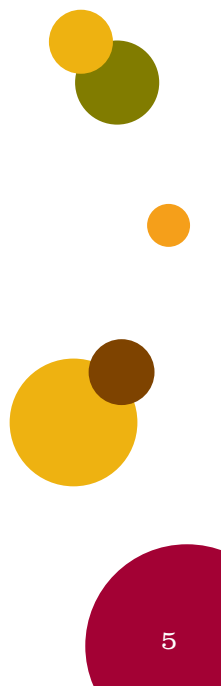
## About the Guides

Each guide in this series includes the following:

- A two-page summary of program tips.
- Chapters on history and immigration; culture; health issues; and common perceptions, attitudes, and beliefs about TB.
- A concluding summary.
- Appendices, including additional resources for working with TB patients and interpreters.
- Useful resources.
- References.

Some of the information in the guides, such as the practical tips, can be applied directly, while other sections are more informative and will help providers better understand the background and sociocultural context of the population. A deeper understanding of pertinent issues will heighten the cultural sensitivity of TB care providers, enhance communication, and improve the overall effectiveness of organizations and staff in cross-cultural settings.

The content of these guides was gathered in two ways. First, an in-depth review of TB-related epidemiologic, behavioral, and ethnographic literature on the Lao Hmong in the United States was performed. Secondly, in 2003, the Division of Tuberculosis Elimination (DTBE) at the Centers for Disease Control and Prevention (CDC) undertook a qualitative study to describe ethnographic aspects of the increasing burden of TB among five foreign-born populations. Selected major findings from this study are presented in each of the guides.





## **How to Use This Guide**

- The tips section at the front of the guide provides a summary of practical suggestions, which are also interspersed throughout the guide in textboxes. Keep these tips readily accessible and refer to them as often as necessary.
- The chapters on history, immigration, and cultural issues (Chapters 1 and 2) provide important background information on the cultural group. Depending on your needs and interests, you will want to read in depth or skim.
- Chapter 3 begins with “Health Statistics at a Glance,” which highlights TB and related health issues. The remainder of the chapter expands upon this information. If you provide direct health services, you may wish to read this section in depth.
- Chapter 4 contains findings from the CDC study on common TB perceptions, attitudes, and beliefs. If you work directly with TB patients, you will want to read this section thoroughly.
- Appendix A presents a set of questions that can be used to elicit a patient’s understanding or perception of his or her own health problems. You may wish to use these questions or slightly modified questions to begin a conversation with a new TB patient.
- Appendix B provides suggestions for working with interpreters. Refer to these suggestions when working with people with limited English proficiency.
- Appendix C provides a list of resources for both patients and providers. These resources include culture-specific educational materials and fact sheets. Use them to enhance communication with patients of different cultures.
- Refer to the other appendices as needed.



## Background

Worldwide, tuberculosis (TB) is one of the most deadly infectious diseases. Although it is curable and preventable, TB claims the lives of more than 5,000 people every day (nearly 2 million deaths per year) (World Health Organization [WHO], 2006a). TB disproportionately affects poor and marginalized groups of society who are often at higher risk for TB, both around the world and in the United States (Dubos & Dubos, 1952; Mitnick, Furin, Henry, & Ross, 1998; Sepkowitz, 2001).

Domestically, the number of TB cases has decreased steadily since 1992, but this reduction has not affected all populations equally. In 2005, the TB case rate among foreign-born persons was almost nine times that of persons born in the United States (21.9/100,000 compared with 2.5/100,000). The same year, 55% of all TB cases in the United States were among foreign-born persons (Centers for Disease Control and Prevention [CDC], 2006d). Most cases among this group result from reactivation of latent TB infection (LTBI) acquired in countries of birth with high TB prevalence (Zuber, McKenna, Binkin, Onorato, & Castro, 1997).

The high incidence of TB in the United States among foreign-born persons poses challenges to public health programs across the country (CDC, 2006d). Although disparities between U.S.-born and foreign-born TB patients are caused by multiple factors, people born outside the United States often face challenges related to personal or cultural beliefs, behaviors, and needs when accessing TB services. Attempts to control TB among foreign-born populations have sometimes been hindered by cultural and linguistic barriers, as well as by challenges related to resettlement, employment, and socioeconomic position. Understanding these issues is crucial to the prevention and control of TB among foreign-born populations.

## Cultural Competency in Tuberculosis Service Delivery

Cultural competence is an essential element of quality health care and can help improve health outcomes, increase clinic efficiency, and produce greater patient satisfaction (Brach & Fraser, 2000). Although there is no universally accepted definition of cultural competence, it may generally be understood to be a set of attitudes, skills, behaviors, and policies that enable organizations and staff to work effectively in cross-cultural situations. Furthermore, it reflects the ability to acquire and use knowledge of the health-related beliefs, attitudes, practices, and communication patterns of patients and their families in order to improve services, strengthen programs, increase community participation, and close the gaps in health status among diverse population groups (U.S. Office of Minority Health, 2006). Linguistically appropriate services are a key component of culturally competent health systems. In 2001, the U.S. Office of Minority Health issued Culturally and Linguistically Appropriate Service (CLAS) standards to help health care organizations move toward cultural competence (see Appendix C). Several of these standards are federal mandates supported by Title VI of the Civil Rights Act (1964), which prohibits discrimination on the basis of national origin and language. In summary, these standards aim to ensure that all federally funded health facilities provide services in a language understood by patients.

To move towards cultural competence, health care providers and other program staff should understand the ethnic and cultural needs of the populations they serve. Providing effective care involves taking the time and effort to learn from patients what is important to them in the experience of illness and treatment. According to medical anthropologist Arthur Kleinman, finding out “what is at stake” for the individual will provide crucial information to use in communication and in tailoring a treatment plan (Kleinman & Benson, 2006). Culture does matter in the clinic, and providers must remember that they too bring a cultural perspective to the patient-provider relationship. Increasing staff knowledge of the cultural and ethnic backgrounds of populations served is one important aspect of the CLAS standards.

## Considerations When Using This Guide

Although the information in this publication was gathered from many sources, it will not apply to all Lao Hmong in the United States. The Lao Hmong culture, as all others, is dynamic. Cultural perspectives may vary depending upon a person's age, sex, education, social class, or degree of acculturation. To ensure that TB services are both sensitive and appropriate, users of this guide are encouraged to use an approach grounded in an understanding of the cultural background of those served, while also appreciating each patient's individuality and uniqueness.

Further, providers must recognize their own beliefs and biases, as these may inadvertently be communicated to patients and families. Awareness of one's own verbal and nonverbal communication styles will help avoid social gaffes that may offend others and adversely affect the relationship. Good patient-provider relationships are built on trust and respect; therefore, providers wishing to care effectively for their patients should heighten their sensitivities to both differences and similarities and use knowledge to guide their practice (Lipson & Dibble, 2005).

## Clarification of Terms

In 2000, the U.S. Census instituted a change to the race category in which Asian Americans and Pacific Islanders were included. This change divided the "Asian/Pacific Islander" (API) category into two separate groups: "Asians" and "Native Hawaiian or Other Pacific Islanders." "Asian" is used to refer to people having origins in the Far East, Southeast Asia, or Indian Subcontinent (Grieco & Cassidy, 2001). Despite this change and the implications for collecting group-specific health data, much of the health statistics literature continues to use the overarching category API. As a result, the terms API and Asian are used throughout this guide as they are in the original source.

This guide uses the term Hmong to refer to Hmong refugees and immigrants to the United States who are from Laos.\* Members of the Hmong ethnic group live throughout Southeast Asia, but for the purposes of this guide, the term Hmong refers only to the Lao Hmong.† According to the 2000 U.S. Census, 170,000–186,000 Hmong live in the United States (U.S. Census Bureau, 2000). A more inclusive definition of Hmong (including all those who reported his or her race, ancestry, or language as Hmong) puts population estimates at 250,000–300,000 (Carroll & Udalova, 2005).

The Hmong language has two distinct dialects: White Hmong (Hmong Der) and Green Hmong (Mong Leng). In the United States, controversy has arisen recently regarding the use of "Hmong" to describe both dialects. Proponents argue that both White Hmong and Green Hmong are mutually intelligible (Duffy, Harmon, Ranard, Thao, & Yang, 2004). Some scholars, on the other hand, promote the use of two distinct terms—"Hmong" and "Mong"—to recognize their cultural and linguistic distinctions (Duffy et al., 2004). Still others debate the distinction between Green Hmong and a third dialect, Blue Hmong, with Green Hmong being the more accepted term among scholars (X. Lee, 2007). For the purposes of this guide and to avoid contributing to confusion, the authors use "Hmong" to refer to White, Blue, and Green Hmong dialects; the choice of this usage does not support one school of thought over another.

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\* Laos is officially known as Lao People's Democratic Republic or Lao PDR.

† Currently 315,000 Hmong still reside in Laos. Several million Hmong live in southwestern China; approximately 500,000 live in Vietnam, 120,000 in Thailand, and smaller numbers in Myanmar.

# Tips for Providing Culturally Competent Tuberculosis Services to Hmong Persons from Laos

Below are practical suggestions presented in *Promoting Cultural Sensitivity: A Practical Guide for Tuberculosis Programs That Provide Services to Hmong Persons from Laos*. These tips are intended for tuberculosis (TB) program staff, including program planners, managers, and providers who work with the Lao Hmong. For additional background and resources, please consult the full version of the guide.

## *Interactions with Lao Hmong Patients and Family Members*

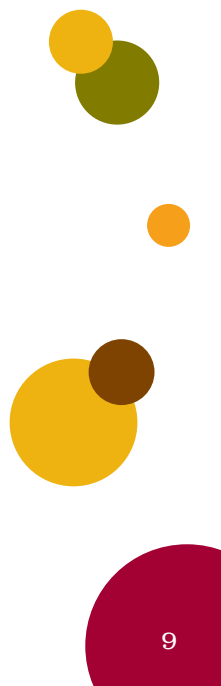
- Because many Hmong are soft-spoken, avoid speaking loudly, as it may make some people uncomfortable.
- Avoid making direct eye contact with Hmong patients. Avoid hugging or shaking hands with the opposite sex.
- Avoid outwardly complimenting Hmong children. Many Hmong believe that if a bad spirit hears such compliments, the spirit might take away the child's soul.
- Avoid refusing refreshments that may be offered at a Hmong patient's home, as this may be considered offensive. Rather, accept the offer graciously and simply place it back on the table if it is undesired. Use discretion if this causes undue discomfort to the patient.
- Be aware that a Hmong patient may present with unusual physical markings, such as bruises or redness, on his or her body. These markings may be the result of traditional healing practices, such as cupping, spooning, or coining. Inquire about the use of traditional practices or medicines.
- Hmong may believe that illness is caused by a combination of natural and supernatural causes and may therefore seek a variety of specialists for diagnosis and treatment. Be sure to ask patients about their understanding of their illness and its cause. Show respect for these beliefs and tailor educational messages accordingly.
- Consider having patients repeat what they have understood, clarifying that the intention is to make sure the information is adequately conveyed, not that their ability to understand is doubted.

## *Family and Cultural Issues*

- Before making a decision, many Hmong like to get a second opinion to be sure they are making the appropriate decision. Be aware of this and avoid rushing patients or forcing an immediate decision or response.

## *Mental Health*

- Be aware that the Hmong may be ashamed or avoid discussion of mental health issues. Discussing the common occurrence of mental illness may help allay a patient's fears and discomfort about discussing mental health.





### *Social Stigma*

- TB is stigmatized and often felt to be a cause for shame among the Hmong. Clearly explain the need for only short-term isolation during the infectious period and emphasize the effectiveness of treatment.
- Clarify the risk factors and underscore the differences between latent and active forms of TB, especially highlighting the non-infectiousness of latent TB infection.

### *Tuberculosis Diagnosis and Treatment*

- Since the Hmong language lacks words for many biomedical or physiological terms and concepts, expect lengthy interpretations in the health care setting and exercise patience. It is important for interpreters to convey concepts and terms in a way that is meaningful to patients rather than simply providing rote translations of the English terms.
- Build on the patient's understanding of TB and tailor education to improve understanding of transmission. As some Hmong may not be familiar with germ theory, discuss this concept, acknowledging different views and beliefs.
- Be aware that some Hmong may delay or avoid seeking care. Encourage early care-seeking with community talks about TB symptoms; the availability of free, effective treatment; and the importance of treatment and prophylaxis.
- Deliver clear, consistent messages. Some Hmong patients may be confused about the information they receive, especially if messages are inconsistent.
- Emphasize the safety and effectiveness of TB treatment. This may help improve treatment acceptability and adherence.
- View health care as a process involving two-way communication and equal exchange between provider and patient. Invite patients and family or clan members to talk about their understanding and perspectives of their health condition. Allow time for questions and decisions and respond using simple language.

# Chapter 1. Lao Hmong History and Immigration to the United States

## Lao Hmong Geography and History

Slightly larger than the state of Utah, Laos (officially known as Lao People's Democratic Republic) is a land-locked nation in southeast Asia, bordered by China to the north, Myanmar to the northwest, Thailand to the west, Vietnam to the east, and Cambodia to the south (Duffy et al., 2004). The capital city of Vientiane is located on the border with Thailand. The population of Laos is approximately 5.9 million (WHO, 2006c). The most recent census identified 47 distinct ethnic groups (WHO, Regional Office for the Western Pacific, 2006). The ethnic Lao comprise 52.5% of the total population and predominate in the lowlands, while ethnic minorities predominate in the highlands. About 9% of the Lao population is Hmong. The average life expectancy at birth in Laos is 55.5 years (United States Central Intelligence Agency, 2006).



The Hmong in the United States are members of a distinct ethno-linguistic group from northern Laos, where 315,000 Hmong still reside. The Hmong originated from Southern China and over time migrated to different parts of Asia in an attempt to resist political control and population pressures of the Han Chinese. Many Hmong fled to mountainous areas of central and southern China, where several million Hmong people still reside. In addition, some Hmong migrated to areas in Southeast Asia, including northern Vietnam, Laos, Thailand, and Burma (Center for Cross-Cultural Health, 2000; Culhane-Pera, Cha, & Kunstadter, 2004). During the 1960s and 1970s, the U.S. Central Intelligence Agency recruited the Hmong to fight in the “Secret War in Laos” on the side of the royal Lao government against the Communist Pathet Lao and the Vietnamese (Culhane-Pera et al., 2004).

After Laos fell to the Communist party in 1975, many Hmong were targeted for reprisals and fled to refugee camps in Thailand. Many were later resettled to various countries around the world, including the United States (Center for Cross-Cultural Health, 2000). Although many Hmong immigrated in 1975, others either remained in Thailand with unresolved immigration status, were repatriated to Laos, or eventually relocated to the United States in the late 1990s (Culhane-Pera et al., 2004).

In Laos, the Hmong way of life has been shaped by mountainous living conditions, the practice of slash-and-burn agriculture, animism and ancestral worship, and a patriarchal family and clan system. The impact of war and dislocation, as well as years of oppression, have undoubtedly influenced Hmong society in many ways (Duffy et al., 2004). The persistence of strong cultural traditions despite the isolation of subgroups is testimony to the strength of Hmong ethnic identity.

## Immigration and Resettlement to the United States

Since 1980, the Hmong population in the United States has quadrupled (Hmong National Development Inc & Hmong Cultural and Resource Center, 2004). During 2004–2006, an additional 15,256 Hmong were resettled in the United States. According to the 2000 U.S. Decennial Census, 170,000–186,000 Hmong live in the United States, mostly in California (38%), Minnesota (25%), Wisconsin (20%), and North Carolina (4%) (Culhane-Pera et al., 2004). However, Hmong community leaders believe the Hmong population is 250,000–300,000 (Carroll & Udalova, 2005; Hmong National Development Inc & Hmong Cultural and Resource Center, 2004).<sup>‡</sup>



An elderly Hmong woman makes brooms.  
© 1988 Andrea Fisch. Courtesy of Photoshare.

In 2003, the U.S. government agreed to resettle 15,707 Hmong refugees from Wat Tham Krabok, a refugee camp in Thailand (California Department of Health Services, 2004; CDC, 2005b). From June 2004 to January 2005, an estimated 9,500 refugees were resettled in 27 U.S. states, with 75% of the refugees going to California, Minnesota, and Wisconsin (Castro, 2005; U.S. Department of State, U.S. Department of Homeland Security, & U.S. Department of Health and Human Services, 2005).

From February 2005 to July 2006, an estimated 5,800 more Hmong refugees resettled in the United States; only a small number were expected to resettle in 2007 (U.S. Department of State et al., 2005; U.S. Department of State, U.S. Department of Homeland Security, & U.S. Department of Health and Human Services, 2006). In contrast to the first groups of Hmong refugees who came from a subsistence, agrarian background, the newer wave of refugees, half of whom are under the age of 14, are more familiar with Western culture and modern technology (U.S. Office of Refugee Resettlement, 2004).

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<sup>‡</sup> The higher estimate is based on an assessment conducted jointly by Hmong National Development, Inc. in Washington D.C., the Hmong Resource Center at the Hmong Cultural Center in Saint Paul, Minnesota, and Hmong and non-Hmong scholars. The assessment used 2000 Census data but a more inclusive definition of “Hmong.” Specifically, the definition included all those who reported his or her race, ancestry, or language as Hmong. Members of the Hmong community widely believe that the census represents an actual count of only half the true population, and that it is skewed to those who are more acculturated into mainstream U.S. culture in terms of education, English language ability, and other socioeconomic variables.

## Chapter 2. Overview of Lao Hmong Culture

This chapter provides an overview of Lao Hmong culture in terms of ethnicity, social structure, family, gender, language, communication, education, literacy, religion, food, dress, socioeconomic position, and traditional health beliefs and practices. Readers are cautioned to avoid stereotyping the Lao Hmong on the basis of these broad generalizations. Lao Hmong culture, as all others, is dynamic and expressed in various ways, owing to individual life experience and personality. Some Hmong living in the United States may be more or less acculturated to mainstream U.S. culture.

### Ethnicity

The Hmong are a distinct ethno-linguistic group that originated in China and migrated during the 19th century into northern Southeast Asia. There are several million Hmong in southwestern China, and 1 million in Southeast Asia, including about 500,000 in Vietnam, 120,000 in Thailand, and pockets of Hmong communities in Myanmar. The estimated 170,000–186,000 Hmong who have resettled in the United States are members of an ethnic group from Laos.

In Laos, ethnic groups are distinguished by where they live. The Hmong and several other highland groups are officially referred to as *Lao Soung* (“Lao of the mountain tops”) because they have traditionally lived at high elevations. In contrast, the *Lao*—the dominant political and cultural group in Laos—live in the lowlands along the Mekong River and are referred to as *Lao Loum* (“Lao of the lowlands”). A third group, the *Lao Theung* (“Lao of the mountain slopes”), also known as *kha*, traditionally live at lower elevations on the mountains (Culhane-Pera et al., 2004; Duffy et al., 2004).

### Social Structure, Family, and Gender

Hmong are generally group-oriented, so the interests of the group come before the interests of the individual (Duffy et al., 2004). An individual is a member of a family, and the family belongs to a clan. There are 19 Hmong clans in Laos. Members of a clan share the same surname, such as Vang, Lee, or Thao. Although they do not have a strict blood relationship, clans are socially bonded and help each other as clan brothers and sisters. Clan membership is obtained by birth, adoption, or for women, by marriage. Marriage between members of the same clan is considered incest, even though a biological relationship may not exist (Lipson, Dibble, & Minarik, 1996). A married woman may identify with both her birth family’s clan and her husband’s clan. Hmong women in the United States are increasingly taking their husband’s clan names or creating a hyphenated last name from their own and their husband’s clan names (Duffy et al., 2004).

Historically, Hmong society has been patriarchal. In Laos, households were often composed of 9–14 people, including both nuclear and extended households of married sons and their families. The family was under the authority and direction of the male head of household, usually the oldest male. Children were expected to care for their parents when their parents were old or ill. In Laos, sons traditionally inherited family property and were often the ones to receive an education. Before the war, educational opportunities were extremely limited; therefore, knowledge was passed down orally. Because elder males were considered the most knowledgeable members of the society, they were required to perform religious ceremonies to honor ancestors. The responsibility of the Hmong woman was often domestic and included preparing meals, child rearing, and managing the family’s finances. Women gained prestige by producing children, especially boys (Queensland Health, 2004).

As the Hmong have immigrated to the United States, family structures have been shifting, especially with respect to the roles of younger and older Hmong family members. Older Hmong must rely on younger family members for language translation, income, and transportation. Older Hmong men may experience a decline in social status, resulting in despair and loss of self-esteem (Queensland Health, 2004). Hmong women, on the other hand, often take jobs outside the home, while the younger generation is increasingly adopting Western customs and behaviors (Center for Cross-Cultural Health, 2000; Duffy et al., 2004). In contrast to the traditional household, the average Hmong household size in the United States is three people (U.S. Census Bureau, 2000).

Historically, in Hmong agrarian society, an early marriage served a beneficial purpose in the family and community. The birth of a son meant a woman could secure her status in the household, and as her sons married, there were more women among whom household tasks could be divided. Early marriage is still observed in the Hmong communities in the United States and is more common among females. Some studies have found that the majority of Hmong females are married between the ages of 13 and 23, and most were married by the age of 16 (Xiong, 2005).



A Hmong elder.  
© 2004 Joshua O. Stream. Courtesy of Photoshare.

## Language and Communication

Most Hmong in the United States speak one of two distinct dialects of the Miao-Yao language: White Hmong (Hmong Der dialect) or Green Hmong (Mong Leng dialect). The names of the languages originate from the colors used in traditional women's clothing of the different groups (Duffy et al., 2004). The dialects are said to be mutually intelligible to a well-trained ear, with pronunciation and vocabulary differences analogous to the differences between British and American English (Taichiming, n.d.). In the United States, approximately 60% of Hmong speak White Hmong and 40% speak Green Hmong (X. Lee, 2007). Though some Hmong report difficulty understanding speakers of a dialect not their own, for the most part, White and Green Hmong speakers seem to understand one another (Duffy et al., 2004).

In Laos, although there is no official preference for one dialect over the other, White Hmong seems to be favored in many ways. Most Hmong dictionaries only include the use of White Hmong, the Hmong writing system (Romanized Practical Alphabet) is closest to the pronunciation of White Hmong, and the majority of educated Hmong speak White Hmong (Hmong Cultural Center, 2004). Green Hmong speakers are more likely to learn White Hmong than vice versa, and younger generations are more likely to speak White Hmong. As a result, a White Hmong interpreter may be more versatile and better able to communicate, even with exclusively Green Hmong speakers (X. Lee, 2007).



## Suggestion



- Repeat questions to help ensure understanding; do not rush or force a response. If they feel pressured to give a response, some Hmong may say “okay” or “yes” when they actually mean “no.”
- Avoid refusing refreshments that may be offered at a Hmong patient’s home, as this may be considered offensive. Rather, accept the offer graciously and simply place it back on the table if it is undesired. Use discretion if this causes undue discomfort to the patient.

Some Hmong cultural values are reflected in different styles of communication and influence how people interact and communicate with one another. The Hmong tend to be humble. They may not express their true emotions in front of others. Hmong may respond with “maybe” or “I will try,” instead of offering a definitive reply. If they feel pressured, sometimes they might say “okay” or “yes” when they actually mean “no” (Hmong Cultural Center, 2006). Many Hmong are soft-spoken and may not be comfortable with loud voices. It is not part of the Hmong culture to hug or to shake hands with the opposite sex, or to make direct eye contact (Hmong Cultural Center, 2006).

It is common to be offered a beverage on a visit to a Hmong patient’s home. Hmong may consider it rude and offensive for one simply to decline a beverage. It is considered more appropriate to accept the beverage and later place it back on the table if it is unwanted. The same applies to gifts that are offered. An explanation should be given why a gift cannot be accepted, rather than simply saying “no” (Hmong Cultural Center, 2006).

### Naming Conventions

Although the Hmong naming system has undergone changes over the past half century, several patterns can be observed today. In Laos, a Hmong person’s clan name often serves as a last name (Duffy et al., 2004). In the West, a young Hmong man often has either two names (first and last name) or three names (first name, honorific name, and clan name). It is common for a Hmong woman in the United States to adopt her husband’s clan name as her last name or hyphenate both her and her husband’s clan names.

Many Hmong American children use English first names and their clan name as their last name, while others are named on the basis of their sex and birth order (e.g., an oldest son would be named *Toua* [“the first”]; the third, or youngest son would be named *Xang* [“the third”]). In Laos, upon marriage, a young man uses his original name until he is given an honorific name, usually after the birth of his first child. A Hmong woman in Laos will be identified by her husband’s name (e.g., Mrs. *Vang Thao*) until she has children, at which point she will be referred to as either the child’s mother (e.g., *Toua’s* mother) or the husband’s wife (e.g., *Vang Thao’s* wife) (Duffy et al., 2004).

### Communication in the Health Care Setting

Hmong patients often want their health care providers to demonstrate a caring demeanor and a happy, positive attitude (Barrett et al., 1998). The Hmong believe a smile or kind word is essential to good care and that basic human kindness is the most important provider characteristic. Conversation is important. Hmong patients often prefer providers to ask about their family or discuss other pleasantries before asking direct questions about their physical health (Barrett et al., 1998). The Hmong may not look directly at their provider, but may instead look down or away; direct eye contact is traditionally considered rude and inappropriate. Privacy is highly valued in Hmong society; however, within the family, it may be considered less important, as family members frequently share information and seek support from one another (Hmong Cultural Center, 2006).

Modesty is an important consideration. Many Hmong women prefer female providers, especially for gynecological visits and for pregnancy and childbirth (Barrett et al., 1998). Hmong women have been known to refuse vaginal examinations, particularly if they are performed by male providers (Office of Global Health Affairs, 2004).

### Suggestion



- Because many Hmong are soft-spoken, avoid speaking loudly, as it may make some people uncomfortable.
- Avoid outwardly complimenting Hmong children. Many Hmong believe that if a bad spirit hears such compliments, the spirit might take away the child's soul.
- Avoid making direct eye contact with Hmong patients. Avoid hugging or shaking hands with the opposite sex.

### Education and Literacy

Many Hmong have had no formal education. In Laos, the first village school was built around 1939, the first Hmong graduated high school around 1942, the first college graduates were in 1966, and the first doctorates were awarded in 1972. Since arriving in the United States in 1975, education has been a priority for many Hmong. The 2000 U.S. Census indicates that almost half (45.3%) of the Hmong in the United States have had no formal schooling, compared with 1.4% of the total U.S. population. The 2000 U.S. Census indicated that about 27.2% of the Hmong in the United States are high school graduates. Levels of Hmong educational attainment vary from state to state. In California and Alaska, Hmong are more likely to report having had no schooling, compared with Hmong elsewhere in the United States, more than 50% of whom report having had at least some schooling (Hmong National Development Inc & Hmong Cultural and Resource Center, 2004; U.S. Census Bureau, 2000).

Older Hmong residing in the United States often do not speak English and, because of the recent development of the written Hmong language in the 1950s, may be illiterate in the Hmong language (Helsel, 1993; Queensland Health, 2004; U.S. Census Bureau, 2000). Young Hmong may be literate in English, but may not be able to read Hmong or Lao, though there is an effort in the Hmong community to teach young people to speak and read their traditional language (Lipson et al., 1996).

According to 2000 U.S. Census data, 34.8% of Hmong (compared with 4.1% in the general U.S. population) were linguistically isolated. A linguistically isolated household is defined by the census as a household in which no adult speaks only English or speaks English “very well.” However, this was a significant decrease from 60% in 1990 (Hmong National Development Inc & Hmong Cultural and Resource Center, 2004).

## Religion

Traditional Hmong beliefs emphasize the importance of harmonious relationships with the spiritual world (Center for Cross-Cultural Health, 2000; Duffy et al., 2004; Lipson & Dibble, 2005). Those who have retained their traditional beliefs are generally animists who believe that all natural objects and individuals have multiple souls. According to this system of beliefs, protective and wild spirits inhabit many objects and natural settings in the world. If a person offends a wild spirit, the spirit can place a curse on that person, causing illness and suffering. Spirits are appeased through ceremonies that range from simple chants to lengthy rituals, including the sacrifice of animals. Animism encourages respect for animals and nature and general harmony with the environment. Many Hmong still believe in animism, ancestor worship, and the use of a shaman to communicate between the spirit and human worlds.

During the second half of the 20th century, missionaries were active in Laos, which led many Hmong to convert to Christianity before emigrating to the United States and other resettlement countries. Sponsors of Hmong refugees in the United States also have influenced Hmong conversion to Christianity (Capps, 1994). By some estimates, roughly one-half of the Hmong in the United States are Christian and may hold some combination of traditional and Christian beliefs (Duffy et al., 2004). Thus, despite traditional Hmong beliefs, some Hmong may consider spirit communication to be evil and will refrain from seeking the services of a shaman (Capps, 1994). Christian Hmong may believe in the concept of multiple souls, but consider one soul to be bound to the body until death, at which point the soul goes to heaven or hell (Capps, 1994).

## Food and Dress



As in other Asian cultures, rice is a main staple and is eaten with small amounts of meat, fish, and green vegetables. Noodle dishes and soups are also common. Hmong dishes are generally not spicy, but some people may add hot chili condiments and salty sauces according to individual taste. Consumption of dairy products and fruit is less common. Perinatal foods and those consumed when ill include plain, boiled rice soup, sometimes with small amounts of chicken (Lipson & Dibble, 2005).

Today, traditional Hmong clothing is generally only worn on special occasions, such as Hmong New Year (similar to the Vietnamese and Chinese New Year) and weddings (Duffy et al., 2004). This is true for the Hmong both in the United States and in Laos. For men, traditional clothing consists of a black shirt tucked in and long black pants belted at the waist with an embroidered or plain red band. Women’s clothing is more elaborate, consisting of a headband, a black or multicolored shirt, long pants, and a striped or plain, plaited white skirt, depending on ethnicity (Hmong Leng or Hmong

Female elder. © Frank Carter.

Der). The pants and skirt are frequently belted with a red cloth band tied around the waist. A single apron-like cloth is worn over the skirt (Duffy et al., 2004). Before 1975, when the Hmong from Laos had little contact with the Hmong from other countries, clothing could distinguish Hmong ethnicity. More recently, increased contact and trade between Lao Hmong and Hmong from other countries (including China, Thailand, and Hmong in the United States) has made dress more a symbol of one's wealth than of group identity. The Hmong from each ethnicity are increasingly wearing others' costumes (Duffy et al., 2004).



Hmong mother and child.  
Courtesy of Healthy House, Merced, CA.

Some Hmong wear accessories such as red necklaces made from silver and brass, white cloth bands around their wrists, and red or white strings on their wrists, necks, or ankles. Hmong traditionally believe that these amulets have the power to keep evil spirits out of the body and to keep the soul inside (Culhane-Pera et al., 2004). Amulets may be worn for health and religious purposes (Hmong Cultural Center, 2006). In addition to wearing amulets, some Hmong may undergo shaman rituals to treat illness and, in doing so, put blood or parts from sacrificed animals (e.g., teeth or nails) on their clothing. The Hmong may avoid removing this clothing because of the belief that the spirit of the dead animal provides protection from illness (Culhane-Pera et al., 2004).

## Changing Values, Changing Roles

For Hmong families in the United States, adaptation to the U.S. lifestyle has demanded new survival strategies that have inevitably changed the pattern and rhythm of their lives. Patterns of early marriage and large families that were essential for survival in Laos are changing to patterns involving formal education, employment, delayed marriage, postponed first childbirths, and smaller families. Although these are significant and rapid changes that affect the cultural identity of Hmong communities, they do not necessarily reflect changes in the value of family to the Hmong. For Hmong Americans, the sense of family remains extremely strong. Adapting to their new U.S. surroundings, however, has demanded that new knowledge and survival strategies be adopted. Consequently, some Hmong sense a loss of control over many aspects of their lives, including the loss of influence over their own children, who are growing up with new U.S. values and are facing serious challenges as a result (Helsel, 1993). Hmong culture continues to evolve as roles and meanings change in the U.S. setting.

## Socioeconomic Position in the United States

Many Hmong in the United States, especially older men, have largely relied on self-employment (e.g., farming or gardening), menial jobs, or welfare programs for income and health services. As younger Hmong have become more educated, families now depend upon the younger generation to enter the workforce in order to support the entire family and ensure its financial survival (Culhane-Pera et al., 2004). Most employed Hmong men and women hold manufacturing jobs (54%); followed by jobs in the arts and entertainment industry (41%); then jobs in retail trade, education, and health and human services (9% each) (Hmong National Development Inc & Hmong Cultural and Resource Center, 2004).

The median Hmong household income in 2000 (\$32,076) was about three-fourths that of the general U.S. population (\$41,994). The Hmong per capita income was only \$6,600, or one-third that of the general population. This gap may be explained by the fact that the average number of family members in a Hmong household is three times that of the general U.S. population. Although gaps continue, they have decreased significantly since 1990, and incomes vary across states. The Hmong median household income was much lower in California (\$24,542) and Alaska (\$25,179), compared with other states. It was highest in Georgia (\$54,000) and Colorado (\$50,058) (Pfeifer & Lee, 2005). The higher incomes may be due to the success of agricultural businesses that pioneering Hmong have established in Southern states (Vang, 2005).

National data indicate that 38% of Hmong lived below the poverty level in 1999, compared with 12% of the entire population and 18% of foreign-born people in the United States (U.S. Census Bureau, 2000). While still high compared with the overall U.S. population, the percentage of Hmong living in poverty has declined greatly since 1990, when it exceeded 60%. Differences by state showed that the poverty rates were highest in California and Alaska, where they exceeded 50% (Pfeifer & Lee, 2005).

## Traditional Health Beliefs and Practices

The traditional Hmong belief structure is based primarily on animism (the belief that all natural objects and individuals have multiple souls), ancestral worship, and reincarnation. Hmong spiritual beliefs are strongly connected to their sense of health and well-being. Hmong may view illnesses as having a natural or a spiritual cause, with the latter resulting from a “loss of souls” or actions or misdeeds that may have offended an ancestor’s spirit (California Department of Health Services, 2004). A common Hmong belief is that a soul can separate from its body and may be unable to find its way back home. The Hmong also may believe that an illness is caused by a combination of natural and supernatural causes. Other causes of illness are believed to stem from spells or curses, violation of taboos, accidents, fright, and infectious diseases (Queensland Health, 2004). Traditional healing practices rely on certain individuals to diagnose and treat ailments; these include shamans, herbalists, magical healers, and others. Each practitioner has a specialty for which he or she is used. For instance, a shaman is used for spiritual healing, while an herbalist diagnoses illness and dispenses herbal medicines. Because of these differences, the identified cause of an illness will influence which healing practices are sought (Culhane-Pera et al., 2004).

Hmong Christians may not believe in soul loss or other traditional beliefs, but may maintain their belief in fright-illness (*ceeb*), or symptoms or illnesses that occur after a frightening event. For traditionally religious Hmong, fright illness is usually treated with traditional massage techniques, followed by a soul-calling ceremony conducted by a shaman. Christian Hmong who believe in fright illness may use the traditional massage technique for treatment, but substitute prayer for a soul-calling ceremony (Capps, 1999).



A Hmong youth in Laos in a community vocational program. Products are sold to tourists, and the income benefits his school. © 2002 Myles F. Elledge. Courtesy of Photoshare.

Illnesses believed to be caused naturally are thought to be caused by an imbalance of metaphysical forces, similar to the Chinese concept of yin/yang, in which a balance of natural elements is essential to health, while an imbalance causes illness or disease. The Hmong believe people get sick from hot or cold, dry or wet, and weather changes, as well as from eating hot or cold foods or liquids which can cause a thermal imbalance of the body. Small creatures that are visible, such as lice, or that are unobservable, such as microorganisms, are thought to cause infectious diseases. It is believed that some diseases run in families and that susceptibility to disease is related to body constitution, for instance, to weak immunity, bad fat or blood, heavy or weak bones, or thinness (Culhane-Pera et al., 2004).

## Suggestion



- Hmong may believe that illness is caused by a combination of natural and supernatural causes and may therefore seek a variety of specialists for diagnosis and treatment.
- Be sure to ask patients about their understanding of their illness and its cause. Show respect for these beliefs and tailor educational messages accordingly.

Many Hmong believe that simply talking about an illness means that they are asking the illness to occur. This belief is closely tied to the emphasis on sustaining harmonious relationships with the spiritual world to maintain health and well-being. It is believed that many diseases are caused by *dabs*, or bad spirits which, when offended, can cause pain, disease, or misfortune (Reznik, Cooper, MacDonald, Benador, & Lemire, 2001). Some Hmong may hesitate to discuss their tuberculosis symptoms as a result of these beliefs.

Illnesses that are not thought to be caused by spiritual influences are often diagnosed by physical appearance, symptoms, and history. They are often treated by massage, cupping, spooning, coining, poking with needles, or herbal medicines. Some of these procedures can cause bruising or unusual markings on the skin. In the United States, the Hmong may combine the use of these traditional methods with a whole range of modern medical care, such as physical therapy or chiropractics (Culhane-Pera et al., 2004).

## Suggestion



- Be aware that a Hmong patient may present with unusual physical markings, such as bruises or redness, on his or her body. These markings may be the result of traditional healing practices, such as cupping, spooning, or coining.
- Inquire about the use of traditional practices or medicines.

For illnesses believed to be caused by spiritual influences, the Hmong may turn to prayers, rituals, chants, and religious ceremonies performed by a shaman (*txiv neeb*). Shamans are highly influential and well-respected members of the Hmong community. Shamans are considered intermediaries between the physical and spiritual world who can cure illness by restoring a person's soul or placating offended ancestors (Cha, 2003). Shamanistic ceremonies are often two-part: a diagnosis ceremony in which a shaman may enter a trance state in order to communicate with spirits to determine the cause of an illness, followed by a healing ceremony if the diagnosis is accepted (Cha, 2003). During the healing ceremony, specific animals may be sacrificed and thus heal the individual. These animals are selected for their value to the spirit world and their strength to fight for an ill person's soul (Johnson, 2002).

Shamans differ from other traditional healers in that shamans are said to be spiritually chosen, whereas others are trained to heal (Deinard & Dunnigan, 1987). Although many Hmong in the United States continue to visit shamans to cure illness, some (often those who have converted to Christianity) may consider aspects of shamanism to be pagan (Deinard & Dunnigan, 1987). Generally, Christian Hmong will pray individually or with their church or pastor rather than perform traditional ceremonies; however, this practice varies among different Christian denominations (Capps, 1994; Culhane-Pera et al., 2004).

Other types of traditional healers also may be consulted, including herbalists, magical healers, or specialists. Herbalists usually diagnose illnesses and dispense herbal medicines made from roots, barks, or animal parts. Magical healers are usually apprenticed to experienced healers, from whom they learn their skill and obtain spiritual connections. There are a variety of magical healers who use specific rituals to diagnose and treat people with illnesses and injuries, including burns, broken bones, and bleeding. Lastly, the Hmong might rely on ordinary men and women who are not recognized as specialists but who have the knowledge and skills to return a person's lost souls (Culhane-Pera et al., 2004; U.S. Department of Health and Human Services, 2004).

## Medical Decision Making

Hmong culture places a high value on the family and clan. Because important decisions are likely to affect all family members, medical decision making is hierarchical with the oldest male family member making the decisions in consultation with other family and clan members (Barrett et al., 1998; Johnson, 2002). Women generally do not make important health care decisions for themselves; instead, their husbands or oldest sons are consulted. Ultimately, the family or clan leader has the final decision-making power (Johnson, 2002). Decision making may take time and require a practitioner's patience, as many Hmong may want to consult with family and clan members.

### Suggestion



- Before making a decision, many Hmong like to get a second opinion, often from clan leaders, to be sure they are making the appropriate decision.
- Refrain from pressuring patients for a decision before they have had time to consult with others.

## Hmong Perspectives on Health Care in the United States

As noted earlier, before immigration to the United States, many Hmong spent years in refugee camps in Thailand. Wat Tham Krabok, a Buddhist temple 2 hours northeast of Bangkok, has hosted Hmong refugees since the 1970s. With only one health clinic and a shortage of both staff and supplies, the residents of Wat Tham Krabok had limited access to Western-based clinical health care before 2004. Additionally, the clinic was severely underused because of mistrust of both the medical system and the staff. As a result, most Hmong refugees living at Wat Tham Krabok relied on traditional health care and Thai health providers outside of the clinic (U.S. Department of Health and Human Services, 2004).

In assimilating and adapting to the United States and its health care system, some Hmong may face conflicts that arise because of differences in traditional and Western medical beliefs and practices, such as differing perspectives on disease etiology. For instance, the Hmong may fear removal of internal organs because of possible interference with reincarnation, or they may fear being unconscious or being put under anesthesia for surgery. Many Hmong hold the notion that blood, once drawn, is not replaced (Deinard & Dunnigan, 1987); this belief may lead to fear or nonacceptance of multiple blood tests. These concerns, along with the opinion that Western treatment may not be effective, may lead to initial refusal or nonadherence to treatment (Johnson, 2002). Reinforcement of the safety of blood tests and the effectiveness of tuberculosis treatment may help allay potential fears and concerns.

### Suggestion



- When working with the Hmong, as with all populations, avoid stereotyping and consider patients as unique individuals.
- Some Hmong may fear blood draws, believing their blood will not be replaced. Therefore, reinforce the safety of blood tests.
- To enhance acceptability and adherence to treatment, highlight the effectiveness of TB treatment and prophylaxis.

In addition to traditional health care practices, many Hmong use Western medicines even though they may lack knowledge about anatomical and physiological functions of the human body. Additionally, the Hmong language lacks words that correlate directly with Western words for disease processes. Consequently, translation in health care settings sometimes requires lengthy explanations and is sometimes impossible. The Hmong may have difficulty comprehending illnesses or diseases they have never encountered before, and some Hmong find chronic illnesses, such as diabetes and hypertension, particularly challenging to comprehend because of the concept of a controllable but not curable condition (Cha, 2003; Johnson, 2002).

Though family-based decision making still persists, there is evidence that the Hmong in the United States are transitioning to a more individualistic approach. Some Hmong will voice their opinions about treatment decisions or will even make decisions without family approval; however, they may still focus on Hmong cultural beliefs and practices when making these decisions. Decisions also may be based on insurance availability, language services, and the relationship with and reputation of the provider (Culhane-Pera et al., 2004).



## Suggestion



- Acknowledge the importance of family-based decision making. Always remember that it is the patient's right to consult with whomever he or she chooses in order to make a decision.
- Make the effort to ask who needs to be involved in consultations and the decision-making process.

Communication between health care providers and Hmong patients can be challenging even when using Hmong interpreters. In a study conducted in Minnesota, findings suggested that providers did not fully understand how the Hmong conceptualized causes and treatments of some ailments. Additionally, patients felt pressured to accept “new” methods on faith alone. The study also found that interpreters experienced role conflicts when they were faced with having to persuade patients to accept medical approaches that contradicted traditional experiences. To address this potential conflict, the authors of the Minnesota study recommended hiring people who could represent the patient’s viewpoint and who held an interagency position distinct from an interpreter’s role (Deinard & Dunnigan, 1987).

Although age and gender distinctions among the Hmong are important, each individual is unique. Like people from other countries, some Hmong have professional degrees and speak English fluently, while others have had no schooling and speak no English. Some retain their animist spiritual traditions, while others have adopted Christianity. Similarly, some Hmong prefer shamans to physicians, and others want state-of-the-art medical technology (Barrett et al., 1998). Therefore, when working with the Hmong, as with all populations, you must consider an individual’s unique circumstances and needs and avoid stereotyping.

## Suggestion



- Explore ways to communicate disease origins and processes in ways that are understandable and helpful to the Hmong patient. In most situations, complex explanations of pathophysiology are probably unnecessary.
- Consider employing ombudsmen or people who represent the patients’ viewpoints during consultation, people who have a distinct role from that of interpreter.

## Chapter 3. The Health of Persons from Laos

### Health Statistics at a Glance

#### Tuberculosis

##### In Laos

- Overall tuberculosis (TB) incidence was 156 per 100,000 in 2004 (WHO, 2006c).
- Among new TB cases, 2% are multidrug-resistant (CDC, 2005b; WHO, 2006c).
- Among adults, 0.5% of TB cases are coinfecting with HIV (WHO, 2006c).
- Bacille Calmette-Guérin (BCG) vaccine coverage at birth is 96% (WHO, 2006b).

##### In the United States

- In California, home to more Hmong than any other state in the United States, the TB case rate among the Hmong in 2000 was 64.6 per 100,000, compared with 9.5 per 100,000 for all populations statewide (California Department of Health Services, 2004).
- During 1999–2003, 7.5% of culture-positive TB cases among Hmong in California were multidrug-resistant at diagnosis (California Department of Health Services, 2004).

#### HIV/AIDS

- In Laos, an estimated 1,700 adults and children were living with HIV/AIDS in 2003 (U.S. Agency for International Development, 2005).
- Laos is considered a low HIV-prevalence country, with an estimated adult HIV seroprevalence of 0.08% (WHO, 2005).

#### Diabetes Mellitus

- In California, Asians were 1.5 times more likely to have a diagnosis of diabetes than non-Hispanic whites in 2005 (National Institute of Diabetes and Digestive and Kidney Diseases, 2005).

#### End-stage Renal Disease

- Asians in the United States are nearly twice as likely to develop end-stage renal disease (ESRD) as non-Hispanic whites (Karter et al., 2002).
- Rates of new ESRD cases are increasing at a rate of 11% per year for Asian/Pacific Islanders (APIs) compared with 6% per year for non-Hispanic whites (U.S. Department of Health and Human Services, 2000).

#### Cancer

- During 1988–2000, cancer incidences among Hmong in California indicate an elevated risk for cancers of the stomach, liver, cervix, and nasopharynx, compared with non-Hispanic whites. The Hmong have a 35-fold higher risk for nasopharyngeal cancer (Mills, Yang, & Riordan, 2005).
- Compared with other APIs in California, the Hmong are diagnosed at a later disease stage (Mills et al., 2005).
- Cervical cancer has relatively low diagnosis rates among Hmong women, but the death rate (23.1 per 100,000) is four times higher than that of non-Hispanic white women (R. Yang, Mills, & Riordan, 2004).

## **Tuberculosis Among the Lao Hmong**

### **In Laos**

Although TB rates among the Hmong in Laos are unknown (WHO, Regional Office for the Western Pacific, 2006; WHO, 2006c), in the last few years, substantial progress in TB control in Laos has been made towards the 2010 goal of reducing TB prevalence and mortality by one-half. This progress is largely attributable to the Stop TB Special Project in the Western Pacific Region. According to the World Health Organization, the estimated TB case rate in Laos in 2004 was 156 per 100,000, while the estimated number of new cases was 9,019.

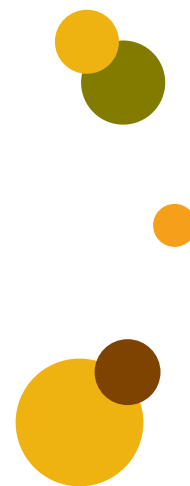
### **In Wat Tham Krabok Camp, Thailand**

In December 2003, the U.S. Department of State approved resettlement to the United States of approximately 15,000 Hmong refugees from the Wat Tham Krabok camp in Thailand. The first group of Hmong refugees began to resettle in the United States in late June 2004. Upon resettlement in the United States, during March 2004–January 2005, a total of 272 refugees, including 11 (4%) children aged 15 years or younger, received a diagnosis of TB disease. Thirty (11%) of the 261 persons aged 15 years or older had acid-fast bacilli (AFB) sputum-smear-positive pulmonary TB. Global Positioning System mapping revealed widespread distribution of TB cases throughout the Hmong living quarters.

### **In the United States**

In the United States, 88 TB cases were reported among persons from Laos in 2004, and 84 cases were reported in 2005 (CDC, 2006d). Among the 9,459 Hmong refugees from Wat Tham Krabok who were resettled in the United States during June 2004–January 2005, a total of 37 cases were reported, 4 of which were multidrug-resistant (see Table 3-1) (CDC, 2005b). The case rate among the Hmong in the United States overall was 508 per 100,000. Four cases were diagnosed among the refugees who arrived during February 2005–July 2006, one of which was multidrug-resistant (CDC, 2006e).

The high number of TB cases among this refugee population can be attributed to the high incidence rate at the Hmong refugee camp in Thailand. Multiple factors, such as overcrowded living conditions, delayed diagnoses, and limited health resources have contributed to the large TB burden among the Lao Hmong in the United States and abroad. (Please see Appendix F for information on the 2007 Technical Instructions for Tuberculosis Screening.)



**Table 3-1. Tuberculosis (TB) disease among Hmong refugees resettled from Thailand to the United States, by state, Jun 2004–Jan 2005\***

State	Persons resettled	TB disease diagnoses after resettlement	Multidrug-resistant TB diagnoses <sup>†</sup>
California	3,236	24	4
Minnesota	3,319	4	0
Wisconsin	2,139	7	0
Michigan	195	1	0
Ohio	44	1	0
15 other states <sup>‡</sup>	526	0	0
<b>Total</b>	<b>9,459</b>	<b>37</b>	<b>4</b>

\* Centers for Disease Control and Prevention, 2005b.

<sup>†</sup> Defined as resistant to at least isoniazid and rifampin.

<sup>‡</sup> Alaska, Arkansas, Colorado, Georgia, Illinois, Kansas, Massachusetts, Nebraska, North Carolina, Oklahoma, Oregon, Rhode Island, Texas, Virginia, and Washington.

### Bacille Calmette-Guérin

Bacille Calmette-Guérin (BCG) is currently used in many parts of the world as a vaccine against TB; in Laos in 2006, BCG vaccine coverage at birth was 96% (WHO, 2007). Post-vaccination tuberculin reactivity is not an indicator of the protective efficacy of BCG vaccination, because it is not an indicator of immunity to *Mycobacterium tuberculosis*. Reaction to a tuberculin skin test (TST) caused by BCG vaccination wanes rapidly in individuals who receive the vaccine in the neonatal period and more slowly in those vaccinated at an older age (Menzies, 2000).

CDC's current TB testing guidelines state that a positive reaction to tuberculin in BCG-vaccinated persons indicates infection with *M. tuberculosis* when the person tested is at increased risk for recent infection or has medical conditions that increase the risk for disease. (See Table 7 in the June 09, 2000, MMWR<sup>§</sup> for criteria for tuberculin positivity.) Therefore, a history of BCG vaccination should not influence decisions about treatment of latent TB infection (LTBI) (CDC, 2000).

§ Centers for Disease Control and Prevention. (2000). MMWR Weekly: Targeted tuberculin testing and treatment of latent tuberculosis infection. Retrieved November 8, 2007, from <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr4906a1.htm>.

## Tuberculosis-related Health Issues

Understanding other health issues affecting the lives of Lao Hmong patients provides critical information for TB care providers. Conditions that can increase the risk of LTBI progressing to TB disease include the following (CDC, 2004):

- HIV/AIDS.
- Previous TB (in a person who received inadequate or no treatment) indicated by chest radiograph findings.
- Prolonged corticosteroid therapy and other immunosuppressive therapy.
- Recent infection with *M. tuberculosis* (within the past 2 years).
- Substance abuse (especially intravenous drug use).
- Silicosis.
- Diabetes mellitus.
- End-stage renal disease.
- Cancer of the head and neck.
- Hematologic and reticuloendothelial diseases.
- Intestinal bypass or gastrectomy.
- Chronic malabsorption syndromes.
- Low body weight (10% or more below ideal).

Of these conditions, those that are most relevant to Hmong from Laos are further explored here.

### HIV/AIDS

Once a person is infected with *M. tuberculosis*, HIV infection is the strongest known risk factor for developing TB disease. While the average probability of progressing from TB infection to disease is less than 10% over the lifetime of a person not infected with HIV, the risk is 5%–8% per year for those who are HIV-infected and not on Highly Active Anti-Retroviral Therapy (HAART) (Markowitz et al., 1997; Selwyn et al., 1989), a combined use of several antiretroviral drugs that inhibits the ability of the virus to multiply in the body (National Cancer Institute, n.d.).

The effect of HAART on the progression from TB infection to TB disease is not well understood (Markowitz et al., 1997; Selwyn et al., 1989), though some evidence indicates that it may have a protective effect on the risk of developing TB (Badri, Wilson, & Wood, 2002; Girardi et al., 2000; Girardi et al., 2004; Jones, Hanson, Dworkin, & DeCock, 2000; Santoro-Lopes, Felix de Pinho, Harrison, & Schechter, 2002). In addition, research suggests that active TB disease accelerates the course of untreated HIV infection, which may lead to more opportunistic infections and earlier death (Lopez-Gatell et al., 2007; Thomas, 2006; Whalen et al., 1995; Whalen et al., 2000; Zar et al., 2007).



***In Laos***

At the end of 2003, the estimated number of adults and children living with HIV/AIDS in Laos was 1,700. Adult HIV prevalence in urban areas was 1.1% (U.S. Agency for International Development, 2005). In 2003, 170 new HIV infections were reported. Overall, Laos is considered a low HIV-prevalence country, with an estimated adult HIV seroprevalence of 0.08% (WHO, 2005). This fact does not necessarily suggest low risk. Rates of sexually transmitted diseases such as chlamydia and gonorrhea are high, especially among female sex workers in urban areas, such as the capital city of Vientiane and in border provinces (U.S. Agency for International Development, 2005; WHO, 2005). The populations most at risk for HIV infection are sex workers and their clients, as well as those with sexually transmitted infections.

***In the United States***

At the end of 2004, in the 35 areas with long-term, confidential, name-based HIV reporting, 2,767 Asian/Pacific Islanders (APIs) were living with HIV/AIDS. At the time of diagnosis, 77% were men, 22% were women, and 1% were children. The estimated number of annual AIDS cases diagnosed among APIs in the United States increased from 346 in 1998 to 497 in 2003. Through 2003, an estimated 7,166 APIs had been diagnosed with AIDS, of which 87% were men (CDC, 2003).

Although APIs represented less than 1% of all HIV/AIDS cases in the United States during 2001–2004, they had the highest estimated annual percentage increase in HIV/AIDS diagnosis rates of all U.S. races and ethnicities (8.1% for males and 14.3% for females) (CDC, 2006c). HIV transmission in API men occurs primarily among men who have sex with men (MSM). Other API men at higher risk are those who have high-risk heterosexual contact or who are injection drug users (IDUs). In 2005, MSM transmission accounted for 71% of all AIDS diagnoses among APIs to date (CDC, 2006a). Among API women, HIV transmission occurs most often among women who have sex with men who are at increased risk. Other API women at higher risk are IDUs (CDC, 2006a).

Table 3-2 presents the estimated number of diagnosed AIDS cases in the United States in 2005 and cumulatively since the beginning of the epidemic. Asian/Pacific Islanders comprise less than 1% of the total HIV/AIDS cases (CDC, 2005a).

**Table 3-2. Total AIDS cases in the United States by race/ethnicity**

Race/Ethnicity	Estimated AIDS cases in 2005	Cumulative estimated AIDS cases through 2005	Percentage of total AIDS cases	Rate per 100,000 population
White, non-Hispanic	11,780	385,537	39.1	5.9
Black, non-Hispanic	20,187	397,548	40.4	54.1
Hispanic	7,676	155,179	15.8	18.0
Asian/Pacific Islander	483	7,659	0.8	3.6
American Indian/Alaska Native	182	3,238	0.3	7.4

## Substance Use

Both TB and drug use are prevalent in crowded, low-income areas. As a result, drug users are 2–6 times more likely to contract TB than nonusers (CDC, 2004). Substance use rates among the Hmong refugees at Wat Tham Krabok camp in Thailand are unknown, and there are conflicting reports about rates of illegal drug use (U.S. Department of Health and Human Services, 2004).

Located in Southeast Asia’s “Golden Triangle” region, Laos became the world’s leader in opium production in 1995 (Booth, 1996). In Laos, opium is commonly used recreationally, medicinally, and for rituals. Among the Hmong, opium historically has been a main cash crop, medicine, and drug of choice (Culhane-Pera et al., 2004; Lao Family Community of Minnesota, n.d.; G. Y. Lee, 1981). In the United States, it is used primarily by middle-aged and elderly Hmong as a painkiller or as an emotional coping strategy (Lao Family Community of Minnesota, n.d.). In Minnesota, only a small percentage of the Hmong regularly smoke opium, though packages concealing opium continue to be seized by law enforcement officials (National Institute on Drug Abuse, 2005).

Despite a low overall prevalence of cigarette smoking among APIs in general, there are significant variations in smoking rates among different API groups. Cigarette smoking rates tend to be particularly high among individuals from Laos and other Southeast Asian countries (American Lung Association, 2006). Smoking rates are important to note because of potential links between smoking and TB (den Boon et al., 2005; Kolappan & Gopi, 2002; Lin, Ezzati, & Murray, 2007). A case control study conducted in India during 1993–1996 showed a positive association between tobacco smoking and pulmonary tuberculosis (Kolappan & Gopi, 2002). More recently, both a population survey conducted in South Africa and a meta-analysis showed consistent evidence that smoking is associated with an increased risk of contracting TB (den Boon et al., 2005; Lin et al., 2007).

## Diabetes Mellitus

People with medical conditions such as diabetes mellitus are at a higher risk of progressing from LTBI to TB disease. Tuberculosis occurs more frequently in people with diabetes and causes greater mortality (Guptan & Shah, 2000). The risk of developing diabetes increases significantly when Asians immigrate to the United States, owing to changes in lifestyle, diet, and physical activity (Fushimoto, 1995). According to the National Institute of Diabetes and Digestive and Kidney Diseases, approximately 7% of the U.S. population has diabetes. The total prevalence of diabetes (both diagnosed and undiagnosed) among Asians in the United States is not available. However, in California, Asians were 1.5 times more likely to receive a diagnosis of diabetes as non-Hispanic whites (National Institute of Diabetes and Digestive and Kidney Diseases, 2005).


## End-stage Renal Disease

End-stage renal disease (ESRD) occurs when the kidneys are no longer able to function at a level necessary to sustain life. Among people diagnosed with chronic renal failure, infection with *M. tuberculosis* is more likely to progress to TB. Asians in the United States are almost twice as likely to develop ESRD as non-Hispanic whites (Karter et al., 2002). In addition, annual increases in ESRD rates are greater among APIs than among non-Hispanic whites. Rates of new ESRD cases are increasing at a rate of 11% per year for APIs, compared with 6% per year for non-Hispanic whites (U.S. Department of Health and Human Services, 2000).

## Cancer

Some of the most commonly diagnosed cancers among the Hmong are leukemia and non-Hodgkin’s lymphoma, as well as cancers of the nasopharynx, stomach, liver, and pancreas (Mills & Yang, 1997; Mills et al., 2005). People diagnosed with leukemia, lymphoma, or other cancers and on high-dose immunosuppressive therapy are at increased risk for progression from LTBI infection to





active TB. According to the California Cancer Registry, 749 Hmong in California had a diagnosis of cancer during 1988–2000 (Mills et al., 2005). In a study of multiple cancer sites conducted in California during 1988–2000, the rates among the Hmong for leukemia, and nasopharyngeal, liver, and stomach cancers were much higher than the rates in the overall API population (Mills et al., 2005). Rates were lower among the Hmong for prostate, breast, lung, and colorectal cancers than among APIs overall (Mills et al., 2005). When compared with non-Hispanic whites in California, the Hmong experienced a twofold increased risk for leukemia and a 35-fold increased risk for nasopharyngeal cancers (Mills et al., 2005). Both genetic and environmental factors are thought to contribute to the high prevalence of nasopharyngeal carcinoma among the Hmong (Pinzon-Perez, 2006).

The rate of cervical cancer among the Hmong is higher (36.6/100,000) when compared with the rate among APIs overall (11.8/100,000) (Mills et al., 2005). Cervical cancer has an extremely high death rate among Hmong women because of delayed care seeking (Cutler, 2006). When cervical cancer is found early, it is curable in 92% of cases (Wausau Area Hmong Mutual Association & American Cancer Society, 2006).

### **Hepatitis B**

Although having hepatitis B does not increase a person's risk of progressing to TB disease, it may affect TB and LTBI treatment because TB drugs are potentially hepatotoxic. While the exact prevalence of hepatitis B among the Hmong is unknown, research has shown the Hmong and other Southeast Asians have high rates of chronic hepatitis B infection. Compared with the U.S. average, hepatitis B is 25–75 times more common among immigrants from Cambodia, Laos, Vietnam, and China (U.S. Office of Minority Health, 2005). People from Southeast Asia are also at high risk for perinatal transmission. While the majority of people infected with hepatitis B get rid of the virus within 6 months, roughly 10% of those infected develop a chronic, life-long infection. Having chronic hepatitis B increases the chance of permanent liver damage (Office of Global Health Affairs, 2004).

## **Special Issues**

### **Mental Health**

For the Hmong, the severe trauma and stress inflicted by war, repression, and years in refugee camps have led to high rates of depression, post-traumatic stress disorder, and other psychological illnesses (Barrett et al., 1998). Physical limitations from war injuries and a sense of powerlessness since immigrating to the United States, compounded by high unemployment among older adults who are not fluent in English, contribute to high rates of depression. Family problems, including marital and intergenerational conflicts often stemming from role reversals, are not uncommon. The adjustment for older men who formerly occupied positions of status in Laos can be particularly difficult, as they often can find only menial jobs or no employment at all (Cerhan, 1990). The adjustment for women is compounded by fewer resources and more job discrimination. Additionally, women's level of adjustment has been shown to be directly related to the well-being of their families. Hmong women's psychological well-being predicts their husbands' depression at a later time but not vice versa. Also, the women's psychological well-being is significantly related to their children's academic successes (while their husbands' is not) (Goodkind, 2006, citing Rumbaut, 1989).

One health issue that is of particular concern for Hmong males is Sudden Unexplained Nocturnal Death Syndrome (SUNDS). SUNDS is a regional phenomenon within Asia that occurs in populations that are culturally and genetically distinct. It primarily affects healthy young males in their mid-20s or 30s (Munger, 1987). Hmong folklore postulates that SUNDS is caused by an evil female spirit who visits in the form of a “nightmare” (*dab tsog*) which causes extreme stress and triggers sudden death (Adler, 1995).



SUNDS was first noted in the United States in the late 1970s and early 1980s, when there were at least 51 documented sudden unexplained deaths of Laotian and Kampuchean refugees (Baron et al., 1983). Fifty of the 51 deaths were of young males and seemed to have no obvious cause. Findings from a case control study conducted among Lao Hmong at the Ban Vinai refugee camp in Thailand (Munger, 1987) suggested an association between sudden death in sleep and a family history of the syndrome, as well as with previous nonfatal sleep disturbances. Limited evidence also suggested higher prevalence among members of the Green Hmong subgroup (Munger, 1987).

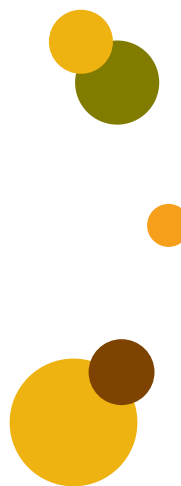
While SUNDS is not fully understood, research suggests a relationship between the syndrome and some level of cardiomegaly (a cardiac abnormality characteristic of increased cardiac work load) (Kirschner, Eckner, & Baron, 1986), and that SUNDS may be the same as Brugada syndrome (Vatta et al., 2002). There is additional evidence that SUNDS may be closely related to post-traumatic stress disorder, depression, and other post-immigration stresses, causing some migrants from affected populations in Asia to be susceptible to sudden death in sleep (Adler, 1995; Munger, 1987; Pinzon-Perez, 2006). No recently published data on SUNDS prevalence can be found.

With regard to mental health care in the United States, the Hmong are likely to be referred to non-Hmong professionals for counseling services. Mental health issues can be extremely complex, particularly in light of cultural differences in beliefs concerning psychological well-being and illness. The Hmong language has no word for mental illness, except for one word that means “crazy” in English (Lipson & Dibble, 2005). Self-disclosure and emotionality are generally considered by the Hmong to be signs of weakness (Cerhan, 1990, citing Voigt, 1984), and mental health problems are not easily acknowledged.

Consequently, the Hmong may be less inclined to seek assistance from counselors openly offering “mental health services” than from counselors in settings such as schools, medical centers, or job placement and employee assistance centers. Also, whereas Western clinicians may tend to diagnose illnesses such as major depression and post-traumatic stress disorder and recommend psychoactive medications and counseling, traditional Hmong practitioners may attribute certain psychological issues to soul loss and recommend treatment by a shaman. To help ensure services are effective and appropriate, consider including Hmong cotherapists or indigenous healers in the treatment plan (Cerhan, 1990).

### **Parasitic Infections**

Laos is one of the less-developed countries in the Western Pacific Region. Because of poor living conditions, many Hmong are at high risk for parasitic infections. In Laos, diarrhoeal disease is the second leading cause of death among children (Goodman, 2005; Rim et al., 2003). In Laos during 2000–2002, a national survey of the prevalence of intestinal parasitic infections among primary school-aged children found a cumulative rate of 61.9%, with certain provinces showing higher prevalence for soil-transmitted versus fish-borne parasites (Rim et al., 2003). Intestinal parasites often remain a problem for people resettling in the United States. A study conducted in 1999 in Minnesota, home to the second largest percentage of Hmong in the United States, showed that 29.5% of refugees from Southeast Asia had some type of intestinal parasitic infection (Lifson, Thai, O’Fallon, Mills, & Hang, 2002).



## Chapter 4. Common Perceptions, Attitudes, and Beliefs About Tuberculosis Among the Lao Hmong

### Findings from Tuberculosis-specific Behavioral and Social Science Research

In 2003, the Centers for Disease Control and Prevention (CDC) conducted an ethnographic study of 24 Laos-born Hmong in the United States to understand better the tuberculosis (TB)-related experiences, perceptions, and attitudes of the Lao Hmong. In this chapter, this study is referred to as “the CDC study.” (See Appendix D for a description of the study design, methods, and study population.) The information presented in this chapter comes from both the CDC study and other TB-related behavioral and social science literature concerning the Hmong. It should be noted that the CDC study findings have limited generalizability because of the study’s small, non-randomly selected sample; thus, the information will not apply to all Hmong.

Program staff should use discretion in determining how applicable the information may be for their specific context. However, taken as a whole, the research findings suggest several programmatic implications. One persistent programmatic implication is that because the Hmong language lacks words for many biomedical or physiological concepts, communication requires proxy words to convey these ideas. New Hmong words may even need to be created in order to convey Western terms or concepts. Additionally, without past exposure to modern medicine or education, many Hmong do not have an understanding of human anatomy or how organs function. Consequently, translation can be lengthy and require extra patience on the part of health care providers, interpreters, and patients (Johnson, 2002).

**Although they associate TB with the lungs, many Hmong may not understand its cause or means of transmission.** The CDC study found that many Hmong commonly associated TB with the lungs, referring to TB as *mob ntsws*, which translates to pain or illness (*mob*) and lungs (*ntsws*). Some added *kab* (insects or bugs, also germs) making the term *kab mob ntsws*.

### Suggestion



- Be prepared for lengthy translations in the health care setting, since the Hmong language lacks words for many biomedical or physiological concepts.
- Consider asking patients to repeat what they have understood, clarifying that the intention is to make sure the information is adequately conveyed, not that their ability to understand is doubted.

The CDC study found that although the Hmong were familiar with TB symptoms such as chest pain, coughing, and headaches, some also associated TB with general pain, loss of appetite, flu symptoms, skin discoloration, and stomachache. Beliefs about what causes TB and how it is transmitted varied considerably. Many respondents believed TB could be passed from person to person, but many were unaware that it could be passed through the air. Common misconceptions included that TB was transmitted by sharing eating utensils, through body fluids, or by kissing, and that TB was associated with or was a type of cancer. Some participants believed TB was caused by “insects like bugs eating at your lungs,” or unhygienic conditions, as one respondent explained, “When a person eats or drinks unclean, unwashed stuff, they can get [TB].”

## Suggestion



- Ask TB patients what they understand about their health condition and how the condition came about. With an understanding of their perspective, explore ways to best communicate their condition and its origins in a way that is simple and understandable. Complex explanations will likely only cause confusion.
- Build on the patient's understanding of TB and tailor education to improve understanding of transmission. As some Hmong may not be familiar with germ theory, discuss this concept, acknowledging different views and beliefs.

**Many Hmong believe they are at low risk for TB.** In the CDC study, most participants who were not diagnosed with TB felt they were at low risk. Furthermore, all Hmong respondents with a history of TB believed their risk of getting TB was low before their diagnosis. Some explained they felt protected because they did not socialize frequently or were cautious about their social contacts. For instance, one respondent reported, “I am pretty careful about the people who I hang around with. No druggies, smokers, or bad people.” Another said, “[I] do not sleep around with other people.” Still other respondents believed that most people in their new environment are simply immune to TB. One participant responded, “I’m not around Asians too much, and most Americans are pretty immune to TB.” One participant, who clearly associated TB with unhygienic conditions, felt his family’s risk was low because “[we] wash all our fruits and vegetables very good before we eat them.”

**Although many Hmong report they would go to a medical doctor, many Hmong may put off seeking medical care until the illness has progressed to an extreme state.** The overwhelming majority of respondents in the CDC study felt that if a Hmong in the United States suspected he had TB, he would go to a medical doctor. A few respondents felt that a Hmong would not seek any care at all, stating that “[The person would do] nothing, because the doctors only use you to make money.” Traditionally, Hmong patients pay healers what they can afford, with no set price, and often payment does not occur until after the illness has been cured (Cha, 2003).

For the Hmong, illness is defined often as the inability to fulfill daily obligations; thus, treatment may be put off until the illness has progressed to an extreme state (Reznik et al., 2001). Several published studies have noted that Hmong in the United States commonly delay or avoid seeking care. One cancer study found that more than half of Hmong women chose to receive no treatment for cervical cancer (R. Yang et al., 2004), while another study found that the Hmong experienced later disease stages at diagnosis than other Asian/Pacific Islanders (Mills et al., 2005). Literature also suggests that holding health beliefs that conflict with Western-based recommendations, mistrust of providers, and reluctance to adhere to suggested treatment may contribute to delays in care-seeking behavior (Fadiman, 1997; Pinzon-Perez, 2006; K. Yang, 2003).

## Suggestion



- Be aware that some Hmong may delay or avoid seeking TB care. Encourage early care-seeking with community talks about TB symptoms; the availability of free, effective treatment; and the importance of the treatment and prophylaxis.
- Recognize that if Western-based recommendations conflict with traditional views on health and illness, some Hmong individuals may be reluctant to follow the recommendations. Understanding patient views on the disease and treatment course is critical.

**TB is stigmatized and often a cause for shame among the Hmong.** In the CDC study, many Hmong respondents who did not have TB disease felt that others would change the way they treated a person if they knew the person had TB. Many felt that friends and family would fear socializing and, as a result, relationships would be severed or severely restricted. Others spoke of community members criticizing or making fun of the person with TB. One middle-aged man elaborated, “People would be afraid of being around her all the time. She would lose a lot of friends because no one would want to have to take care of her. The sick person may have a lot of evil spirits around her.” Another respondent felt that a TB diagnosis meant certain death because the person was cursed.

For some Hmong, a TB diagnosis is shameful. In the CDC study, half of the respondents with TB disease reported that their diagnosis caused them embarrassment or depression. More than half did not or claimed they would not tell anyone, fearing social isolation or ridicule for themselves or their families. One participant explained, “The community would not want anything to do with this person. [TB] will only bring shame onto his or her family. And he might be disowned by his family. It’s very bad in our community.” The fears associated with TB stigma among the Hmong are not entirely unfounded; those participants in the CDC study who did tell others about a TB diagnosis reported that friends and co-workers began keeping a physical distance.

Though only a minority of people in the CDC study believed that their self-perception would change if they had TB, several strong feelings were reported. One middle-aged male respondent said, “If I ever got it, I would not want to live. I would rather die. I wouldn’t be able to take care of my family. I would not be a strong person anymore.”

## Suggestion



- Recognize that because medical decision making involves the family and clan, the stigma associated with TB and the fear of social isolation may be heightened. Clearly explain the need for only short-term isolation during the infectious period and emphasize the effectiveness of treatment.
- Clarify the risk factors and underscore the differences between latent and active forms of TB, especially highlighting the noninfectiousness of latent TB infection.

**The Hmong may be confused about their diagnosis.** In the CDC study, respondents reported a range of understanding about and reaction to a latent TB infection (LTBI) diagnosis. Asked to discuss their interpretation of the results, most felt confused by what health care workers told them. One respondent complained, “At first they said I had [TB], then I didn’t have it. I was a mess. Anyway, they said I should just take the medications because they are unsure if I have it or not. It’s just for protection in case I do have it. So to me, if I don’t have it, why treat it?” The most common reactions to a diagnosis of active TB disease were confusion about what it meant and how it was acquired.

**The challenges with medications include perception of inconsistent information, duration, and side effects.** Participants in the CDC study reported challenges with taking both LTBI and active TB medications. Some Hmong had trouble remembering to take pills; some were confused about why they had to take medicines. As one elderly woman explained, “I was confused as to why I had to take [medicine] if I didn’t have [TB].” Several participants with active TB disease reported difficulties with side effects from their medication, describing pain, fatigue, difficulty swallowing pills, and a generally “terrible” feeling.

When asked whether anything would have made taking TB medication (either for LTBI or TB disease) easier, respondents suggested reducing the number of pills per dose, offering a “shot” instead of pills, shortening the regimen length, providing more consistent information about diagnosis and treatment, and offering home delivery of medications. Emphasizing the benefits of prophylactic TB treatment may enhance treatment acceptability and adherence. Providing health care may best be viewed as a cooperative undertaking between the patient (and relevant individuals) and the provider, rather than a unidirectional process that requires the patients to make all the adjustments (Deinard & Dunnigan, 1987).

## Suggestion



- Deliver clear, consistent messages. Some Hmong patients may be confused about the information they receive, especially if messages are inconsistent.
- Emphasize the safety and effectiveness of TB treatment. This may help improve treatment acceptability and adherence.

**Age and English literacy may play a role in whether a Hmong person wants information on TB.** More than half of the Hmong respondents in the CDC study stated that they would like to receive information about TB. Older people were more likely to decline TB information, as were those who were female, were illiterate in English, or did not finish secondary school. Respondents who reported already receiving TB information were also more likely to want additional information; those who had not received any TB information were more likely to decline.

All of the respondents who wanted information indicated that they desired more detailed information about TB transmission, pathology, and treatment because they acknowledged a poor understanding of TB. One man with active TB disease said, “I don’t know about others, but I still don’t know anything about TB. I would like more detailed information on what it is.” Those who did not want additional information often felt that they would not understand because they were either “too old” or could not read.

## Suggestion



- Make efforts to tailor TB information to the literacy level of patients. In the CDC study, those who did not want additional information about TB often said they did not want the information because they believed that they would not understand it.
- View health care as a cooperative undertaking involving a two-way and equal exchange between provider and patient.

Respondents in the CDC study also described the most effective mechanisms for providing information to the Hmong community about TB symptoms and the importance of treatment. They suggested talks or presentations to community members, videos shown in waiting rooms or to take home and watch with their families, radio public service announcements, and pamphlets. Videos and pamphlets were more often cited by those who had finished secondary school and were literate in English.

## Suggestion



- In the CDC study, many participants said videos were their preferred health educational format, along with public service announcements on the radio, community talks, and pamphlets. Address these preferences whenever possible to help ensure messages are effective.
- Consider using pictures or graphics to communicate with people with limited literacy.

### **Language barriers and distrust of doctors may contribute to dissatisfaction with services.**

Although a few respondents in the CDC study reported being satisfied with services, more than half of the participants reported problems or complaints. Some Hmong indicated distrust of doctors and anger or disbelief regarding diagnoses. Some Hmong in the CDC study were skeptical of Western treatment and medicine because they had heard that “doctors experiment on Hmong people” and that the treatment doctors suggest “does not benefit Hmong people, but helps the doctor learn more or practice skills.” One respondent in the CDC study with active TB disease refused to believe a positive TB diagnosis, saying that the health care workers “made it up because they did not like [him].” These feelings further emphasize the importance of building trust and maintaining good rapport in order to treat TB patients effectively in the Hmong community. The literature indicates that these feelings are not unique to the participants in this study (Cha, 2003; Deinard & Dunnigan, 1987; Johnson, 2002).

Despite negative feedback, some respondents described positive experiences. One woman said, “They were very nice to me. (They) gave me a lot of information and always made sure that I understand everything. They have Hmong interpreters all the time and that was very useful.” For several people, the demeanor and attitude of the Hmong staff person was of equal importance to language ability. The most common suggestions for improvement included hiring Hmong staff who are “caring, understanding, friendly, and not rude.” One participant said of health care workers, “They need to spend more time with us when we are there instead of rushing us out so fast.” Taking these suggestions into consideration can help improve rapport and cross-cultural communication.

## Suggestion



- Hire interpreters who exhibit caring and understanding because demeanor and attitude are often considered equally as important as language ability.
- Improve cross-cultural communication to help build a trusting relationship.



## Conclusion

To meet the challenge of controlling tuberculosis (TB) in the United States, the care and treatment of all patients should be appropriate and effective, regardless of country of origin, language, or cultural factors. That entails not only addressing the linguistic and cultural needs of populations with or at risk for TB, but also focusing on the individual's perspective. This guide is intended to provide an understanding of the social and cultural setting from which some Lao Hmong patients may come. It is not meant to stereotype or stigmatize; on the contrary, the authors of this guide fully recognize and appreciate the rich diversity of the myriad groups who have settled in the United States.

This guide aims to remind TB care providers that culture does matter in the clinic and that they too bring a cultural perspective to the patient-provider relationship. Providing effective TB care involves taking the time and effort to learn from patients what is important to them personally in the experience of illness and treatment. In the words of Arthur Kleinman, ascertaining “what is at stake” for the individual will provide crucial information to use in tailoring the treatment plan. Being “Hmong” may not be a significant issue to a patient; being responsible for the care of multiple family members and juggling two part-time jobs without health insurance may. In short, focusing on the patient as an individual and maintaining open, two-way communication will foster effective TB care.



## Appendix A. Using Kleinman's Questions to Understand Patients' Perceptions of Tuberculosis

While this guide encourages a broad understanding of Lao Hmong culture, it is also essential to remember that each individual has personal beliefs. Several methods exist to help health care providers understand how an individual thinks about his or her own health problems. One method is to use a series of questions developed by medical anthropologist Arthur Kleinman (CDC, 1999; Kleinman, 1986). These questions, which have been tailored to tuberculosis (TB) here, can help providers see the illness from the patient's point of view by eliciting the patient's understanding of TB—its name, cause, timing, effects, severity, and treatment.

These questions also address the fears a patient may have, how TB may impact the patient, and the effects TB may have on his or her family or friends. Health care providers can use these questions to discuss TB with patients. The questions also can be adapted to address issues related to latent TB infection. These questions may be incorporated into an existing health assessment or an ongoing assessment of a patient's educational needs and treatment adherence. Questions can be reworded in accordance with a patient's cultural, linguistic, and educational backgrounds. The number and sequence of the questions also can be tailored to the circumstances.

### Suggestion



Use Kleinman's questions to understand your patients' perceptions of TB.

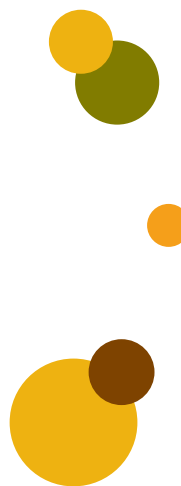
- What do you call your illness (the problem)?
- What do you think causes TB?
- Why do you think you got sick when you did?
- What do you think TB does to your body?
- How severe is your sickness?
- What kind of treatment do you think you should receive?
- What are the most important results you hope to receive from this treatment?
- What are the main problems TB has caused?
- What do you fear most about TB?
- How do your family members or close friends feel about you having TB?

## Appendix B. Tips for Working with Interpreters

A good interpreter is able to communicate effectively across cultures and convey important nuances. The most effective interpreters have been trained and assessed for active listening skills and for the ability to extract meaning and use descriptions when there are no language equivalents (CDC, 2006b). Whenever possible, make an effort to match the sex, general age, and social class of the patient and interpreter. In general, avoid using family members as interpreters, especially if sensitive topics are being discussed. An unknown third party may better be able to maintain confidentiality and provide unbiased communication (CDC, 2006b).

When communicating through an interpreter, speak slowly and clearly. Use a positive tone of voice that conveys your interest in the patient. Face the patient, not the interpreter. Speak in short units of speech, allowing sufficient time for the interpretation. Avoid medical terminology or professional jargon, as well as slang and idiomatic expressions. Clear, simple, lay language is generally most effective.

Encourage the interpreter to translate the patient's words as closely as possible and not to paraphrase, polish, or omit anything that may result in loss of the patient's true meaning. Be aware of nonverbal communication such as silence, distance between individuals, eye contact, emotional expressiveness, and body movements (CDC, 2006b). You may wish to ask the interpreter for clarification of the meaning of any nonverbal cues to be sure you have understood correctly any cross-cultural meaning. Above all, be patient: careful interpretation often takes considerable time.





## Appendix C. Tuberculosis and Cultural Competence Resources

The following resources contain additional information on tuberculosis (TB) education and culturally competent care. See Appendix G for additional references used in the guide. Web site addresses for nonfederal organizations are provided solely as a service to the users of this guide; the Centers for Disease Control and Prevention (CDC) is not responsible for their content. Provision of these addresses does not constitute an endorsement of any organization by CDC or the federal government, and none should be inferred. At the time this guide went to press, all links were active.

### General Tuberculosis Resources

#### Centers for Disease Control and Prevention, Division of Tuberculosis Elimination

<http://www.cdc.gov/tb>

This Web site is for health care professionals, patients, and the general public. The site can be used to search for TB guidelines, surveillance reports, education and training materials, and other TB-related Web links and resources.

#### Office of Refugee Resettlement, U.S. Department of Health and Human Services, Administration for Children and Families

<http://www.acf.hhs.gov/programs/orr>

This Web site outlines the types of refugee assistance provided by the U.S. government. It also contains retrospective data about countries of origin and destination states.

#### Tuberculosis Education and Training Resources

<http://www.findtbresources.org>

This Web site is for health care professionals, patients, and the general public. The site can be used to search for TB education and training materials in various languages and to locate TB-related Web links.

### Resources For Hmong Patients

#### Bridging Hmong America: Tuberculosis (Video)

<http://www.health.state.mn.us/divs/idepc/diseases/tb/videos.html>

This is a patient education videotape developed by the Wisconsin Department of Health that features Hmong actors and health care providers and discusses both active TB disease and latent TB infection (LTBI). An English summary of content is provided with the videotape. Limited free copies are available.

#### Hmong Health Web Site

<http://www.hmonghealth.org>

This Web site can be used to search for information on different illnesses that often affect Hmong patients. The site is fully bilingual with information in both English and Hmong dialects. The Web site is maintained by the Wausau Area Hmong Mutual Assistance Association with funding from the National Library of Medicine.

### **Tuberculosis Fact Sheets in Hmong and Lao Languages**

<http://spiral.tufts.edu/topic.html#tb>

This Web site, made available by SPIRAL (Selected Patient Information Resources in Asian Languages), is the product of a joint initiative of the South Cove Community Health Center in Massachusetts and Tufts University Hirsh Health Sciences Library. Patient information in seven Asian languages, including Hmong and Lao, is available on a wide variety of health topics, and there is a wealth of Web resources, including Asian Community Centers and Asian Health Web sites.

### **Tuberculosis Fact Sheets in Hmong and Other Languages**

<http://www.health.state.mn.us/divs/idepc/diseases/tb/factsheets/translations.html#hmong>

This Web site from the Minnesota Department of Health contains fact sheets on active TB disease, contact investigations, and treatment information for LTBI and other resources. The fact sheets are available in a variety of languages and are designed to be understandable and easy to read.

## **Resources For Providers**

### **The American Medical Association**

<http://www.ama-assn.org>

<http://www.ama-assn.org/ama/pub/category/6759.html>

The American Medical Association offers a Cultural Competence Compendium, a 460-page resource guide, to help physicians and other health professionals communicate with patients and provide individualized, respectful, patient-centered care. Selected sections of the book are available at the Web site.

### **Bridging Hmong America: Tuberculosis (Video)**

<http://www.health.state.mn.us/divs/idepc/diseases/tb/videos.html>

This is a patient education videotape developed by the Wisconsin Department of Health that features Hmong actors and health care providers and discusses both active TB disease and LTBI. An English summary of content is provided with the videotape. Limited free copies are available.

### **The Center for Cross-Cultural Health**

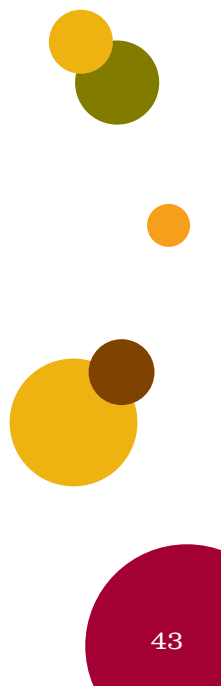
<http://www.crosshealth.com>

The Center for Cross-Cultural Health has produced materials to guide communities faced with the challenge of providing culturally competent care. Sample language policies, guidelines for working with interpreters, instruments to help measure an organization's cultural competency, and lists of translated health education materials are available.

### **Cough It Up!**

<http://www.dshs.state.tx.us/lab>

This videotape, available at the Texas Department of State Health Services' Web site, provides information about how to supply health care providers with a sputum sample.



### **Culturally and Linguistically Appropriate Services in Health Care**

<http://www.omhrc.gov/clas>

The National Standards on Culturally and Linguistically Appropriate Services (CLAS), the CLAS Standards, makes recommendations for national standards for culturally and linguistically appropriate services in health care. Based on an analytical review of key laws, regulations, contracts, and standards currently in use by federal and state agencies and other national organizations, these standards were developed with input from a national advisory committee of policy makers, health care providers, and researchers. Each standard is accompanied by commentary that addresses the proposed guidelines' relationship to existing laws and standards and offers recommendations for implementation and oversight to providers, policy makers, and advocates.

### **CulturedMed**

<http://culturedmed.sunyit.edu/index.html>

CulturedMed is a Web site promoting culturally competent health care for refugees and immigrants. The library also houses a research center containing relevant print materials. The bibliographies and links found on the Web site contain items that discuss health beliefs or ethnographic information about various ethnic groups.

### **DiversityRx**

<http://www.diversityrx.org>

DiversityRx is a clearinghouse of information on how to meet the language and cultural needs of minority, immigrant, refugee, and other populations seeking health care.

### **EthnoMed**

<http://www.ethnomed.org>

The EthnoMed Web site hosted by Harborview Medical Center, University of Washington, Seattle, contains information about cultural beliefs and medical issues pertinent to the health care of recent immigrants to Seattle, many of whom are refugees fleeing war-torn parts of the world. Information on the Hmong can be found in the "other groups" section of the site, listed under "Lao."

### **Guidance to Federal Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons**

<http://www.hhs.gov/ocr/lep/revisedlep.html>

This Web site offers guidance to help federally funded programs comply with regulations affecting people with limited English proficiency.

### **Hmong Cultural Center**

<http://www.hmongcenter.org/index.html>

This Web site provides adult basic education as well as social, cultural, and historical background and health information on the Hmong. The center is located in the Twin Cities, Minnesota, and provides a wide range of services for the Hmong community.

### **Linguistic and Cultural Aspects of Tuberculosis Screening and Management for Refugees and Immigrants**

[http://ethnomed.org/ethnomed/clin\\_topics/tb/tb.html](http://ethnomed.org/ethnomed/clin_topics/tb/tb.html)

This site presents the transcript of a presentation that focused on TB screening, management of active cases, and linguistic and cultural differences between Western and non-Western approaches to medicine.

**Refugee Health Information Network**

<http://www.rhin.org>

The Refugee Health Information Network is a database of multilingual public health resources for refugees, asylees, and their health care providers. Available resources include health education materials in various languages and formats (including brochures, fact sheets, and videos), information on populations and cultural competence for providers, and links to a variety of Web sites.

**Tuberculosis and Cultural Competency: Notes from the Field**

<http://www.umdnj.edu/globaltb/start.html>

This newsletter was developed to provide an ongoing educational forum for cultural competency training. The content includes a “teaching case” that reflects the experiential knowledge of health care providers working in TB, as well as relevant information and resources for culturally proficient skills development. The newsletters, which are published twice annually, are available on the Web site of the New Jersey Global Tuberculosis Institute under “Product List A–Z.”

**Title VI of the Civil Rights Act of 1964**

<http://www.hhs.gov/ocr/discrimrace.html>

This Web site provides information regarding the Civil Rights Act of 1964. The Office for Civil Rights (OCR) within the U.S. Department of Health and Human Services (HHS) is responsible for enforcing the nondiscrimination requirements of Title VI of the Civil Rights Act of 1964. It applies to covered entities under the jurisdiction of OCR. This jurisdiction includes entities that conduct programs or activities that receive federal financial assistance from HHS.

**Tuberculosis Training and Education Network**

<http://www.cdc.gov/tb/tbetn/default.htm>

The Tuberculosis Training and Education Network (TB ETN) was formed to bring TB professionals together to network, share resources, and build education and training skills. Members include representatives from TB programs, correctional facilities, hospitals, nursing homes, federal agencies, universities, the American Lung Association, Regional Training and Medical Consultation Centers, and other U.S. and international organizations interested in TB education and training issues. TB ETN’s Cultural Competency Subcommittee has developed a cultural competency resource list that is available to health care professionals.





## Appendix D. Centers for Disease Control and Prevention Study Summary

A total of 24 Hmong born in Laos were selected to participate in the 2003 Centers for Disease Control and Prevention (CDC) study of tuberculosis (TB). These respondents were recruited from one study site, Ramsey County, St. Paul/Minneapolis, Minnesota. This site was recruited on the basis of local epidemiology, interest, and ability to participate. To elicit a range of responses, both TB patients and people recruited directly from the community (i.e., people who were not patients at the local TB clinic) were included.

In the CDC study, sites played an active role in choosing which foreign-born groups to recruit. In general, CDC aimed to include the same group in two sites to facilitate analysis of the influence of local context on participant responses. Although this guide focuses on data from the Lao Hmong, four other groups included in the overall study were Mexicans, Vietnamese, Somalis, and Chinese.

### Study Population and Participant Recruitment

In Ramsey County, Minnesota (St. Paul), Hmong participants born in Laos were chosen by the study site staff to participate. This decision reflected the local epidemiological trends, as well as the need for TB-specific ethnographic information regarding this population.

This study used a convenience sampling strategy. In addition to country of birth, specific criteria and informal quotas for specific subgroups were identified, with local circumstances determining final sampling. The sample criteria were as follows:

- Persons aged 18 years or older.
- Persons residing within the area served by the local health department.
- Only one respondent per household.
- Approximately 50% of respondents with fewer than five years' residency in the United States.

Participants were recruited either through the community contacts of the bilingual, bicultural researchers (50%) or through recruitment of TB clinic patients by clinic staff (50%). The clinics recruited a balance of patients who 1) had a negative tuberculin skin test, 2) had received a diagnosis of latent TB infection (LTBI), or 3) had received a diagnosis of TB disease. The combination of quota and snowball sampling strategies was not random, but instead followed methodology appropriate to qualitative research. The demographics and TB status of the Lao Hmong study group are presented in Tables D-1 and D-2.



**Table D-1. Description of Lao Hmong cohort**

	<b>N = 24, n (%)</b>
Recruited from clinic/health department	12 (50)
Age at interview (mean, range)	47.5, 18–88
18–24	4 (17)
25–44	6 (25)
45–64	11 (46)
≥65	3 (13)
Years in United States (mean, range)	18.2, 2–28
1–4 years	1 (4)
≥5 years	23 (96)
Female	12 (50)
From urban area	13 (54)
Completed high school	12 (50)
English speaking	12 (50)
English literate	10 (42)
Any language literate	15 (63)

**Table D-2. Tuberculosis (TB) status of Lao Hmong cohort**

	<b>N = 24, n (%)</b>
Screened*	15/24 (63)
TB disease diagnosis	6/15 (40)
Started TB treatment	6/6 (100)
Completed or currently on TB treatment	6/6 (100)
LTBI <sup>†</sup> diagnosis	5/15 (33)
Started LTBI treatment	2/5 (40)
Completed or currently on LTBI treatment	1/2 (50)

\* Screened by one or more methods, such as tuberculin skin test, chest radiography, symptom screening, or sputum.

<sup>†</sup> Latent TB infection.

## Appendix E. Glossary of Hmong Terms

Health care professionals can use this list of tuberculosis (TB)-related terms and phrases and their Hmong translations to facilitate communication by saying or pointing to the Hmong word or phrase that they would like to communicate to their Hmong patient. This glossary is not, by any means, meant to be used in lieu of interpretation services. Hmong language interpreters also may wish to refer to this table during consultations.

Terms and Phrases	Hmong Equivalent
<b>Greetings</b>	
Hello, my name is _____.	Nyobzoo, Kuv lub-npe hu ua _____.
I'm sorry, I do not speak Hmong.	Thovtxim, Kuv tsis paub haislus Hmoob.
We are waiting for an interpreter.	Peb tseem tos tus pes-lus.
<b>Symptoms of TB</b>	
Cough	Hnoos
Cough with blood	Hnoos nrog ntshav
Cough with phlegm	Hnoos tau nhoos qeev
Chest pain	Mob hauvsiab
Fever	Kuv taubhau ua daus no
Chills	Ua daus no
Night sweats	Kub mob hmo ntuj/Tawm hw mho ntuj
Appetite loss	Tsis qablos nojmov
Weight loss	Poob pounds
Fatigue/tiredness	Tsaus-tsaus/Nkees-nkees
<b>Side Effects from TB Medications</b>	
Skin rash	Ua txho/Xoo pob
Blurred or changed vision	Tsaus-muag/Qhovmuag plooj
Upset stomach	Plab tsaim/Raws plab
Abdominal pain	Mob plab mog
Fatigue/tiredness	Tsaus-tsuas/Nkees-nkees
Appetite loss	Tsis qablos nojmov/yuag zog
Nausea	Xeevsiab
Vomiting	Ntuav
Yellowish skin or eyes	Daj-ntseg
Dark urine	Tso zis dub
Tingling sensation in hands and feet	Rhiab tes-taw
Joint aches	Mob pobtxha/Mob qib txa
Balance problems	Tsis sib-haum/Qaug ncig leeg

Hearing loss	Lag ntseg
Ringing in the ears	Pob-ntseg nrov
Easy bruising	Doog yoojyim
Slow blood clotting	Ntshav majmam daig
<b>Traditional Health Beliefs</b>	
Tuberculosis	Mob ntsws dub
Soul loss	Poob plig/Plig xiam
<b>Traditional Health Specialists</b>	
Have you seen a (an) _____	Koj puas tau pom _____
Doctor?	Tus khomob?
Herbalist?	Tshuaj Hmoob?
Magical healer?	Tusk ho khawvkoob?
Shaman?	Txivneeb?
<b>Traditional Health Remedies</b>	
Coining	Kav nrog nyiaj-npib
Cupping	Kav nrog khob
Pinching	De xais
Steaming	Cub pa
Any over-the-counter drugs?	Tshuaj muag?
<b>Useful Phrases</b>	
Are you experiencing any side effects from the TB medicine?	Koj puas muaj dabtsi mob ntawm?
The following are possible side effects of TB medications (see list of side effects).	Cov hauv-qab no yog cov tejzaum yuav muaj mob rawsli tus kabmob hais los sauv.
Please point to all the ones you are experiencing.	Thov taw rau cov ua koj tau muaj ibzaug los ntawv.
It is important that you take all of your medicine even if you start feeling better.	Yog ib qho tseemceeb heev koj yuas tsum noj tag-nrho koj cov tshuaj koj thiaj li yuav zoo.
Do you understand what the doctor/nurse is telling you about TB?	Koj puas to-taub cov lus tus khomob piav qhia rau koj txog TB?
Please repeat back to the doctor/nurse what he/she just told you about TB.	Thov koj rov qab hais cov lus tus khomob nyuam-qhuav hais rau koj txog TB ntawv rov rau nws.
Do you have any questions about TB?	Koj puas muaj lus noog txog dabtsi?
Do you have any other questions?	Koj puas muaj lwm yam lus noog dabtsi ntxiv thiab?



## Appendix F. Tuberculosis Screening Policies for Persons Overseas

### Technical Instructions for Tuberculosis Screening

Tuberculosis screening is required for people overseas who are applying for permanent legal status and for nonimmigrants required to have an overseas medical examination (referred to as “applicants”). The Technical Instructions for Panel Physicians summarized here apply to refugees in Thailand and supersede all previous Technical Instructions. This summary is adapted from the 2007 Technical Instructions issued by the Immigrant, Refugee, and Migrant Health Branch of the Division of Global Migration and Quarantine (DGMQ), Centers for Disease Control and Prevention (CDC) (CDC, 2007). For more details or questions about the Technical Instructions, please contact CDC’s Immigrant, Refugee, and Migrant Health Branch at 404-498-1600.

**Any applicant for whom the clinical suspicion of tuberculosis is high enough to warrant treatment for tuberculosis disease, regardless of laboratory results, is considered to have a diagnosis of tuberculosis.**

**Applicants 2–14 years of age living in countries with a World Health Organization (WHO)-estimated tuberculosis incidence rate of  $\geq 20$  cases per 100,000 population should have a tuberculin skin test.**

**Prior receipt of Bacille Calmette-Guérin (BCG) vaccination does not change the screening requirements or the required actions based on tuberculin skin test results.**

A complete screening medical examination for tuberculosis consists of a medical history, physical examination, chest radiography (CXR) (when required), determination of immune response to *Mycobacterium tuberculosis* antigens (i.e., tuberculin skin testing [TST], when required), and laboratory testing for HIV infection (for applicants  $\geq 15$  years of age) and *M. tuberculosis* (when required). Please see 2007 Technical Instructions at DGMQ’s Web site for complete details at <http://www.cdc.gov/ncidod/dq/technica.htm>.

All applicants  $< 15$  years of age require a physical examination and history from a parent or responsible adult who knows the child best. Applicants  $< 15$  years of age who are ill and have signs or symptoms suggestive of tuberculosis should have a TST. If the TST is  $\geq 5$  mm, a CXR (anteroposterior or posteroanterior view and a lateral view for applicants  $< 10$  years of age; posteroanterior view for applicants  $\geq 10$  years of age) should be performed. An exam shall include three sputum specimens to undergo microscopy for acid-fast bacilli (AFB), as well as culture for mycobacteria and confirmation of the *Mycobacterium* species, at least to the *M. tuberculosis* complex level, and any laboratory or additional studies that are deemed necessary, either as a result of the physical examination or pertinent information elicited from the applicant’s medical history for the panel physician to reach a conclusion about the presence or absence of tuberculosis, but see 42 CFR 34.3(b)(v).

Applicants  $< 15$  years of age who are a known contact of someone with recently diagnosed tuberculosis and applicants 2–14 years of age living in countries with a WHO-estimated tuberculosis incidence rate of  $\geq 20$  cases per 100,000 population should have a TST. If the TST is  $\geq 5$  mm, a CXR

(anteroposterior or posteroanterior view and a lateral view for applicants <10 years of age; posteroanterior view for applicants ≥10 years of age) should be performed. If the CXR findings are suggestive of tuberculosis, the applicant should provide three sputum specimens to undergo microscopy for AFB, as well as culture for mycobacteria and confirmation of the *Mycobacterium* species, at least to the *M. tuberculosis* complex level.

Applicants ≥15 years of age require a medical history, physical examination, and CXR. If the applicant has a CXR with findings suggestive of tuberculosis, has signs and symptoms of tuberculosis, or has HIV, the applicant should provide three sputum specimens to undergo microscopy for AFB, as well as culture for mycobacteria and confirmation of the *Mycobacterium* species, at least to the *M. tuberculosis* complex level.

Applicants should be assigned one or more tuberculosis classifications. The applicant's classification should be recorded on the Tuberculosis Classification Cover Sheet. Table F-1 is a listing of the tuberculosis classifications and descriptions.

**Table F-1. Tuberculosis (TB) classifications and descriptions**

<b>Class</b>	<b>Description</b>
<b>No TB Classification</b>	Applicants with normal tuberculosis screening examinations.
<b>Class A TB with waiver</b>	All applicants who have tuberculosis disease and have been granted a waiver.*
<b>Class B1 TB, Pulmonary</b> No Treatment	Applicants who have medical history, physical exam, or CXR findings suggestive of pulmonary tuberculosis but have negative AFB sputum smears and cultures and are not diagnosed with tuberculosis or can wait to have tuberculosis treatment started after immigration.
<b>Class B1 TB, Pulmonary</b> Completed Treatment	Applicants who were diagnosed with pulmonary tuberculosis and successfully completed directly observed therapy prior to immigration. The cover sheet should indicate if the initial sputum smears and cultures were positive and if drug susceptibility testing results are available.
<b>Class B1 TB, Extrapulmonary</b>	Applicants with evidence of extrapulmonary tuberculosis. The anatomic site of infection should be documented.
<b>Class B2 TB, LTBI Evaluation</b>	Applicants who have a tuberculin skin test ≥10 mm but otherwise have a negative evaluation for tuberculosis. The size of the TST reaction, the applicant's status with respect to LTBI treatment, and the medications used should be documented.
<b>Class B3 TB, Contact Evaluation</b>	Applicants who are a contact of a known tuberculosis case. The size of the applicant's TST reaction should be documented, if performed. Information about the source case, name, alien number, relationship to contact, and type of tuberculosis should also be documented.

\* Waivers may be pursued by immigrants or refugees with a complicated clinical course who would benefit from receiving treatment in the United States.

## Appendix G. References

- Adler, S. R. (1995). Refugee stress and folk belief: Hmong sudden deaths. *Social Science and Medicine*, 40(12), 1623–1629.
- American Lung Association. (2006). Smoking and Asian Americans/Pacific Islander fact sheet. Retrieved June 6, 2007, from <http://www.lungusa.org>.
- Badri, M., Wilson, D., & Wood, R. (2002). Effect of highly active antiretroviral therapy on incidence of tuberculosis in South Africa: A cohort study. *The Lancet*, 359, 2059–2064.
- Baron, R., Thacker, S., Gorelkin, L., Vernon, A., Taylor, W., & Choi, K. (1983). Sudden death among Southeast Asian refugees. An unexplained nocturnal phenomenon. *JAMA*, 250(21), 2947–2951.
- Barrett, B., Shadick, K., Schilling, R., Spencer, L., del Rosario, S., Moua, K., et al. (1998). Hmong/medicine interactions: Improving cross-cultural health care. *Family Medicine*, 30(3), 179–184.
- Booth, M. (1996). *Opium: A history*. New York: Simon & Schuster, Ltd.
- Brach, C., & Fraser, I. (2000). Can cultural competency reduce racial and ethnic disparities? A review and conceptual model. *Medical Care Research and Review*, 57(1), 181–217.
- California Department of Health Services (Ed.). (2004). Briefing on expected resettlement of Hmong refugees to California.
- Capps, L. L. (1994). Change and continuity in the medical culture of the Hmong in Kansas City. *Medical Anthropology Quarterly*, 8(2), 161–177.
- Capps, L. L. (1999). Fright illness in Hmong children. *Pediatric Nursing*, 25(4), 378–382.
- Carroll, W., & Udalova, V. (2005). Who is Hmong? Questions and evidence from the U.S. Census. *Hmong Studies Journal*, 6, 1–20.
- Castro, K. (2005). Briefing TB in recently resettled Hmong refugees. Paper presented at the Advisory Council for the Elimination of TB Atlanta, GA.
- Center for Cross-Cultural Health. (2000). *Hmong culture: A profile in Minnesota*. Minneapolis: Center for Cross-Cultural Health.
- Centers for Disease Control and Prevention. (1999). Self study modules on tuberculosis chapter 9: Patient adherence to tuberculosis treatment. Atlanta, GA: U.S. Department of Health and Human Services.
- Centers for Disease Control and Prevention. (2000). Targeted tuberculin testing and treatment of latent tuberculosis infection. *Morbidity and Mortality Weekly Report*, 49(RR-6), 1–54.
- Centers for Disease Control and Prevention. (2003). HIV/AIDS Surveillance Report: HIV Infection and AIDS in the United States. Atlanta, GA: U.S. Department of Health and Human Services.
- Centers for Disease Control and Prevention. (2004). Core curriculum on tuberculosis. Retrieved n.d., from <http://www.cdc.gov/tb/webcourses/CoreCurr/index.htm>.
- Centers for Disease Control and Prevention. (2005a). HIV/AIDS surveillance report: HIV infection and AIDS in the United States. Atlanta, GA: U.S. Department of Health and Human Services.
- Centers for Disease Control and Prevention. (2005b). Multidrug-resistant tuberculosis in Hmong refugees resettling from Thailand into the United States, 2004–2005. *Morbidity and Mortality Weekly Report*, 54(30), 741–744.
- Centers for Disease Control and Prevention. (2006a). Cases of HIV infection and AIDS in the United States and dependent areas, 2005. *HIV/AIDS Surveillance Reports*, 17, 37.
- Centers for Disease Control and Prevention. (2006b). Effective TB interviewing for contact investigation: Self study modules. Atlanta, GA: U.S. Department of Health and Human Services.
- Centers for Disease Control and Prevention. (2006c). Racial/ethnic disparities in diagnoses of HIV/AIDS—33 states, 2001–2004. *Morbidity and Mortality Weekly Report*, 55(5), 121–125.
- Centers for Disease Control and Prevention. (2006d). Reported tuberculosis in the United States: 2005. Atlanta, GA: U.S. Department of Health and Human Services.
- Centers for Disease Control and Prevention. (2006e). Tuberculosis in Hmong refugees resettling to the United States (Presentation at ACET meeting). Atlanta, GA: Immigrant Refugee and Migrant Health Branch of the Division of Global Migration and Quarantine.
- Centers for Disease Control and Prevention. (2007). Technical instructions for tuberculosis screening and treatment. Atlanta, GA: U.S. Department of Health and Human Services.
- Cerhan, J. U. (1990). The Hmong in the United States: An overview for mental health professionals. *Journal of Counseling & Development*, 69, 88–92.
- Cha, D. (2003). *Hmong American concepts of health, healing and conventional medicine (First Edition ed.)*. New York & London: Routledge.
- Culhane-Pera, K. A., Cha, D., & Kunstader, P. (2004). Hmong in Laos and the United States. In C. Ember & M. Ember (Eds.), *Encyclopedia of Medical Anthropology: Health and Illness in the World's Cultures (First ed., Vol. 2, pp. 729–743)*. New York: Kluwer Academic/Plenum Publishers.

- Cutler, C. (Ed.) (2006). *Medline Plus Medical Encyclopedia*. Bethesda, MD: U.S. National Library of Medicine, National Institutes of Health.
- Deinard, A. S., & Dunnigan, T. (1987). Hmong health care: Reflections on a six-year experience. *International Migration Review*, 21(3, Special Issue: Migration and Health), 857–865.
- den Boon, S., van Lill, S. W. P., Borgdorff, M. W., Verver, S., Bateman, E. D., Lombard, C. J., et al. (2005). Association between smoking and tuberculosis infection: A population survey in a high tuberculosis incidence area. *Thorax*, 60, 555–557.
- Dubos, R. J., & Dubos, J. (1952). *The white plague: Tuberculosis, man and society*. New Brunswick, New Jersey: Rutgers University Press.
- Duffy, J., Harmon, R., Ranard, D. A., Thao, B., & Yang, K. (2004). *The Hmong: An introduction to their history and culture*. Baltimore, MD: Center for Applied Linguistics, Cultural Orientation Resource Center.
- Fadiman, A. (1997). *The spirit catches you and you fall down*. New York: Farrar, Straus and Giroux.
- Fushimoto, W. (1995). *Diabetes in America: Diabetes in Asian and Pacific Islander Americans (2nd Edition)*. Bethesda, MD: National Diabetes Data Group, NIDDK, NIH.
- Girardi, E., Antonucci, G., Vanacore, P., Libanore, M., Errante, I., Matteelli, A., et al. (2000). Impact of combination antiretroviral therapy on the risk of tuberculosis among persons with HIV infection. *AIDS*, 14(13), 1985–1991.
- Girardi, E., Antonucci, G., Vanacore, P., Palmieri, F., Matteelli, A., Iemoli, E., et al. (2004). Tuberculosis in HIV-infected persons in the context of wide availability of highly active antiretroviral therapy. *European Respiratory Journal*, 24, 11–17.
- Goodkind, J. (2006). Promoting Hmong refugees' well-being through mutual learning: Valuing knowledge, culture, and experience. *American Journal of Community Psychology*, 37(1–2), 77–93.
- Goodman, D. L. (2005). *Water sanitation and hygiene education...Children and adolescents leading the way in the Lao People's Democratic Republic*. Retrieved November 20, 2007, from [http://www.unicef.org/eapro/Case\\_Study\\_Lao\\_PDR.pdf](http://www.unicef.org/eapro/Case_Study_Lao_PDR.pdf).
- Grieco, E. M., & Cassidy, R. C. (2001). *Overview of race and Hispanic origin: Census 2000 brief*. Washington, DC: U.S. Census Bureau.
- Guptan, A., & Shah, A. (2000). Tuberculosis and diabetes: An appraisal. *Indian Journal of Tuberculosis*, 47(3), 2–8.
- Helsel, D. (1993). "Here there is much more and much less." Hmong-American families, culture and childbearing in the "land of the giants." Unpublished Doctoral dissertation, University of California, San Francisco.
- Hmong Cultural Center. (2006). *Etiquette for interacting with the Hmong*. Hmong Cultural Center, Multicultural Resources, Adult Basic Education, Cultural Education. Retrieved April 4, 2006, from <http://hmongcc.org/BuildingBridgesGeneralPresentation2007Version.ppt>.
- Hmong National Development Inc, & Hmong Cultural and Resource Center. (2004). *Hmong 2000 Census Publication: Data and analysis*. Washington, DC: Hmong National Development Inc.
- Johnson, S. K. (2002). Hmong health beliefs and experiences in the Western health care system. *Journal of Transcultural Nursing*, 13(2), 126–132.
- Jones, J. L., Hanson, D. L., Dworkin, M. S., & DeCock, K. M. (2000). HIV-associated tuberculosis in the era of highly active antiretroviral therapy. *The International Journal of Tuberculosis and Lung Disease*, 4(11), 1026–1031.
- Karter, A. J., Ferrara, A., Liu, J. Y., Moffet, H. H., Ackerson, L. M., & Selby, J. V. (2002). Ethnic disparities in diabetic complications in an insured population. *JAMA*, 287(19), 2519–2527.
- Kirschner, R., Eckner, F., & Baron, R. (1986). The cardiac pathology of sudden, unexplained nocturnal death in Southeast Asian refugees. *JAMA*, 256(19), 2700–2705.
- Kleinman, A. (Ed.). (1986). *Illness behavior: A multidisciplinary model*. New York: Plenum.
- Kleinman, A., & Benson, P. (2006). Anthropology in the clinic: The problem of cultural competency and how to fix it. *PLoS Medicine*, 3(10), e294.
- Kolappan, C., & Gopi, P. G. (2002). Tobacco smoking and pulmonary tuberculosis. *Thorax*, 57, 964–966.
- Lao Family Community of Minnesota. (n.d.). *Health services: chemical awareness program*. Retrieved December 19, 2006, from <http://www.laofamily.org>.
- Lee, G. Y. (1981). *Opium and the Hmong*. Retrieved December 19, 2006, from <http://www.hmongnet.org/hmong-au/opium.htm>.
- Lee, X. (2007). *Hmong: Hmong Cultural Center*. Retrieved November 20, 2007, from <http://www.hmongcc.org>.
- Lifson, A. R., Thai, D., O'Fallon, A., Mills, W. A., & Hang, K. (2002). Prevalence of tuberculosis, hepatitis B virus, and intestinal parasitic infection among refugees to Minnesota. *Public Health Reports*, 117, 69–77.
- Lin, H.-H., Ezzati, M., & Murray, M. (2007). Tobacco smoke, indoor air pollution and tuberculosis: A systematic review and meta-analysis. *PLoS Medicine*, 4(1), e20.
- Lipson, J. G., & Dibble, S. L. (Eds.). (2005). *Providing culturally appropriate health care*. In *Culture and Clinical Care (First ed., pp. 250–263)*. San Francisco: UCSF Nursing Press.
- Lipson, J. G., Dibble, S. L., & Minarik, P. A. (Eds.). (1996). *Culture and nursing care: A pocket guide*. San Francisco: UCSF Nursing Press.

- Lopez-Gatell, H., Cole, S. R., Hessol, N. A., French, A. L., Greenblatt, R. M., Landesman, S., et al. (2007). Effect of tuberculosis on the survival of women infected with human immunodeficiency virus. *American Journal of Epidemiology*, 165(10), 1134–1142.
- Markowitz, N., Hansen, N. I., Lewis, V. A., Schoenbaum, E. E., Vermund, S. H., Klein, R. S., et al. (1997). Incidence of tuberculosis in the United States among HIV-infected persons. *Annals of Internal Medicine*, 126, 123–132.
- Menzies, D. (2000). What does tuberculin reactivity after Bacille Calmette-Guerin vaccination tell us? *Clinical Infectious Diseases*, 31(Suppl 3), S71–S74.
- Mills, P., & Yang, R. (1997). Cancer incidence in the Hmong of central California, United States, 1987–94. *Cancer Causes and Control*, 8, 705–712.
- Mills, P., Yang, R., & Riordan, D. (2005). Cancer incidence in the Hmong in California, 1988–2000. *Cancer*, 104(12 Suppl), 2969–2974.
- Mitnick, C., Furin, J., Henry, C., & Ross, J. (1998). Tuberculosis among the foreign-born in Massachusetts, 1982–1994: A reflection of social and economic disadvantage. *The International Journal of Tuberculosis and Lung Disease*, 2(9), S32–S40.
- Munger, R. (1987). Sudden death in sleep of Laotian-Hmong refugees in Thailand: A case-control study. *American Journal of Public Health*, 77(9), 1187–1190.
- National Cancer Institute (Ed.) (n.d.). *Dictionary of Cancer Terms*. Bethesda, MD: U.S. Department of Health and Human Services.
- National Institute of Diabetes and Digestive and Kidney Diseases. (2005). *National diabetes statistics fact sheet: General information and national estimates on diabetes in the United States*. Bethesda, MD: National Institute of Health.
- National Institute on Drug Abuse. (2005). *Epidemiologic trends in drug abuse: Volume II—Proceedings of the Community Epidemiology Working Group*. Retrieved n.d., from [http://www.drugabuse.gov/PDF/CEWG/Vol2\\_605.pdf](http://www.drugabuse.gov/PDF/CEWG/Vol2_605.pdf).
- Office of Global Health Affairs. (2004). *Background on potential health issues for Hmong refugees from Wat Tham Krabok*. Bethesda, MD: U.S. Department of Health and Human Services.
- Pfeifer, M. E., & Lee, S. (2005). *Hmong population, demographic, socioeconomic, and educational trends in the 2000 Census*. Washington, D.C.: Hmong National Development Inc.
- Pinzon-Perez, H. (2006). Health issues for the Hmong population in the U.S.: Implications for health educators. *International Electronic Journal of Health Education*, 9, 122–133.
- Queensland Health. (2004). *Hmong community health profile*. Queensland, Australia: Queensland Government.
- Reznik, V., Cooper, T., MacDonald, D., Benador, N., & Lemire, J. (2001). Hais cuaj txub kaum txub—To speak of all things: A Hmong cross-cultural case study. *Journal of Immigrant Health*, 3(1), 23–30.
- Rim, H.-J., Chai, J.-Y., Min, D.-Y., Cho, S.-Y., Eom, K. S., Hong, S.-J., et al. (2003). Prevalence of intestinal parasite infections on a national scale among primary schoolchildren in Laos. *Parasitology Research*, 91, 267–272.
- Santoro-Lopes, G., Felix de Pinho, A. M., Harrison, L. H., & Schechter, M. (2002). Reduced risk of tuberculosis among Brazilian patients with advanced human immunodeficiency virus infection treated with highly active antiretroviral therapy. *Clinical Infectious Diseases*, 34, 543–546.
- Selwyn, P. A., Hartel, D., Lewis, V. A., Schoenbaum, E. E., Vermund, S. H., Klein, R. S., et al. (1989). A prospective study of the risk of tuberculosis among intravenous drug users with human immunodeficiency virus infection. *New England Journal of Medicine*, 320, 545–550.
- Sepkowitz, K. (2001). Tuberculosis control in the 21st century. *Emerging Infectious Diseases*, 7(2), 259–262.
- Taichiming. (n.d.). Who are Hmong? Retrieved January 30, 2007, from <http://www.yimhmoob.org/articles/whohmong.htm>.
- Thomas, D.J. (2006). Mycobacterial diseases in HIV-positive patients. *Journal of Pharmacy Practice*, 19(1), 10–16.
- Title VI of the Civil Rights Act of 1964: Prohibition against exclusion from participation in, denial of benefits of, and discrimination under federally assisted programs on ground of race, color, or national origin, Pub. L. No. 88-352, 78, Stat. 241 (1964).
- U.S. Agency for International Development. (2005). *Health profile: Lao People's Democratic Republic*. Retrieved July 10, 2006, from [http://www.usaid.gov/our\\_work/global\\_health/aids/Countries/ane/laos\\_05.pdf](http://www.usaid.gov/our_work/global_health/aids/Countries/ane/laos_05.pdf).
- U.S. Census Bureau. (2000). *Profile of selected demographic and social characteristics: 2000*. Retrieved January 30, 2007, from <http://www.census.gov/population/www/socdemo/foreign/STP-159-2000tl.html>.
- U.S. Department of Health and Human Services. (2000). *Healthy people 2010*. Retrieved January 30, 2007, from [www.healthypeople.gov](http://www.healthypeople.gov).
- U.S. Department of Health and Human Services. (2004). *Background on potential health issues for Hmong refugees from Wat Tham Krabok* (pp. 1–21): Bridging Refugee Youth and Children's Services Clearinghouse.
- U.S. Department of State, U.S. Department of Homeland Security, & U.S. Department of Health and Human Services. (2005). *Proposed refugee admissions for fiscal year 2006—Report to the Congress*. Retrieved n.d. from <http://www.state.gov/g/prm/refadm/rls/rpts/52366.htm>.



- U.S. Department of State, U.S. Department of Homeland Security, & U.S. Department of Health and Human Services. (2006). Proposed refugee admissions for fiscal year 2007—Report to the Congress. Retrieved n.d., from <http://www.state.gov/g/prm/rls/rpt/2006/73619.htm>.
- U.S. Office of Minority Health. (2005). Asian American profile of health. Retrieved November 3, 2006, from <http://www.omhrc.gov/templates/content.aspx?ID=3005>.
- U.S. Office of Minority Health. (2006). What is cultural competency? Washington, DC: U.S. Department of Health and Human Services.
- U.S. Office of Refugee Resettlement. (2004). Annual report to Congress 2004: Amerasian, aslyee (from northern Iraq), entrant, and refugee arrivals by country of origin and state of initial resettlement for FY 2004. Washington, DC: U.S. Health and Human Services, Administration for Children and Families.
- United States Central Intelligence Agency. (2006). The world factbook: Laos. Retrieved n.d., from <https://www.cia.gov/library/publications/the-world-factbook/geos/la.html>.
- Vang, C. Y. (2005). Contested economic growth among Hmong Americans. Washington, D.C.: Hmong National Development Inc.
- Vatta, M., Dumaine, R., Varghese, G., Richard, T. A., Shimizu, W., Aihara, N., et al. (2002). Genetic and biophysical basis of sudden unexplained nocturnal death syndrome (SUNDS), a disease allelic to Brugada syndrome. *Human Molecular Genetics*, 11(3), 337–345.
- Wausau Area Hmong Mutual Association, & American Cancer Society. (2006). Take charge of your health: Ask questions about cancer. Retrieved October 30, 2006, from <http://www.hmonghealth.org/healthtip/tip.asp?HTID=4>.
- Whalen, C., Horsburgh, C. R., Hom, D., Lahart, C., Simberkoff, M., & Ellner, J. (1995). Accelerated course of human immunodeficiency virus infection after tuberculosis. *American Journal of Respiratory and Critical Care Medicine*, 151, 129–135.
- Whalen, C., Nsubuga, P., Okwera, A., Johnson, J. L., Hom, D. L., Michael, N. L., et al. (2000). Impact of pulmonary tuberculosis on survival of HIV-infected adults: A prospective epidemiologic study in Uganda. *AIDS*, 14, 1219–1228.
- World Health Organization. (2006a). The global plan to stop TB 2006–2015: Actions for life, towards a world free of tuberculosis. *International Journal of Tuberculosis and Lung Disease*, 10(3), 240–241.
- World Health Organization. (2006b). Immunization profile—Lao People's Democratic Republic. Geneva.
- World Health Organization. (2006c). WHO report 2006: Global tuberculosis report: Surveillance, planning, financing. Geneva.
- World Health Organization. (2007). Baccille Calmette Guerin vaccine: Reported estimates of BCG coverage. Retrieved July 20, 2007, from <http://www.who.int/vaccines/globalsummary/immunization/timeseries/tscoveragebcg.htm>.
- World Health Organization, Regional Office for the Western Pacific. (2005). Health situation: Lao People's Democratic Republic: World Health Organization: Regional Office for the Western Pacific. Retrieved November 20, 2007, from [http://www.wpro.who.int/countries/lao/health\\_situation.htm](http://www.wpro.who.int/countries/lao/health_situation.htm).
- World Health Organization, Regional Office for the Western Pacific. (2006). Lao People's Democratic Republic. Retrieved December 21, 2006, from <http://www.wpro.who.int/countries/lao>.
- Xiong, Z. B., & Tuicomepee, A. (2004). Hmong families in America in 2000: Continuity and change. In B. Thao & M. Pfeifer (Eds.), *Hmong National Development 2000 Census Report*. Retrieved November 20, 2007, from <http://hmongstudies.com/2000HmongCensusPublication.pdf>.
- Yang, K. (2003). Hmong Americans: A review of felt needs, problems and community development. *Hmong Studies Journal*, 4, 1–23.
- Yang, R., Mills, P., & Riordan, D. (2004). Cervical cancer among Hmong women in California, 1988 to 2000. *American Journal of Preventive Medicine*, 27(2), 132–138.
- Zar, H. J., Cotton, M. F., Strauss, S., Karpakis, J., Hussey, G., Schaaf, H. S., et al. (2007). Effect of isoniazid prophylaxis on mortality and incidence of tuberculosis in children with HIV: Randomised controlled trial. *BMJ*, 334, 105–106.
- Zuber, P. L. F., McKenna, M. T., Binkin, N. J., Onorato, I. M., & Castro, K. G. (1997). Long-term risk of tuberculosis among foreign-born persons in the United States. *JAMA*, 278(4), 304–307.

