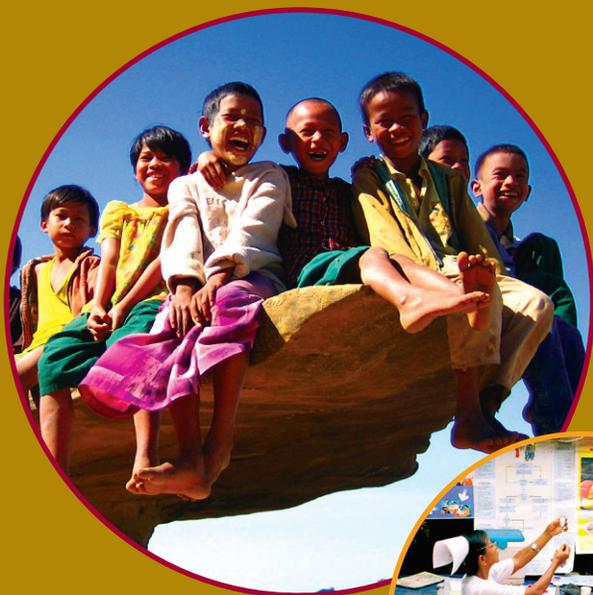


# Promoting Cultural Sensitivity

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



*There is no friend like learning.  
There is no enemy like disease.*  
- Burmese Proverb

## **Promoting Cultural Sensitivity: A Practical Guide for Tuberculosis Programs Providing Services to Karen Persons from Burma**



Children in Burma.  
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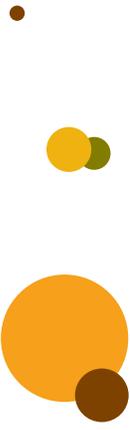
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# Introduction

*Promoting Cultural Sensitivity: A Practical Guide for Tuberculosis Programs Providing Services to Karen Persons from Burma* is part of 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 persons from China, Laos, Mexico, Somalia, and Vietnam (Centers for Disease Control and Prevention, 2010). <http://www.cdc.gov/TB/publications/guidestoolkits/EthnographicGuides/default.htm>.

## Intended Audience

This *Guide* is intended for health care providers, community-based workers, program planners, administrators, health educators, and resettlement agencies that work with Karen (pronounced ka-RENN) communities. This *Guide* is designed to increase the knowledge and cultural sensitivity of health care providers, program planners, and any others serving Karen persons from Burma. The ultimate aim is to foster provision of culturally competent TB care and services for Karen people in the United States (U.S.).

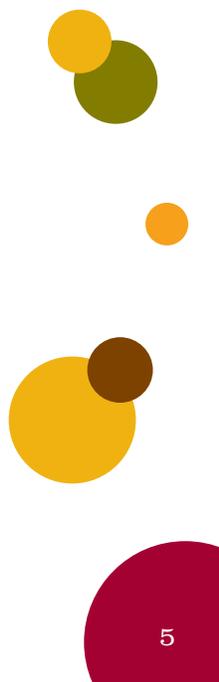
## About the Guides

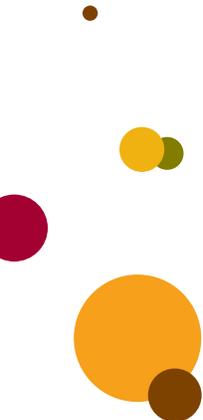
Each *Guide* in this series includes:

- A two-page summary of programmatic tips
- Chapters on History and Immigration, Overview of the Culture, Health Issues, and Common Perceptions, Attitudes, and Beliefs about TB
- A concluding summary
- Appendices
- Useful resources
- References

Some of the information in the *Guides*, such as the practical tips, can be directly applied; while other sections are more informative and will help providers better understand the background and socio-cultural context of the population. It is hoped that 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 Karen Burmese in the U.S. was performed. Secondly, in 2007, 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 Karen persons from Burma residing in two U.S. cities. Findings from this original research are also included in this *Guide*. This mirrored the 2003 CDC study that explored five cultural groups (see <http://www.cdc.gov/tb/publications/guidestoolkits/EthnographicGuides/default.htm> for copies of these Ethnographic Guides).





## Tips for Providing Culturally Competent TB Services to Karen Persons from Burma

Below are practical suggestions presented in *An Ethnographic Guide for TB Programs Providing Services to Karen Persons from Burma*. These tips are intended for TB program staff, including program planners, managers, and providers who work with Karen persons from Burma. For additional background and resources, please consult the full version of the *Ethnographic Guide*.

### Interactions with Karen Patients and Family Members

- Traditionally, Karen persons do not wear shoes in the household. Guests are expected to take their shoes off when entering the house. However, some Karen have accepted the U.S. culture of wearing shoes in the house. Rule of thumb: if the host does not have his/her shoes on in the house, then the guest should not.
- Avoid referring to Karen people as Burmese. The two ethnicities consider themselves distinct.
- The head is considered a sacred part of the body. Avoid touching any adult or child on the head with the exception being during a medical exam.

### Communication Styles

Obtaining others' opinions and arriving at a group consensus are integral in the decision making process.

- Modesty and humility are strongly valued in Karen culture. Avoid overly direct statements or assertive questions when communicating with Karen people.

### Mental Health

- Mental health issues can be complex and compounded by cultural differences in the belief of psychological well-being. Some Karen may be less inclined to visit counselors who openly offer "mental health services." Instead, counseling opportunities should be offered in more discreet settings, such as schools, medical centers, job placement, and employment centers.
- Be aware that the majority of Southeast Asian refugees in the U.S. have been diagnosed with post-traumatic stress disorder and that suicide is a leading cause of death for Asian Americans, especially among women ages 65 and above.

## **Understanding of TB Symptoms, Transmission, Prevention, and Social Stigma**

Fear of the social repercussions of a TB diagnosis could be diminished by clarifying the meaning of latent TB infection and emphasizing that only persons with infectious, active TB disease need to be isolated for a short time.

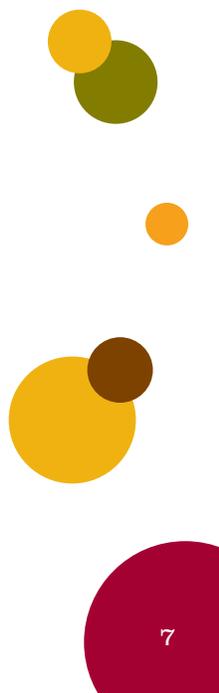
- Assessing how Karen persons believe TB is transmitted will help to reinforce correct beliefs such as airborne transmission and clarify misunderstandings such as TB being spread by sharing cups, plates, and utensils.

## **TB Diagnosis and Treatment**

- Providing information about the purpose of latent TB infection (LTBI) medications will mitigate the confusion shared among Karen persons about whether these medications will prevent TB disease.

## **TB Education and Outreach**

- Some Karen believe that the low prevalence of TB in the U.S. and the availability of quality medical care lowers one's risk of developing TB. Emphasizing the risk of past exposure among people from high TB-burden countries will help Karen immigrants understand that living in the U.S. has no additional protective factors.
- Assess the desire for TB information and provide education in an appropriate format (e.g., pamphlets, videos, and public service announcements), literacy level, language, and dialect.



## Background

Worldwide, tuberculosis (TB) is one of the most deadly infectious diseases. Though it is curable and preventable, more than 5,000 people die of TB every day (nearly 2 million deaths per year) (World Health Organization, 2006a). TB disproportionately affects poor and marginalized groups of society, having unequal susceptibility patterns long recognized both around the world and in the United States (U.S.) (Dubos & Dubos, 1952; Mitnick, Furin, Henry, & Ross, 1998; Sepkowitz, 2001). In 2009, a total of 11,545 incident TB cases were reported in the U.S.; the TB rate declined to 3.8 cases per 100,000 population, the lowest rate recorded since national reporting began in 1953 (CDC, 2010b). Foreign-born persons continued to bear a disproportionate burden of TB disease, accounting for 59% of all cases in the U.S. In 2009, the TB case rate among foreign-born persons was 11 times that of U.S.-born persons (18.7/100,000 compared to 1.7/100,000) (CDC, 2010b). However, both the number and rate of TB cases declined in 2009, with 6,854 cases reported among foreign-born persons. Four countries accounted for approximately half of the reported cases: Mexico, the Philippines, Vietnam, and India.

The high incidence of TB in the U.S. among foreign-born persons (18.7/100,000) poses challenges to public health programs across the country (CDC, 2010b, 2009b). Though disparities between U.S.-born and foreign-born TB cases are caused by multiple factors, persons born outside the U.S. often face challenges in accessing TB services related to personal or cultural beliefs, behaviors, and needs. Attempts to control TB in foreign-born populations have sometimes been hindered by cultural and linguistic barriers, as well as challenges related to resettlement, employment, and socioeconomic position. Understanding these issues is crucial to the prevention and control of TB in foreign-born populations. *Promoting Cultural Sensitivity: A Practical Guide for TB Programs Providing Services to Karen Persons from Burma* is part of a series that aims to help TB control staff across the country provide culturally competent TB care to some of our highest priority foreign-born populations.

### Cultural Competency in TB 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). While there is no one 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 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 guidelines through the Culturally and Linguistically Appropriate Service (CLAS) standards to help health care organizations move toward cultural competence. (Refer to Appendix C.) Several of these standards are federal mandates supported by Title VI of the Civil Rights Act of 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 (U.S. Department of Justice, 1964).

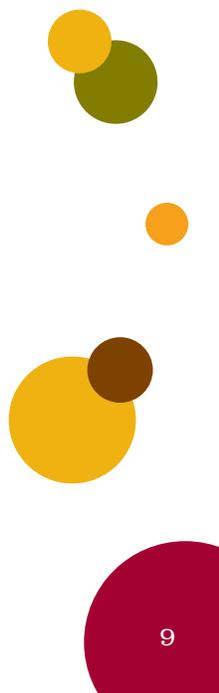
In order to move towards cultural competence, health care providers and other program staff should understand the ethnic identities and cultural needs of the populations they serve. Providing effective care involves making the time and effort to learn from patients what is important to them in the experience of illness and treatment; in the words of medical anthropologist Arthur Kleinman, finding out “What is at stake?” for the individual will provide crucial information to use in beginning communication and tailoring the 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. This *Guide* is designed to increase the knowledge of health care providers, program planners, and any others serving Karen communities to facilitate the provision of culturally competent TB education and care. Increasing staff knowledge of the cultural and ethnic backgrounds of populations served is one important aspect of the CLAS standards.

## **How Information for the Guide was Gathered**

Two separate methodologies, a literature review and a qualitative study, were employed to gather data for this *Guide*. The literature review was performed first to capture in-depth information about the epidemiologic, behavioral, and ethnographic factors related to TB among the Karen people of Burma. Then in 2007, the qualitative study was conducted by the Division of Tuberculosis Elimination (DTBE) at the Centers for Disease Control and Prevention (CDC) to capture ethnographic aspects of the increasing burden of TB among Karen persons from Burma residing in two U.S. cities. The CDC conducted similar studies in 2003 that explored five cultural groups (see <http://www.cdc.gov/tb/publications/guidestoolkits/EthnographicGuides/default.htm> for copies of these Ethnographic Guides). Findings from the original research are presented in this Guide, and Appendix D provides detail about the study design, methods, and population.

## **Intended Audience**

This *Guide* is intended for health care providers, administrators, community-based workers, program planners, health educators, and resettlement agencies who work with Karen communities.



## How to Use this Guide



Karen Community Members  
© 2005 Kyaw Kyaw Winn, Courtesy of Photoshare.

As described above, this *Guide* aims to increase knowledge and understanding of those serving Karen persons born in Burma as one component of a multi-faceted approach to cultural competence that also includes language-appropriate services, diverse staff and leadership, and community partnerships. While the information was gathered from many sources, it will not apply to all Karen Burmese because Karen culture, especially in the U.S., is dynamic and cultural perspectives may vary depending upon a person's age, gender, 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 also 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 to avoid committing *faux pas* that may offend others and adversely affect the relationship. Good patient-provider relationships are built on trust and respect; thus, providers wishing to effectively care for their patients need to heighten their sensitivities to both differences and similarities, and use this knowledge to inform practice (Lipson & Dibble, 2005).

In each chapter of this *Guide*, the reader will find text boxes titled "Suggestions." These contain practical tips derived from the preceding background information. Some suggestions may be more relevant for either program planners or persons providing direct patient care.

When interpreting the information presented in Chapter 4, "Common Perceptions, Attitudes, and Beliefs about Tuberculosis among Karen Burmese," it is recommended that readers understand the context of the original research and compare it to their own environment in order to determine the applicability of the findings to the local situation.

## Clarification of Terms

This guide uses the term “Karen” to refer to persons of Karen ethnicity who are from Burma; this includes the Sgaw (pronounced Skaw) Karen, Karenni, and Pa-o Karen. The term “Burmese” refers generally to persons born in Burma and to persons of Burman (or Burmese) ethnicity for whom Burmese is their first language and who are the majority ethnic group in Burma. In following the preference of Karen respondents with whom we spoke, we refer to the country from which they emigrated as “Burma;” for many Karen, the Union of Myanmar represents a period of military dictatorship and political and economic hardship. Some Karen may be offended if they are referred to as Burmese, not only because of the political implications, but also because of different ethnic affiliations (Neiman et al., 2008).

Asian Americans and Pacific Islanders (APIs) is a broad term generally used to refer to diverse groups of people, including but not limited to Chinese, Cambodian, Filipino, Hawai’ian, Hmong, Indian, Indonesian, Japanese, Korean, Laotian, Malaysian, Pakistani, Samoan, Thai, and Vietnamese. The Karen and Burmese would fall into this broad category. Most U.S. national-level health data are aggregated into one “Asian” or “Asian/Pacific Islander” category, resulting in data that may not be representative of specific sub-groups.



## 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 titled “Suggestions.” Keep these Tips readily accessible and refer to them as often as necessary.
- The chapters on history, immigration, and cultural issues provide important background information on the cultural group. This information can be helpful for building rapport with patients and community partners. 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 highlight 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.
- The chapter on common TB perceptions, attitudes, and beliefs contains findings from the CDC study. If you interface directly with TB patients or plan TB educational materials, 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 conversation with a new TB patient.
- Appendix B provides suggestions for working with interpreters. Refer to these suggestions when working with persons with limited English proficiency.
- Appendix C consists of 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.
- Appendix D presents a summary of the CDC study of Karen communities in two U.S. cities.
- Appendix E contains simple Karen terms and phrases with associated graphics. You may find these useful in communicating basic ideas, but this pictographic glossary should not be used in lieu of an interpreter.
- Appendix F presents TB screening policies for persons overseas. Instructions are also given for various age groups.
- Appendix G presents the references that are cited throughout this guide.

# Chapter 1: Burma History and Immigration to the United States

## Burma Geography, People, and History

### Geography

Burma is one of the largest countries in Southeast Asia and is approximately the size of the state of Texas (Central Intelligence Agency, 2010). Bordered by China and Laos to the east, Thailand to the south, Bangladesh to the west, and India to the northwest (Figure 1), Burma has a vibrant and ethnically diverse population. Burma is estimated to have a population of 48.8 million (Central Intelligence Agency, 2010), although there has been no official census since 1983 (U. S. Department of State, Bureau of East Asian and Pacific Affairs, 2010). The largest cities in Burma are the former capital city of Rangoon, now known as Yangon, with a population of 5.5 million, and Mandalay, with a population of 1.2 million. The capital city was moved by the military junta in 1996 to the city of Nay Pyi Taw, 400 kilometers to the north of Yangon (Department of Foreign Affairs and Trade, 2008) and has a population of 200,000 (U.S. Department of State, 2010).



Figure 1. Map of Burma (Myanmar)

### People

Burma's location and fertile lands has made it a crossroads in Asia, as groups have migrated across the country, contributing to its cultural diversity (Smith, 1999). There are seven main ethnic groups that include the Burmans, Shan, Karen, Rakhine, Chinese, Indian, Mon, and other smaller ethnic groups (Central Intelligence Agency, 2010). There are also over 130 unique subgroups within the eight main ethnic groups (Barron et al., 2007). The largest ethnic group, the Burmans, represents 68% of the population. The two second largest ethnic groups, the Shan and the Karen, make up 9% and 7% respectively. The remaining ethnic groups together represent 16% of the population (U.S. Department of State, Bureau of East Asian and Pacific Affairs, 2010).

Burma is divided into states that reflect ethnic divisions. Burmans inhabit seven ethnic divisions and dwell in urban areas in Burma's lowlands. The remaining states in Burma include Chin (bordered by Bangladesh and India in the west), the northernmost Kachin, Kayin (Karen), Kayah (Karenni), Mon, Rakhine (Arakan), and Shan (in the northeastern plains).

This *Guide* focuses on Karen people who are a distinct ethno-linguistic group. It is believed that the Karen people migrated to Burma from the Tibetan region and from Yunnan in China centuries ago. There are approximately seven million Karen living in southeast Burma and approximately 400,000 living in Thailand (Barron et al., 2007). About 140,000 currently live in refugee camps in Thailand right along the border with Burma. Many have recently resettled in the United States from these camps and from Malaysia.

## History

The ethnic groups that are part of modern Burma have lived in the region for centuries or millennia. Burma's history as a unified kingdom dates back to the early 8th and 9th centuries when the Burmans migrated south from the eastern Himalayas and occupied the central plains of Burma and established a dynasty that ruled for almost 500 years (Barron et al., 2007). Over the past 1,000 years, different ethnic groups established kingdoms that controlled what is now Burma at different times until the late 19th Century (U.S. Department of State, Bureau of East Asian and Pacific Affairs, 2010). The British then conquered Burma over a period of 62 years (1824-1886) and incorporated it into their Indian Empire in 1886 with the capital at Rangoon (Central Intelligence Agency, 2010). During this period, the British government practiced a policy of "divide and rule" in Burma by drawing clear lines that established the modern ethnic states, between the Burmans in the plains and the other ethnic minorities in the hills, a practice that exacerbated the historical ethnic rivalries (Barron et al., 2007). Eventually, the ethnic minorities, including Karen persons, became semi-autonomous in their villages with the help of Aung Sang, a Burman, who unified the modern country of Burma and helped to forge the path to independence. In 1948, Burma gained independence from the British (Office of Global Health Affairs, 2009), but General Aung San was assassinated before the new constitution could take effect (U.S. Department of State, Bureau of East Asian and Pacific Affairs, 2010).

During the weak constitutional period from 1948 to 1962, Burma suffered widespread political and ethnic conflict and internal struggle. In 1962, the democratic government of Burma was overthrown by the army and became entrenched in civil conflict and political unrest (Office of Global Health Affairs, 2009). The military led a coup abolishing the constitution and took control of the government. Ethnic minority insurgent and political groups, such as the Karen National Union and the Karen National Liberation Army, were formed which fought to regain democratic participation for ethnic minorities in Burma (Office of Global Health Affairs, 2009).

On August 8, 1988, military forces killed more than 1,000 demonstrators calling for a change in regime. At a rally following this massacre, Aung San Suu Kyi, the daughter of General Aung Sang, assumed the role of the opposition leader (U.S. Department of State, Bureau of East Asian and Pacific Affairs, 2010). In September 1988, a new military coup established a new ruling junta called the State Law and Order Restoration Council (SLORC). In an effort to "restore order," the SLORC sent the army into the streets to suppress the ongoing public demonstrations. An estimated additional 3,000 were killed, and more than 10,000 students fled into the hills and border areas (Office of Global Health Affairs, 2009; U.S. Department of State, Bureau of East Asian and Pacific Affairs, 2010).

In 1989, a cease-fire agreement was made between the SLORC and the armed ethnic groups. Burma gradually began preparing for its first national elections in almost 30 years (Office of Global Health Affairs, 2009). In 1990, Aung San Suu Kyi overwhelmingly won in the elections and assumed the role of leader of National League for Democracy (NLD), the principal opposition party, during this period (Office of Global Health Affairs, 2009). However, the military junta refused to accept the result of the elections and arrested Aung San Suu Kyi to prevent her from assuming power. Since 1990, Aung San Suu Kyi remained under almost continuous house arrest until her release on November 13, 2010 (U.S. Department of State, Bureau of East Asian and Pacific Affairs, 2010). In 1997, the SLORC was abolished and reconstituted as the State Peace and Development Council (SPDC), but did not cease the control and repression of the democratic opposition (U.S. Department of State, Bureau of East Asian and Pacific Affairs, 2010).

The fight for autonomy and control over their own territories continues today for Karen people. The international community has accused the current regime of committing gross human rights violations, which include execution, destruction of property, forced labor, rape, and torture (Stover et



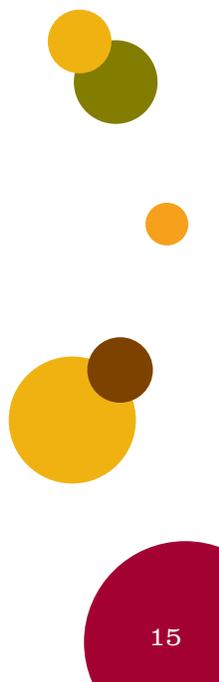
A young boy from Karenni State, Burma, at a refugee camp in Thailand. The Karenni have been living in camps on the Thai-Burma border for years, receiving food and non-food assistance from the international community.  
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al., 2007). These conditions have forced many ethnic minorities, especially Karen, to seek refuge in neighboring countries including Thailand, Bangladesh, and even Malaysia. As early as 1984, Karen refugees began arriving in Thailand. In 2006, there were nearly 110,000 Karen in the Mae Sot area of Thailand (UNHCR, 2006), and 140,000 refugees in camps along the Burma border.

### **Immigration and Resettlement to the United States**

Refugees from Burma have resettled in the United States in waves, with the first group of approximately 1,400 arriving in June 2004 (Office of Global Health Affairs, 2009). Data from the U.S. State Department indicate that half of these early Burmese refugees were Karen, 25% ethnic Burmese, 15% Mon, and the rest were a mix of other ethnic groups (Office of Global Health Affairs, 2009). In 2006, the U.S. government waived restrictions that would allow approximately 9,000 Karen refugees from the Tham Hin refugee camp in Thailand to resettle into the United States (Krause, 2006). Since 2005, the top three states for Burmese immigrant resettlement were Texas, New York, and Indiana.

As demonstrated in Table 1, refugees from Burma have been entering the United States in increasing numbers since this waiver in 2006 was authorized. These data show the states that have the greatest number of refugees from Burma during that time period. Appendix F details the TB screening procedures that are administered to these refugees.



**Table 1**

<b>Fiscal Year Refugee Arrivals from Burma (Top 10 States)*</b>						
<b>State</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>Total</b>
Arizona	67	63	381	542	900	1953
California	93	36	424	519	450	1522
Georgia	16	23	401	574	875	1889
Illinois	20	31	434	639	596	1720
Indiana	185	193	1,066	1,150	1,147	3741
Minnesota	157	121	488	367	370	1503
New York	251	217	1,100	1,321	1,696	4585
North Carolina	86	57	544	837	885	2409
Texas	163	155	1,163	1,457	3,086	6024
Washington	15	13	181	460	655	1324
<b>Total</b>	<b>1,053</b>	<b>909</b>	<b>6,182</b>	<b>7,866</b>	<b>10,660</b>	<b>26,670</b>

---

Administration of Children and Families, Office of Refugee Resettlement (ORR) 2005-2009

\* This includes the states with the largest number of Burmese resettlement during the past five years.

## Chapter 2: Overview of Karen Culture

This chapter provides an overview of Karen culture in terms of language, literacy, socioeconomic position, family, social structure, gender, religion, communication styles, and traditional health care beliefs and practices. Readers are cautioned to avoid stereotyping Karen people based on these broad generalizations. Please keep in mind that the Karen culture, as are all others, is dynamic and expressed in various ways by individuals owing to life experiences, individual personality, and other influences. The extent to which Karen living in the United States identify with the Karen culture will also depend on their level of acculturation to mainstream American society.

### Ethnicity

Karen persons are ethnically distinct from other groups living in Burma and Thailand. According to some, the Karen are descendents of the Mongols and rather than being a single ethnic group, are comprised of at least 20 sub-groups (Institute of Medicine (IOM), 2006). An anglicized form of *Kayin* – their name for themselves – the term “Karen” is used only by people outside the community and refers to those who live in rural communities (Karen State) along the Burmese-Thai border (Hayami & Darlington, 2000). Karen communities are indigenous to the hills and plains of southeastern Burma and western Thailand (Graber, 2006; Hiyami and Darlington, 2000). Estimates of the Karen population vary widely, from 3 to 7 million (Barron et al., 2007; UNHCR, 2007). Although the earliest Karen settlement in Burma was 739 BC, it is unclear whether they began settling in Thailand prior to the eighteenth century (Platz, 2003). In Burma, Karen people inhabit the hill forests, valleys and plains as well as cities and towns along the border, while in Thailand, they live on the lower-altitude hills, valleys and lowlands among the provinces of Mae Hong Son, Tak, and the western part of Chaing Mai (Hiyami & Darlington, 2000).

Geographically and linguistically, the Karen can be divided into Southern, Central, and Northern groups. There are several subgroups of Karen, each with their own language and group name. These subgroups have also been distinguished by the dominant color of their clothing, including: the Sgaw (pronounced Skaw) and Pwo from the Northern Karen state who are sometimes referred to as the white Karen; the Karenni from the Central Karen state, also known as the red Karen; and the Pa-o from the Southern Karen state who are also referred to as the black Karen (Barron et al., 2007; Tapp, 2002).

Sgaw Karen are the largest Karen subgroup, many of whom live along two river valleys in rural areas along the Burmese-Thai border (Barron et al., 2007). Other Sgaw Karen occupy parts of the lower Yangon River Delta and southeastern Burma. Due to years



A girl from the Padaung minority, one of the many ethnic groups that make up Burma's population.  
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of ethnic conflicts and persecution by the Burmese government, many Sgaw Karen have settled in refugee camps along the Thai border. Pwo Karen live mainly in the Irrawaddy Delta, while Pa-o inhabit the southwestern Shan State. Kayan (or Padaung) are members of the Karenni subgroup and are distinguished by the coils of polished metal that are worn around the necks of young girls and women to create the appearance of an elongated neck (Mirante, 2006).

Economic activities of Karen communities are heavily reliant on farming, as nearly 70% of Karen participate in some form of agricultural production and/or hunting activities (Barron et al., 2007). They have two methods of growing rice. Those who inhabit the hills cultivate “hill rice” in dry fields cleared by a slash-and-burn method and live in villages that are small clearings in the forest (Neiman et al., 2008). Those who live close to rivers use paddy farming (flooded fields) methods to grow rice. In the Karen communities of both Thailand and Burma, however, traditional farming activities are changing due to environmental degradation, population increase, and restrictions on forest and land use (Hiyami & Darlington, 2000).

## Education and Literacy



Children attend class at a monastic school in Hlegu, Myanmar. When parents cannot afford education fees for their children, they send them to monastic schools where Buddhist monks and volunteers teach them for free. © 2006 Innthar, Courtesy of Photoshare

Historically, Karen education was home-based and focused on cultural tradition, such as learning farming and other economic skills, as well as specific education about the different rituals associated with marriage and death (Barron et al., 2007; Mekong, 2006). In 19th century Burma, Karen people were well known for their superior formal education in the colonial schools, and a large percentage worked as teachers (IOM, 2006). Education continues to be highly valued in Karen culture, but schooling in Burma today is available to very few due to the lack of resources and teachers. Local schools, such as those serving Karen persons, must support the cost of education themselves, and because of this, many Karen cross the border into Thailand so that their children may attend the schools in the refugee camps (IOM, 2006).

Education is a priority for the Burmese immigrants who have resettled in the United States. According to the U.S. Census' 2006-2008 American Community Survey, 27.5% of the Burmese in the United States had attained some college or associate's degree with 26.3% enrolled in college or graduate school (U.S. Census Bureau, 2008). Among males, 89.9% are literate in Burmese, in comparison with 86.4% among females (Central Intelligence Agency, 2010).

## Language and Communication

Despite the geographic dispersion of Karen people across several countries, the culture has experienced limited linguistic assimilation. Persons of Karen ethnicity speak Karen, which is a member of the Sino-Tibetan language family and characterized by its monosyllabic and tonal nature (Barron et al., 2007). The Karen language can be broken into four distinct dialects with the most common being Sgaw (Barron et al., 2007). A person who speaks Pwo Karen is also likely to speak Sgaw Karen, but the reverse is not often the case (Neiman et al., 2008). A small percentage of Karen



A couple in Mandalay Township, Myanmar bathes their child in a nearby drainage area which supplies water to the paddy fields.

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people speak or understand Burmese and Thai, and some Karen elders speak English as a result of former British colonization between 1886 and 1947 (Metropolitan Area Agency on Aging, 2006). This fact is more evident among Karen refugees in Thailand's Tham Hin Camp. In a UNHCR survey, the vast majority (81%) of refugees spoke Sgaw Karen, followed by Pwo (11% western Pwo and 4% eastern Pwo). Only 4% of those surveyed spoke Burmese (Barron et al., 2007).

Karen people can be described as friendly, quiet, and cheerful (e.g., IOM, 2006). Karen culture promotes a sense of pride for

being simple, humble, unassuming, and peace-loving. Being direct is considered rude, and many Karen find elements of the western style of communication, such as directness, loud speech, and emphatic body language, uncomfortable (Neiman et al., 2008). For Karen people, self-expression that promotes community values and cultural identity is more important than communication that promotes individual opinions or needs. This communication style helps to prevent disagreements and encourage harmonious interactions (Northeastern Regional Training and Medical Consultation Consortium, 2008). Modesty, or not emphasizing one's own feelings or opinions, is also an important value in Karen culture. For this reason, the answer "No" is often given when Karen persons are asked direct questions about their individual needs, when a person from mainstream American culture might expect a "yes." Similarly, Karen people will often first refuse an invitation to eat, but after repeated offers, will later quietly accept the invitation (Barron et al., 2007). These cultural norms may have an implication in terms of medical interpretation and interactions with health care providers. There may be an inherent difficulty for a Karen patient to challenge or question a physician that providers should keep in mind when interacting with Karen persons.

When greeting one another, people will say, *Kaw Leh Ah Gay* (Good morning), *Ni Leh Ah Gay* (Good Afternoon), *Ha Leh Ah Gay* (Good evening) and *Na Leh Ah Gay* (Good Night) rather than shake hands or bow. Another common greeting is to ask someone if they have eaten rice (the staple food), *N'aw May Wele Ha*. This is the equivalent to asking someone, "How are you" (Neiman et al., 2008). A list of Sgaw Karen words and phrases can be found in Appendix E. Some Karen who have had exposure to western culture may use a modified form of a handshake (Neiman et al., 2008). The greeting begins with holding one's right elbow in one's left hand and using one's right hand to lightly and gently shake the other person's hand in greeting (Dziedzic, n.d.).

It is very uncommon to see men and women displaying affection in public. Kissing and hugging by opposite genders in public is considered impolite or disrespectful (Neiman et al., 2008). However, showing affection by holding hands or hugging someone of the same sex is common and is considered friendly. Other behaviors that can be seen as culturally impolite include direct eye contact, folding one's arms in front of oneself when talking, sitting so that one's feet are pointing



in the direction of another person (especially someone older), and touching someone's head where it is believed a person's spirit resides (Neiman et al., 2008). It is acceptable, however, for an elder to touch a child on the head and for a medical provider to touch a patient on the head during a medical assessment, but it is helpful to explain this beforehand (Kemp & Rasbridge, 2004).

## Naming Conventions

The Karen people do not traditionally use surnames, but instead use names or nicknames given to them at birth. However, Karen who have resettled outside Burma are increasingly adopting the use of surnames; in Thailand, the law requires that they be assigned surnames (Barron et al., 2007). Men and women are referred to by the prefix *Saw* (Mr.) or *Naung* (Ms.) followed by their given names and then their kinship relations (Barron et al., 2007; Neiman et al., 2008). For example, one's older brother would be addressed by his first name followed by the Sgaw Karen word for older brother, *wae kwá*. Elders are often referred to as either *phi* (grandmother) or *phu* (grandfather), regardless of whether there is a blood relationship. Older men and women are referred to as *pa ti* (uncle) and *my rä* (auntie) respectively (Barron et al., 2007).

### Suggestion

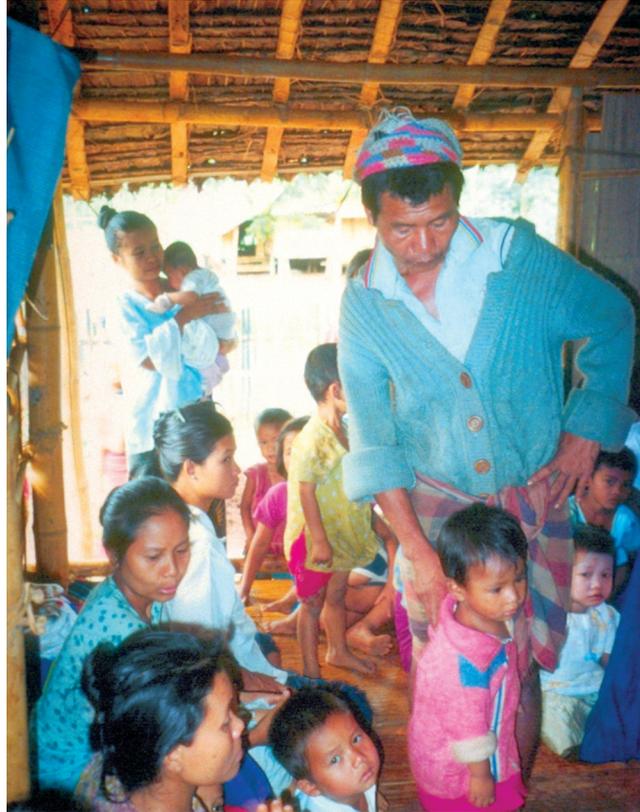


- When greeting a Karen person, remember it is not always necessary to shake hands. A greeting like “good morning” or “good evening” is sufficient. Wait to see if they offer their hand first.
- To elicit “small talk,” the polite Karen phrase asks if you have eaten rice.
- Refrain from showing affection between men and women in public.
- Avoid touching any adult or child on the head, as it is considered sacred.
- Avoid referring to Karen persons as Burmese. It may be considered offensive, since they are distinct ethnic groups with different languages and histories.
- Be cognizant of the Karen cultural norms, which promote collectivism over individualism and value harmony rather than challenging opinions.

## Social Structure, Family, and Gender

Karen culture places a high value on the family, respect for elders, and duty to parents (Barron et al., 2007). Similarly, the concept of community is extremely important, and the community at large is considered a part of the extended family. It is the nuclear family, however, that plays a prominent role in the daily life of Karen people, usually consisting of a husband, wife, and their unmarried children. Karen couples tend to have on average two to three children (Graber, 2006).

Typically, both men and women share the responsibilities of the household, with men doing mainly manual labor such as farming, plowing, hunting, building, and maintaining the physical structure of the family home (Barron et al., 2007). Women are often responsible for cooking, cleaning, and overall maintenance of the household. Both men and women share the responsibility of raising children. In terms of decision-making, both husband and wife are involved because decisions affect the whole family, although the husband is usually the one to communicate the decision in public (Mekong, 2006).



Karen refugees, including men, participate with their children in an immunization campaign at the Thai-Burma border.  
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## Marriage

Karen persons tend to marry within their own local cultural group. Most young people choose their spouses through courtship, although arranged marriages occasionally occur (Barron et al., 2007). A young man initiates the process by informing his parents of his intent to marry (Spiro, 1975). Then an astrologer is consulted to determine the couple's compatibility (Brant & Khaing, 1951). If compatibility is determined and the marriage is deemed appropriate, the astrologer chooses the wedding date. The marriage ceremony involves all participants of the community.

Historically, the Karen people are a matrilineal society. As such, it is common for young married couples to live with the wife's family for a short length of time. If all the children are married, it is common for elderly parents to be cared for by the youngest married daughter (Mekong, 2006). This youngest daughter will inherit the land upon the passing of both parents. In Burma, elders have a great deal of influence over their children and grandchildren's occupations and living arrangements (Skidmore, 2004).

## Clothing

The vibrancy of Karen culture is exhibited in traditional clothing. The basic, traditional dress for Karen men is a short-sleeved, red cotton shirt or tunic and blue or black wide-legged pants or wrapped sarong (Mekong, 2006; Barron et al., 2007). A colorful shoulder bag is also worn, and it is not uncommon for men to wear earrings (Barron et al., 2007). Sgaw Karen women wear short-sleeved, dark-blue blouses with red and white beads at the bottom (Barron et al., 2007). These blouses are worn with red or lilac-colored embroidered skirts. A red or white turban is worn to complete the outfit. Unmarried girls and women wear white tunics decorated with embroidery and tassels at the bottom. In refugee camps it is common to see Karen people in western style clothing such as denim jeans and t-shirts (Barron et al., 2007).

## Customs and Holidays

A central theme of Karen life is artistic expression, such as drama, dance, music, painting, and poetry. The harp, bamboo guitar or fiddle, drums, cymbals, and gongs are some common Karen musical instruments (Mekong, 2006). Through these media, Karen artists portray comedic, political, romantic, religious, and cultural themes (Skidmore, 2004). Karen people celebrate several traditions that serve to unify the various Karen populations and preserve their culture, identity, and language. Certain symbols are used in these festivities to symbolize basic tenets of Karen culture. These symbols include sticky and regular rice, banana, sugar cane, water, and a kind of flower (*paw gyi*) which are associated with values such as unity, sincerity, honesty, perseverance, simplicity, beneficence, and purity (Barron et al., 2007).

Rites of passage are very important in Karen culture, with the three most recognized times during a person's life being birth, marriage, and death. At birth, offerings are often made to spirits and a string is tied around the child's wrist to keep its soul, or *kla*, from being taken away. Weddings are lively affairs filled with music. Funerals of adults are ceremonies marked with feasts, funeral rites, and chanting of poems (Barron et al., 2007).



Women harvest rice in Myanmar.  
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## Religion

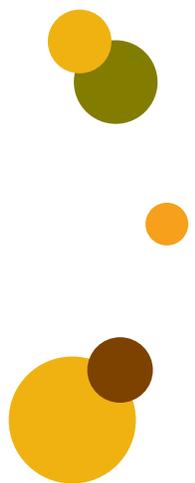
Karen people were originally animists. Today it is estimated that approximately 70% are Buddhist, Buddhist-animist, or animist, and 20% to 30% are Christian (Barron et al., 2007). The interplay between Karen religious beliefs (Buddhism and Christianity) and traditional animist beliefs is evident in Karen culture, but Karen persons do not associate their ethnic identity with a particular religion (Hayami, 1996; Platz, 2003).

The majority of those Karen who are considered Buddhist belong to the Theravada sect. This sect teaches that individuals are responsible for their own actions and that every action has a consequence, *karma*. In addition, the concept of “self-awakening” is an important tenet of Theravada Buddhism and is characterized by the belief in reincarnation (Neiman et al., 2008). If a person lives a good and harmonious life, he or she will be rewarded in the next life. The ultimate reward is to reach Nirvana, the freedom from all worldly concerns such as greed, hate, and ignorance. Nirvana is achieved by following the teachings of Buddha.

Animists 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. The animist belief system is divided into two realms, the spirits of the land and familial/ancestral spirits (Hayami & Darlington, 2000). The spirits of the land include the Rice Goddess and the Lord of Water and Land. The elders in the community are responsible for performing the appropriate rituals, which are conducted to appease the spirits. When food production is prosperous, the spirits of the land are said to be happy. It is believed that famine or epidemics occur when the spirits are unhappy or are angered by immorality or failure to perform rituals (Hayami & Darlington, 2000).

In Karen animism, it is believed that each person has 37 souls or *kla*. The *kla* is said to enter one’s body at birth and leave one’s body at death, at which time the *kla* reappears in a newborn at birth. Illness is said to be a result of losing a *kla*. To prevent the *kla* from leaving the body, many Karen people wear a string around his or her wrist (Barron et al., 2007). This string is placed by either an elder or shaman.

The conversion of some Karen to Christianity occurred during the early to mid 18th century when Christian missionaries began settling in rural areas of Burma (Hayami & Darlington, 2000). Converts learned to read and write in both English and Burmese, and around 1830, an American Baptist missionary developed for the Karen people a written script adapted from the Burmese alphabet (Neiman et al., 2007). These formally educated Karen Christians soon held higher social positions than the Buddhist or Animist Karen (Hayami & Darlington, 2000) and went on to take the majority of leadership roles in the Karen independence struggle (Barron et al., 2007).



## Traditional Health Beliefs and Practices

Traditional medicine is an integral part of people's culture in developing worlds (Awale et al., 2006). According to the World Health Organization (WHO), up to 80% of the world's poor and rural populations use traditional medicine for primary care due to its accessibility (Northeastern Regional Training and Medical Consultation Consortium, 2008).

Karen ethno-medicine includes elements of both traditional Chinese medicine and the Ayurveda humoral system of India. A harmonious state between the mind, body, and soul is believed essential to having good health (Kemp & Rasbridge, 2004). Imbalances ("too hot" or "too cold") of those natural elements are believed to cause illnesses, although these terms do not refer to temperature. To counteract the effects of too much heat in the body, traditional healers provide cold treatments that restore balance. Excessive heat can also be caused by eating the wrong types of foods for one's body type (Neumann, 2003). Many Karen also believe that the abdomen is the place where diseases, moods, and bodily conditions originate. To protect themselves from harm, Karen men often have elaborate tattoos on their abdomens (Barron et al., 2007).

Traditional healers treat their patients with a combination of plants with medicinal properties, dried and powdered substances, and Buddhist principles (Skidmore, 2004). For example, various herbs and plants, such as *Lay-myo-shit-hsai-hsay*, are used to make medicines to treat indigestion, congestion, and cough. *Has-hset-da-bah-hsay*, another commonly used remedy, is used to treat wind and urinary disorders (Awale et al., 2006). Illness is also sometimes thought to be caused by evil spirits. Traditional healers perform ceremonies that require the sacrificing of chickens or other animals in order to appease or banish the spirits causing the illness (Barron et al., 2007). To treat mental and emotional illnesses, the Burmese have traditionally used medico-religious specialists or *daq sayas*, which include astrologers, white magicians, alchemists, wizards, *Nat* spirit mediums, and monks (Skidmore, 2004).

### Seeking Medical Care in the U.S.

Despite the long history of traditional health practices among the Karen people, many in the refugee communities are accustomed to accessing health care through a clinic setting, and most Karen have had enough contact with western doctors that they do not fear modern medicine (Neiman et al., 2008). It is important to note, however, most Karen are more comfortable working with people of their same ethnic origin, and some patients may be reluctant to work with a particular interpreter if he/she is not of Karen background (Northeastern Regional Training and Medical Consultation Consortium, 2008).

Another consideration with regard to seeking care in the U.S. is the reluctance some Karen may have in divulging their health information to the practitioner. Karen patients may be ashamed, embarrassed or hesitant to explain their health history and would benefit from having a Karen interpreter to facilitate communication between patient and practitioner, to clarify any misunderstandings, and to discuss



Villagers meet with a health care provider, Magway, Myanmar.  
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the logistical details of their next appointments, often even if they speak English well (Neiman et al., 2008). Medical decision making also involves everyone in the family (Neiman et al., 2008) and may take time and require a practitioner's patience to ensure adherence to treatment regimens. In the case of TB, the patient-provider interaction is key to minimize stigma associated with the disease.

## Suggestion

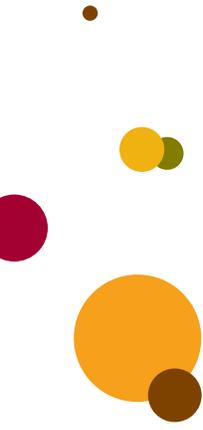


- Respect the importance of family-based decision making. Always remember that it is the patient's right to consult with whomever he or she chooses in order to make a decision.
- Whenever possible, choose professional interpreters who share the same characteristics as the patient (e.g., same Karen sub-group, religion, gender).
- Use interpreters to gain health history information, clarify misunderstandings, and discuss the logistical details of subsequent medical appointments.

## Socioeconomic Position in the United States

Many Karen have had difficulty finding employment in the United States, and have relied heavily on menial jobs for income and/or welfare programs for health services (see for example, Wright, 2009; and Jirat, 2007). According to 2000 Census data, 35% of Burmese Americans were outside the labor force, which is one aspect of their new lives in the U.S. that is not as welcome a change as they had hoped. For some, the pursuit of higher education is a goal (Jirat, 2007), while for others, the positions held in the camps, such as teacher, were more reputable than their current occupations in the U.S. in menial, low-paid work (Wright, 2009).

The most common jobs held by Burmese men and women are in manufacturing (23.4%), followed by education, health, and social services (20%); retail, the arts, entertainment, and recreation (10%); and jobs in accommodation and food services (10%) (U.S. Census Bureau, 2000). According to the 2006-2008 American Community Survey 3-Year Estimates, which may disproportionately factor ethnic Burmese who immigrated to the U.S. before the current waves of Karen immigrants (U.S. Census Bureau, 2008), the median Burmese household income in 2008 was \$62,871, about \$7,000 higher than that of non-Hispanic white households (\$55,530) (U.S. Census Bureau, 2009). Nearly 15% of Burmese were living below the poverty level, in comparison with 10.6% for Asians overall. By comparison, the poverty levels for Hmong and Cambodians were 27.1% and 19.9% respectively (U.S. Census Bureau, 2008).

A decorative graphic on the left side of the page consists of several overlapping circles in various colors: a small brown circle at the top, a yellow circle below it, a red circle to the left, a large orange circle below the yellow one, and a small dark brown circle at the bottom right of the orange circle.

## **Changing Values, Changing Roles**

Adaptation to an American lifestyle has demanded new survival strategies that have inevitably changed the pattern and rhythm of the lives of the Karen people. For Karen Americans, the sense of family and cultural heritage remains strong. Many elders are now taking greater responsibilities in providing childcare to their grandchildren and cooking for the household (Metropolitan Area Agency on Aging, 2006). Because of the long hours that their adult children are working, elders are finding it hard to adjust to this new lifestyle. Some Karen elders may feel like they have lost control over many aspects of their lives, including the loss of influence over their own children. Parents who have limited English-speaking abilities often have to rely on their children to interpret for them in everyday situations (Neiman et al., 2008). The power dynamic between parent and child is shifting. This change in family dynamic adds strain among family members. Karen culture will continue to evolve as roles change in the U.S. setting.

## Chapter 3: Health Status of Karen Burmese

### Health Statistics at a Glance

This chapter provides a broad overview of health topics that affect Karen people, particularly tuberculosis and related health needs. Unfortunately, there is a limitation on the availability of health data for Karen persons in Burma due to restrictions imposed by the SPDC on publications and reports, as well as constraints on health and humanitarian activities in Burma (Beyrer et al., 2006). These limitations have made it difficult to accurately assess the current health situation and to respond to health crises in Burma. Health statistics for Karen people or Burmese living in the United States are also limited as the diversity of Asians, Asian Americans, and Pacific Islanders are often obscured under this umbrella term and do not represent specific ethnicities or nationalities. Data that are specific to Karen or Burmese in the United States are reported when available in this chapter. The health statistics in this chapter are not specific to Karen, unless specifically stated.

### Tuberculosis

#### In Burma

- In 2007, the estimated tuberculosis incidence was 171 per 100,000 (World Health Organization (WHO), 2009) and the estimated prevalence was 162 per 100,000 (WHO, 2009).
- Among new TB cases in 2007, 4.4% were estimated to be multidrug-resistant (WHO, 2009). Among previously treated TB cases in 2007, 16% were multidrug-resistant (WHO, 2009).
- In 2007, the estimated TB mortality rate was 13 per 100,000 (WHO, 2009).
- Bacille Calmette-Guerin (BCG) vaccine coverage at birth is 85% (WHO, 2007b). It is important to note that this statistic varies depending on access to health care in rural areas.

#### In the United States

- In 2006, there were 41 cases of TB among individuals from Burma. This number increased to 65 in 2007 and 112 in 2008, although the percentage of overall cases (1%) did not change (CDC, 2008a).
- Based on the past 5-year average number of TB cases, Burma is in the top 20 countries contributing to TB in the United States.
- In 2008, Burmese living in the United States for less than 1 year represented the majority of cases (66%), compared to those who lived here between 1-4 years (10%) and 5 years or more (20%) (CDC, 2008a).
- California has one of the largest Burmese immigrant populations; the state reported 19 TB cases among Burmese people in 2008 (California Department of Public Health, 2009).



## HIV/AIDS

### In Burma

- Estimates of adult HIV-prevalence in Burma vary between 0.7% - 2.0% among adults (USAID, 2008).
- The population living with HIV/AIDS is estimated to be between 200,000 - 570,000 (USAID, 2008).
- Prevalence rates among at-risk populations, particularly injection drug users and sex workers, remain high. According to UNAIDS (2005), 43% of IDUs and 32% of sex workers are HIV positive.
- The major mode of transmission is sexual (67%), followed by intravenous drug use (30%) (USAID, 2008).
- In 2007, approximately 7% of new TB cases were estimated to be co-infected with HIV (WHO, 2008b); 70% of those infected with HIV will eventually have active TB (USAID, 2008).

## Malaria

### In Burma

- Nearly half of all deaths (53.6%) from malaria in Asia occur in Burma (Beyrer et al., 2006).
- There were 411,494 lab-confirmed and 154,710 probable malaria cases in 2008 (WHO, 2010).
- The number of reported cases increased from 245,000 in 2000 to 566,000 in 2008 (WHO, 2010).

## Substance Abuse

### In Burma

- Among youths (13-15 years of age ), 20.7% used some form of tobacco and 15.7% smoked cigarettes (WHO, 2007a).
- Boys aged 13-15 were more likely to smoke than their female counterparts, at 37.3% and 4.7% respectively (WHO, 2007a).
- According to the 2004 World Drug Report, the most commonly used drug among 15-64-year-olds was marijuana.
- In general, the prevalence of drug use is estimated to be 1% of the population (300,000) (United Nations Office on Drugs and Crime, 2005).
- Among registered drug abusers, opiate addicts make up approximately 90% (United Nations Office on Drugs and Crime, 2005).

## Diabetes Mellitus

- In California, Asians were 1.5 times more likely to be diagnosed with diabetes than non-Hispanic whites (National Diabetes Education Program, 2007).
- In 2006 in the United States, Asians and non-Hispanic whites had the lowest rates of diabetes as compared to all other ethnic groups, with 8.4% and 7.1% respectively (CDC, 2007c).
- It is estimated that 3 million people in Burma have diabetes (Muecke, 2008).

### End-Stage Renal Disease (ESRD)

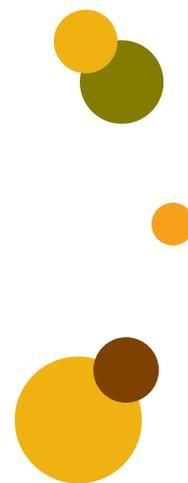
- Asian Americans are nearly twice as likely to develop end-stage renal disease as non-Hispanic whites in the United States (National Diabetes Education Program, 2007).
- Rates of new ESRD cases are increasing at a rate of 11% per year for Asian/Pacific Islanders (APIs) compared with 6% per year for non-Hispanic whites in the United States (U.S. Department of Health and Human Services, 2000b).

### Cancer

- Liver cancer is the third leading cause of mortality among Asians in the United States (Intercultural Cancer Council, 2004). Both API men and women have more than twice the incidence of liver cancer as the non-Hispanic white population (U.S. Department of Health and Human Services, 2009).
- Southeast Asians have a higher rate of lung cancer than non-Hispanic whites (Intercultural Cancer Council, 2004).
- Mortality rates for cervical cancer have increased among foreign-born women. Of particular concern is that 70% of the API population is foreign-born (Tsui et al., 2007).
- APIs have the highest incidence rates of stomach cancer (U.S. Department of Health and Human Services, Office on Women's Health, 2008). Asian/Pacific Islander men are twice as likely to die from stomach cancer, compared to the non-Hispanic white population, and API women are 2.6 times as likely to die from the same disease (U.S. Department of Health and Human Services, 2009).

### Hepatitis B

- There is a 15% prevalence rate of chronic hepatitis B among the Burmese in the U.S. (U.S. Department of Health and Human Services, 2008).
- Southeast Asians are at a high risk for transmitting the hepatitis B virus from mother to child (U.S. Department of Health and Human Services, 2008).



## **Tuberculosis**

### **In Burma**

Although people in almost every country are infected with tuberculosis (TB), 22 countries account for 80 percent of the worldwide TB cases (WHO, 2009). Specifically, South and Southeast Asia have the highest burden of TB worldwide, as one in three cases of diagnosed TB is in this region (Beyrer et al., 2006). Burma is one of these 22 countries, with an estimated 97,000 new cases diagnosed each year (WHO, Regional Office for South-East Asia, 2008). In 2007, the incidence of tuberculosis was estimated to be 171 per 100,000, the prevalence was estimated to be 162 per 100,000, and the mortality rate was estimated to be 13 per 100,000 (WHO, 2009).

Non-Governmental Organizations (NGOs) have been crucial in reducing the incidence of TB. With support and assistance from the World Health Organization (WHO), the Burmese Ministry of Health (MOH) instituted a directly observed treatment short course (DOTS) program as a mechanism to control TB. Through DOTS, other improvements in the National Tuberculosis Programme (NTP), and increased surveillance and monitoring activities, the case detection rate increased over a 5-year period (1999-2004) (Stover et al., 2007). The Ministry of Health increased DOTS coverage to all of Burma's 324 townships (WHO Regional Office for South-East Asia, 2008). According to WHO, Burma had a case detection rate of 95% from 2003-2006.

As the majority of its funding comes from international donors, the MOH is unable to provide the support necessary to improve the public health infrastructure. According to a published report by researchers at the Johns Hopkins Center for Public Health and Human Rights, the actual burden of disease may be under-estimated because of the government's inability to fully operate surveillance, monitoring, and reporting activities (Beyrer et al., 2006).

Multidrug-resistant (MDR) TB in Burma was first reported in 2000. The estimated incidence of sputum smear positive MDR TB cases in 2007 was 2,331 (WHO, 2008a). Among new TB cases in Burma in 2007, 4.4% were MDR TB; and among previously treated TB cases in 2007, 16% were MDR TB (WHO, 2009). The rate of MDR TB was 5.3% on the Thai-Burmese border compared to the national average of 0.9% in Thailand (Stover et al., 2007).

One reason for the development of MDR TB is that TB drugs have become widely available on the black market, enabling people to take them without supervision (Stover et al., 2007). Another hindrance to the current TB control program is the military junta's reliance on sputum exams as the only means of TB confirmation and reporting (Stover et al., 2007).

### **In Tham Hin Refugee Camp, Thailand**

Although there are few epidemiologic data on TB in the refugee camps along the Thai border, the information that is available paints a similar picture to the TB epidemic in Burma. In 2006, as many as 2,700 of Tham Hin's 9,500 refugees were scheduled to be resettled in the United States (McKinsey, 2006). In a 2007 evaluation study of the International Organization for Migration's (IOM) TB screening process, researchers found that 30% of 4,686 people screened at Tham Hin were classified as TB suspects, and 5% (or 252) were found to have TB (Nolan, Schecter, & Mase, 2007). Only one case of MDR TB was discovered among the refugees screened. Researchers concluded that the burden of TB among Burmese refugees was not much less than other refugee groups along the Thai border.

The Mae La Displaced Persons Camp near Mae Sot is the largest refugee camp in Thailand along the border with Burma. There are approximately 45,000 refugees in the camp, nearly all of whom are Karen. Many have been living there since the camp opened in 1984. BPRM offered resettlement to these refugees and aimed to resettle 15,000 refugees before September 30, 2007, (Nolan, Schecter,

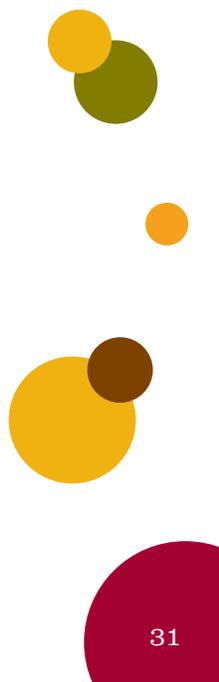
& Mase, 2007). Medical screening of U.S.-bound refugees from Mae La Camp by IOM began on April 9, 2007, following the new Technical Instructions for Tuberculosis Screening and Treatment. The IOM screening process begins with TST placement and reading for refugees from age 2 through age 14. All persons then undergo a medical exam and, for those 15 and older, those with a TST of 5 mm or more, and those under 2 with clinical signs or symptoms of TB, a chest x-ray (with lateral if less than 10 years of age). Refugees with any findings of suggestive of pulmonary TB (including for this purpose pleural or laryngeal) will then have three morning sputum specimens collected for AFB smear and culture. Any person found to have smear- or culture-positive TB is required to complete treatment for TB by ATS/CDC treatment guidelines under strict DOT management before being allowed to travel to the U.S. In the first 3 weeks of screening, during which 1,300 refugees were screened, three sputum specimens were obtained from each of 97 refugees because of abnormal x-ray findings and/or symptoms. Of these, two refugees had at least one positive AFB smear. This is an initial smear-positivity rate of about 150/100,000, which suggests that the burden of TB disease is likely to be very similar to that of Tham Hin. (from (Nolan, Schecter, & Mase, 2007).

### **In the United States**

In 2006, there were 41 cases of TB among individuals from Burma. Of the 41 cases of TB reported, it is unknown what percentage of the cases were Karen Burmese. This number increased to 65 in 2007 and 112 in 2008, although the percentage of overall cases (1%) did not change (CDC, 2008). Based on the past 5-year average number of TB cases, these cases place Burma in the top 20 countries contributing to TB in the United States. In 2008, the number of TB cases and percentages among Burmese in the United States varied according to the number of years since arrival in the United States. Individuals living in the United States for less than 1 year represented the majority of cases (64 cases, 66%) compared to those living between 1-4 years (10 cases, 10%) and 5 years or more (19 years, 20%) (CDC, 2008). With one of the largest Burmese immigrant populations, California had 19 reported cases of TB from persons born in Burma in 2008 (California Department of Public Health, 2009).

### **Bacille Calmette-Guérin Vaccine**

Bacille Calmette-Guérin (BCG) is currently used in many parts of the world as a vaccine against TB; in Burma in 2006, BCG vaccine coverage at birth was 85% (WHO, 2007b). These statistics may vary based on access to health care, particularly in areas where there is ethnic conflict with the government. 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). An Interferon-Gamma Release Assay (IGRA) is preferred for testing persons who have received BCG as it is expected to reduce the possibility of false-positive results and improve acceptance of treatment for LTBI (CDC 2010c). The current CDC 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. (Refer to Table 7 in the June 09, 2000 *MMWR* for criteria for tuberculin positivity, (CDC, 2000)). Therefore, a history of BCG vaccination should not influence the decision regarding whether to treat latent TB infection (LTBI) (CDC, 2000).



## Malaria

Malaria is among the most important public health problems in Burma, and is a top priority in health planning (WHO, 2010). Nearly half of all deaths (53.6%) from malaria in Asia occur in Burma (Beyrer et al., 2006). There were 411,494 lab-confirmed malaria cases in 2008 (WHO, 2010).

In Southeast Asia, particularly what is defined as the Greater Mekong sub region (Burma, Thailand, Laos, Cambodia, Vietnam, and Yunnan Province, China), the areas at greatest risk of malaria are the forested regions, populated by ethnic minority groups (Beyrer et al., 2006; USAID, 2009). For example, the ethnic minority Kachin state on the Burma-Chinese border had mortality rates for malaria almost five times higher than the national average (WHO, 2003). In addition to these ethnic minority groups, there is often a significant migrant population, both domestic and international (USAID, 2009), and non-immune migrant workers involved in gem-mining in forests, logging, agriculture and construction, that is also at risk (WHO, 2009).

Multidrug resistant (MDR) malaria is most problematic on the Thai-Burma border (WHO, 2010; Wongsrichanalai et al., 2001). As there is little regulatory oversight on the sale and importation of anti-malarials, 70% of anti-malarial pills sold in Burma contain substandard amounts of active ingredients, which increases the risk of MDR malaria (Beyrer et al., 2006).

## Tuberculosis-Related Health Issues

Understanding other health issues affecting the lives of Karen Burmese patients provides critical information for TB care providers. Listed below are some conditions that increase the risk of latent TB infection progressing to TB disease (CDC, 2004).

- Human immunodeficiency virus (HIV) infection
- 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)

Among these conditions, those that are most relevant to Karen persons from Burma are further explored here. Information for these conditions is provided for both Burma and the United States when available.

## HIV/AIDS

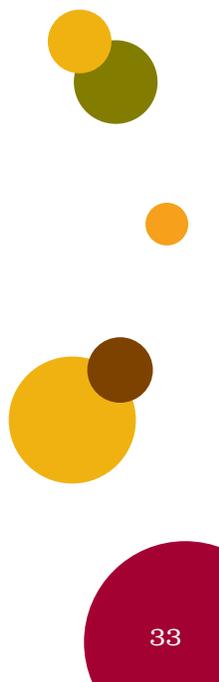
The HIV epidemic has posed major challenges to TB control efforts globally. HIV infection is the strongest predictive risk factor for developing TB disease once a person is infected with *M. tuberculosis*. While the average probability of progressing from TB infection to disease is less than 10% over the lifetime of an HIV-uninfected person, the risk ranges from 5% to 8% per year in those who are HIV-infected and not on Highly Active Anti-Retroviral Therapy (HAART) (Markowitz et al., 1997; Selwyn et al., 1989) – the combined use of several antiretroviral drugs that inhibit the ability of the virus to multiply in the body (National Cancer Institute, n.d.). 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). As such, TB is a leading cause of death worldwide among people who are HIV-positive, accounting for at least 11% of AIDS deaths and possibly as many as 50% (WHO, 2006b).

### In Burma

Countries in the Southeast Asia region are beginning to witness increasing numbers of TB/HIV co-infected individuals. In the Southeast Asia region, 5 of the 11 countries are high- or moderate-TB/HIV burden countries: India, Indonesia, Burma, Nepal, and Thailand. Tuberculosis is the most common opportunistic disease in Asia among people living with HIV/AIDS. While the double stigma of HIV and TB leads to delays in both HIV and TB diagnosis and treatment, mortality in HIV-infected TB patients is also higher due to a worse prognosis or other opportunistic infections (WHO, 2006b). In Burma, TB/HIV surveillance data indicate that 11% of TB patients in Burma are coinfecting with HIV (WHO, 2007b). In 2005, approximately 7% of new TB cases were co-infected with HIV (WHO, 2008b); 70% of those infected with HIV will eventually have active TB (USAID, 2008).

In Burma, HIV/AIDS is ranked as the nation's third most pressing health challenge, after TB and malaria (USAID, 2008). The adult HIV-prevalence rate in Burma has been reported between 0.7% - 2.0%, an estimated 200,000 - 570,000 people (USAID, 2008). The major mode of transmission is sexual (67%) followed by intravenous drug use (30%) (USAID, 2008). From 2000-2004, infection levels among adults seeking treatment for other sexually transmitted infections dropped from 7% to 3% for men and 12% to 6% for women (USAID, 2008). Conversely, prevalence rates among at-risk populations, particularly injecting drug users and sex workers, remain high. According to UNAIDS (2005), 43% of IDUs and 32% of sex workers are HIV-positive.

In an effort to find ways to address the HIV/AIDS epidemic, the Burmese government formed the National AIDS Committee (NAC) in 1989 within the Ministry of Health which centralized efforts into one single authority. While the multi-sectoral program targets high-risk populations (USAID, 2008), reduced funding has caused many AIDS programs to suffer. Health expenditures in Burma are among the lowest globally, as there is an annual budget of less than \$22,000 for the prevention and treatment of HIV among a total population of 43 million people. Much of the country lacks basic laboratory facilities to carry out a CD4 blood test, the minimum standard for clinical monitoring of AIDS care (Beyrer et al., 2006). Additionally, there is much variation in HIV surveillance results across Burma.



## In the United States

Although APIs represented less than 1% of all HIV/AIDS cases in the United States between 2001 and 2004, APIs had the highest estimated annual percentage increase in HIV/AIDS diagnosis rates of all races/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), followed by men who have high-risk heterosexual contact or are injection drug users (IDUs). In 2005, MSM transmission accounted for 71% of all API AIDS diagnoses to date (CDC, 2006a). Among API women, HIV transmission occurs most often among women who have sex with men who are at increased risk, followed by women who are IDUs (CDC, 2006a).

**Table 2.**

Race or Ethnicity	Estimated # of AIDS Cases in 2007	Cumulative Estimated # of AIDS Cases Through 2007	Total AIDS Cases in 2007 (%)	Rate per 100,000 population
White, non-Hispanic	10,407	404,465	28.1	10.8
Black, non-Hispanic	17,507	426,003	47.3	96.2
Hispanic	6,921	169,138	18.7	36.9
Asian	551	8,232	1.3	9.3
American Indian/Alaska Native	158	3,492	0.4	16.1

Table 2 presents the estimated number of diagnosed AIDS cases in the United States in 2007 and cumulatively since the beginning of the epidemic. Asians comprised approximately 1.3 percent of the total HIV/AIDS cases in 2007 (CDC, 2009a).

**Source: Centers for Disease Control and Prevention. HIV/AIDS Surveillance Report, 2007.**

## Substance Use

### In Burma

The discussion of HIV/AIDS in Burma is intertwined with narcotics use and exportation. Burma is the world's second-largest opium- and heroin-producing state and has also increased its production and export of methamphetamine (Beyrer, 2006).

Additionally, tobacco has been accepted as a social norm for many decades in Burma. Substantial literature, poems and songs present tobacco as positive for social life. There have been long traditions of serving tobacco to friends, and giving tobacco to guests at weddings and ceremonies (Kyaing et al., n.d.). The association between tobacco use and TB outcomes has long been suspected. More recent studies have provided evidence for causal association between active and passive tobacco smoking and a range of TB outcomes including infection, development of disease, treatment outcomes, relapse, and mortality (e.g., den Boon et al., 2005; Kolappan & Gopi, 2002; Lin et al., 2007). A case control study conducted in India between 1993 and 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 evidence that smoking is associated with an increased risk of contracting tuberculosis (den Boon et al., 2005; Lin et al., 2007).

Among youth in Burma (13-15 years of age), 20.7 % used some form of tobacco and 15.7 % smoked cigarettes (WHO, 2007a). Smoking and chewing betel quid among men are accepted as normal behaviors for adult men. Although smoking for women is not common in urban areas, about 20% of rural women, especially older age women, smoke cheroots and hand-rolled tobacco products (WHO, 2010).

According to the 2004 World Drug Report, the most commonly used drug among 15-64 year olds was marijuana. In general, the prevalence of drug use is rather low (estimated 1% of the population, or 300,000) (United Nations Office on Drugs and Crime, 2005). In 2002, national data reported that among new drug addicts, 4.9% were 15-19 years of age and 12% were 20-24 years of age (WHO, 2007a). Among registered drug abusers, opiate addicts make up approximately 90% of drug abusers (United Nations Office on Drugs and Crime, 2005).

Among Karen, the use of tobacco is quite common. As early as age 10 years, boys begin smoking (Neiman et al., 2008). Even though Burma is one of the world's largest opium producers, Karen villages are more likely to cultivate marijuana than opium. However, it is the use of betel nut that is most common among the Karen people. Betel nut, also known as *Kunya* in Burmese, is a stimulant that contains high levels of psychoactive alkaloids and produces a euphoric effect (Neiman et al., 2008).

### **In the United States**

Both TB and substance use are prevalent in crowded, low-income areas in the United States. As a result, substance users are two to six times more likely to contract TB than nonusers (CDC, 2004). When compared to non-Hispanic whites, APIs generally have lower rates of substance use, including smoking. In 2004, only 11.3% of APIs smoked cigarettes compared to 22.2% of non-Hispanic whites (American Lung Association, 2006).

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 Southeast Asian countries (American Lung Association, 2006).

### **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 diabetics 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). Diabetes is the 5th leading cause of death for APIs, who have higher rates of impaired glucose tolerance than non-Hispanic Whites (Cornell University, 2010). Data concerning diabetes prevalence for API is limited. A national survey (2004-2006) for people aged 20 years and older indicates that 7.5 percent of Asian Americans were diagnosed with diabetes (National Diabetes Information Clearinghouse, 2008).

### **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. 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 in APIs than in non-Hispanic whites. New ESRD cases are increasing at a rate of 11% per year for APIs compared to 6% per year for non-Hispanic whites (U.S. Department of Health and Human Services, 2000a).

## Cancer

People who are diagnosed with cancer of the head or neck are at an increased risk of developing TB disease. In the U.S., nasopharyngeal cancer is most common among Chinese Americans, followed by other API groups (American Cancer Society, 2010). In 2002, APIs showed a higher incidence (4.1 per 100,000) of nasopharyngeal cancer than all other racial groups (CDC, 2002).

## Hepatitis B

Although having hepatitis B does not increase the risk of progression to TB disease like the conditions noted above, it may have an impact on TB and LTBI treatment because TB drugs are potentially hepatotoxic. Persons from Southeast Asia are also at high risk of prenatal transmission of hepatitis B. While the majority of people infected with hepatitis B eliminate 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 or cancer (Office of Global Health Affairs, 2004).

## Special Issues

### Mental Health

Among refugees, trauma associated with war, torture, rape, mass violence, and severe poverty has been long associated with mental illness. There is very limited information regarding the Karen refugees and post-traumatic stress disorder (PTSD). In the case of Southeast Asia, the literature primarily focuses on Vietnamese and Cambodian refugees. General information, however, regarding refugees and their experiences is well documented.

Research has found that refugees are prone to developing some type of PTSD as a result of trauma experienced pre- and post-arrival to the United States. This is due in part to the method in which they left their countries. Post-traumatic stress disorder was diagnosed in 70% of Southeast Asian refugees receiving mental health care. Post-traumatic stress disorder among Southeast Asian refugees is associated with trauma experienced before and after immigration to the United States (The Office of Minority Health, 2008). For Asian Americans, suicide was the 8th leading cause of death as compared to the 10th leading cause of death for white Americans in 2004 (The Office of Minority Health, 2008). Specifically, the highest suicide rate is among Asian American women who are 65 years of age and older. Older Asian women are 1.6 times more likely to commit suicide than their white counterparts (The Office of Minority Health, 2008). Once refugees have relocated to the United States, social isolation, feeling a lack of control over one's life, and lowered social status may compound the risk for depression and anxiety.

Refugees, unlike immigrants, do not choose to leave their countries of origin. Instead they are forced out. This forced migration leaves refugees with a sense of little control over their lives. It may also leave a sense of unpreparedness for the journey ahead (Southeast Asian Subcommittee of the Asian American/Pacific Islander Work Group, 2006). Long-term trauma such as forced displacements and torture are examples of the types of stressors that refugees can experience. These stressors place refugees at higher risk for developing mental disorders. The most reported mental health disorders include depression and anxiety disorders (Pumariega et al., 2005).

With regard to mental health care in the United States, the Karen immigrants are likely to be referred to non-Karen professionals for mental health counseling services. Mental health issues can be extremely complex, particularly in light of cultural differences in beliefs concerning psychological well-being and illness. Although the Karen people have words that describe what Americans would call depression and anxiety, their manifestations are not necessarily recognized as medical or mental illnesses by Karen people (Kemp & Rasbridge, 2004). Consequently, Karen persons 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 employment centers (Kemp & Rasbridge, 2004).

# Chapter 4: Perceptions, Attitudes, and Beliefs about Tuberculosis among Karen Burmese

## Findings from TB-Specific Behavioral and Social Science Research

In 2007, the Centers for Disease Control and Prevention (CDC) conducted a qualitative ethnographic study of 73 persons of Karen ethnicity from Burma in the United States to understand the TB-related experiences, perceptions, and attitudes of Karen Burmese. 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.) Briefly, study participants were recruited from two cities, 71% were health department clients, approximately half (45%) were women, and all were new arrivals to the U.S. Focus groups were conducted with these participants and moderators utilized an open-ended guide. It should be noted that the CDC study findings have limited generalizability due to the study’s small, non-randomly selected sample; thus, the information will not apply to all Karen Burmese. 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.

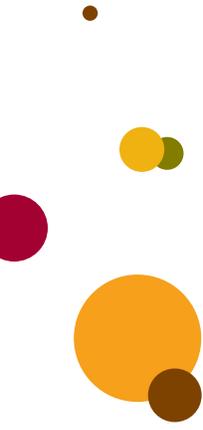
**Karen Burmese from the study have varying levels of understanding of TB symptoms, transmission, and prevention.** Generally, Karen respondents showed a basic knowledge about TB and its symptoms. The TB symptoms most frequently reported were weight loss, coughing, and difficulty breathing. Understanding about transmission was somewhat more varied. Almost all respondents reported knowing that TB can be passed from one person to another, but differences of opinion surfaced with regard to the way the TB was passed.

Although about half of the respondents knew that TB is communicable and associated with the lungs, only about one quarter of the sample was aware of airborne transmission. Many participants believed transmission could occur by sharing objects like cups and plates; thought that TB could evolve from pneumonia; or suggested belief in a family or genetic connection. One respondent explained, “TB is a scary, contagious disease, and also deadly disease. It could be passed down from family.” These findings suggest the need to assess understanding before tailoring educational messages, not only to reinforce accurate information about TB transmission, but also to clarify how TB is not transmitted.

Similarly, the majority of Karen Burmese respondents knew that TB was preventable, but responses related to the ways one prevents the transmission of TB varied from taking certain medications, or getting immunized, to taking care of personal hygiene. Only a few of the 21 respondents who were reportedly asked to take LTBI medicines indicated understanding that the medicines were for preventing the disease. Others from this sub-sample reported believing that the LTBI medicines were for “curing the TB disease” or “not to spread the TB disease to others.”

**Many Karen Burmese from the study may consider themselves at low risk for TB.** Almost half of the Karen Burmese who had no history of TB or LTBI believed their risk of getting TB was “low.” Several persons commented on the ‘protection’ they felt living in the United States. One respondent seemed confident in the environment of this country, stating “Because we live in a big city, (the) U.S. always prevents whatever disease came over.” Being vaccinated against TB did not appear to have an impact on one’s perception of risk, and no one mentioned having the vaccination when considering their risk of TB.





Despite perceptions of low TB risk, many Karen Burmese in the study felt TB was as serious as or more serious than other problems they were currently facing, and believed their family and friends worry a lot about becoming infected with TB. Persons who perceived TB as “more serious” than other problems tended to have been recruited from the health department in the study sites and had received TB information.

**Fear of stigma and the social repercussions of a TB diagnosis exist in the Karen community.** In the CDC study, over half of the Karen Burmese who had no history of TB felt that having TB would change the way they felt about themselves and stated that they would be treated differently by others. One person explained, “I don’t want anyone to say bad about me. People will stay away from me if they know the truth.” Despite this sense of stigma surrounding TB, over half of the Karen in the study said they would inform persons close to them if they had TB.

Contrary to this perception of stigma in the community, all of the Karen Burmese with a history of TB reported that people had not treated them differently and that having TB did not affect their day-to-day activities.

**Karen Burmese from the study are likely to use western biomedicine to treat TB and its symptoms.** The overwhelming majority of Karen Burmese felt that if a Karen person living in the United States suspected having TB, he/she would go to a medical doctor; most also mentioned the need to take medication. Several of the persons in the study also discussed traditional medicines or practices used by Karen to treat TB, such as special herbs or tree roots. One person in the study explained, “Yes, using the leaves call ‘paw bwa la,’ mixing together, and drink the water that came out of it.” However, less than half of the people in the study knew whether these treatments were available in the United States.

**Karen Burmese from the study are adherent to TB treatment, despite experiencing medication side effects.** Treatment adherence did not present a problem among the Karen participants. Almost all of the participants diagnosed with LTBI or TB reported that they were currently on or had completed the prescribed treatment. Only a few of the participants with LTBI reported any side effects from the medication, but among them were itchy skin, muscle aches, dizziness, weak joints, difficulty sleeping, and low energy. Similarly, none of the participants having a TB diagnosis complained of serious side effects or difficulties with the medicines, other than fatigue and some dizziness. No comments or suggestions were provided by these Karen Burmese participants about ways to facilitate medication adherence.

**TB providers are missing opportunities to disseminate information to both patients and the Karen community at large.** Among those Karen sampled for the CDC study, the majority reported never having received information about TB from a health care worker, including those participants who were recruited directly from the health department. Of those who did receive TB information, most of the Karen reported having understood the meaning of the information and receiving the information in a language they understood.

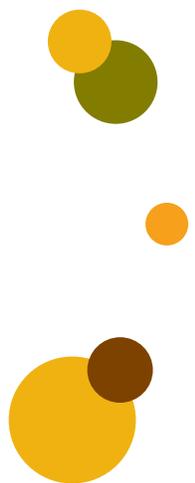
Most of the participants in the CDC study stated that they wanted to receive more information about TB and felt that other Karen in the community would also want information on TB. The most frequently mentioned topics included general information about TB and how to prevent it, information about the medications, and instruction on how TB is spread. Several individuals desired information on how many kinds of TB there were, including those who were in the middle of their course of LTBI treatment.

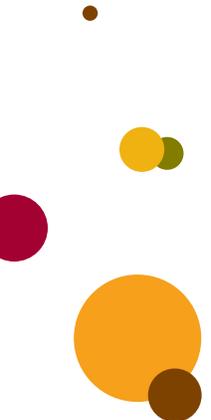
When asked what forms of information helped them understand TB most easily, most participants from the CDC study listed pamphlets and video most frequently, followed by television public service announcements, and informal talks to the community. In addition, several Karen Burmese participants encouraged the availability of interpreters who spoke the appropriate dialect of Karen. As one participant expressed, “Even though the clinic arranged with the Burmese/Karen interpreters, I could not clearly understand the Burmese or Sgaw Karen, as I am (speak) Pwo Karen.”

## Conclusion

To meet the challenge of controlling 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 Karen 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 across and among the various Karen 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 making the time and effort to learn from patients what is important to them -- personally -- in their experience of illness and treatment. In the words of Kleinman, ascertaining “what is at stake” for the individual will provide crucial information to use in tailoring the treatment plan (Kleinman & Benson, 2006). For example, specific beliefs or practices from Karen culture may not be a significant issue to a patient; however, being responsible for the care of multiple family members and juggling two part-time jobs without health insurance may be paramount. In short, focusing on the patient as an individual and maintaining open, two-way communication will foster effective TB care for all.





## Appendices

Appendix A: Using Kleinman's Questions to Understand Patients' TB Perceptions

Appendix B: Tips for Working with Interpreters

Appendix C: TB and Cultural Competence Resources

Appendix D: Centers for Disease Control and Prevention Study Summary

Appendix E: Karen Terms and Phrases

Appendix F: Tuberculosis Screening Policies for Persons Overseas

Appendix G: *Guide* References

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

While this *Guide* encourages a broad understanding of Karen Burmese culture, it is also essential to remember that within each culture there is a range of individual, personal beliefs. There are a number of methods to understand the way an individual thinks about his or her own health problems. A simple and especially effective 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 TB, can help the health care provider 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 address the patient's expectations, fears, how TB may impact the patient, and the effects on his or her family or friends.

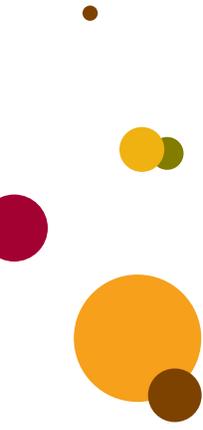
### Suggestion



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

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

Health care providers can use these questions to have discussions with patients with TB disease, and they can also be adapted to address issues related to LTBI. These questions can be incorporated into an existing health assessment at intake or an ongoing assessment of a patient's educational needs and treatment adherence. Questions may be reworded in accordance with a patient's cultural, linguistic, and educational backgrounds. The number and sequence of the questions may also be tailored to the circumstances.



## Appendix B. Tips for Working with Interpreters

A good interpreter is able to effectively communicate 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). It is also important that the interpreter has training in medical interpretation, including vocabulary in English and the language in which they interpret. Whenever possible, use interpreters of the appropriate gender, age, and social class for the patient. In general, it is best to avoid using family members as interpreters, children in particular, especially if sensitive topics are being discussed. An unknown third party may be better able to maintain confidentiality and provide unbiased communication, especially if counseled on these expectations ahead of time (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 to not 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, as careful interpretation often takes considerable time.

## Appendix C. TB and Cultural Competence Resources

The following resources contain additional information on TB education and culturally competent care. Refer to Appendix G for additional references used in the *Ethnographic Guide*. Links to non-federal organizations found in this *Guide* are provided solely as a service to the users of this *Guide*; the CDC is not responsible for their content. These links do not constitute an endorsement of any organization by CDC or the federal government, and none should be inferred. Additionally, please note that at the time this *Guide* went to press, all links were active.

### General TB Resources

#### Centers for Disease Control and Prevention (CDC), Division of Tuberculosis Elimination (DTBE)

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

This website 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.

#### Regional Training and Medical Consultation Centers' TB Training and Education Products

<https://sntc.medicine.ufl.edu/rtmccproducts.aspx>

This webpage provides TB healthcare professionals and others interested in increasing their knowledge of TB access to the educational materials developed by the CDC-funded TB Regional Training and Medical Consultation Centers (RTMCCs). These resources include print, audiotape, videotape, CD-based tools, and MP3 files.

#### Minnesota Department of Health

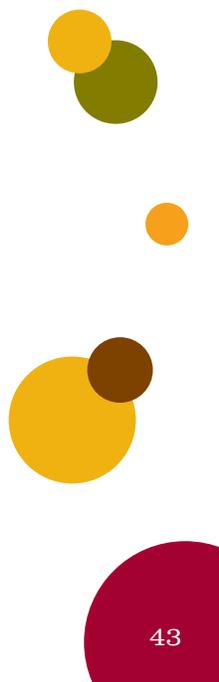
<http://www.health.state.mn.us/divs/idepc/diseases/tb/>

This website 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.

#### TB Education and Training Resources

<http://www.findtbresources.org/>

This website 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 Karen Patients from Burma

### Healthy Roads Media

<http://www.healthyroadsmedia.org/karen/index.htm>

<http://www.healthyroadsmedia.org/burmese/index.htm>

These websites contain free audio, written and multimedia health education materials in a number of languages. These educational materials have been developed as health information tools for diverse populations.

### Minnesota Department of Health

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

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

### Refugee Health Information Network

[http://www.rhin.org/search/search\\_results.asp?quick\\_search=&language=15&x=33&y=17](http://www.rhin.org/search/search_results.asp?quick_search=&language=15&x=33&y=17)

This website provides information about health benefits and treatment for refugees from Burma in Burmese.

### U.S. Committee for Refugees and Immigrants - Healthy Refugee Toolkit Downloads

<http://www.refugees.org/resources/for-refugees--immigrants/health/healthy-living-toolkit/karen.html>

This website can be used to find health information on different illnesses that affect Karen patients. The site contains brochures in Karen related to the following issues: Communicable Diseases, Domestic Violence, Health Care, Hygiene, Maternal and Child Health, Nutrition Related Diseases, Respiratory Diseases, and Women's Health. The site includes information in English, Karen and Burmese.

### U.S. Library of Medicine

<http://asianamericanhealth.nlm.nih.gov/Alsouthasian.html#karen>

This website contains health information for Asian Americans in different languages including versions in Burmese and Karen.

## Resources For Providers

### The American Medical Association

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

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.

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

<http://www.crosshealth.com/>

The Center for Cross-Cultural Health has produced materials to address the challenges 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 provides information about how to supply health care providers with a sputum sample. For copies of the videotape, visit the Texas Department of Health's website listed above.

### **Culturally and Linguistically Appropriate Services (CLAS) in Health Care — CLAS Standards**

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

The Culturally and Linguistically Appropriate Services (CLAS) in Health Care — CLAS Standards project makes recommendations for national standards for culturally and linguistically appropriate services (CLAS) 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 policymakers, 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, policymakers, and advocates.

### **CulturedMed**

<http://culturedmed.binghamton.edu/>

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, including Karen Burmese.

### **Diversity RX**

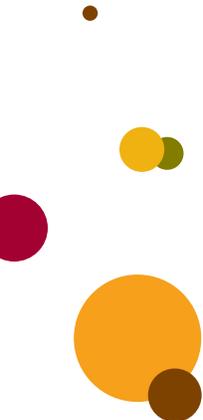
[www.diversityrx.org](http://www.diversityrx.org)

Diversity Rx 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 website, hosted by Harborview Medical Center, University of Washington, Seattle, WA, 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 Karen culture can be found in the "culture specific" section of the site, listed under "Karen."



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

<http://www.hhs.gov/ocr/civilrights/resources/specialtopics/lep/factsheetguidanceforlep.html>

This website offers guidance to help federally-funded programs comply with regulations affecting limited English proficient persons.

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

<http://ethnomed.org/clinical/tuberculosis>

This is 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.

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

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

This newsletter was developed to provide an ongoing educational forum for cultural competency training. Content includes a “teaching case” which reflects experiential knowledge from colleagues working in TB as well as relevant information and resources for cultural proficiency skills development. The newsletters, which are published twice annually, are available on the website of the New Jersey Global Tuberculosis Institute, under “Product List A-Z” or “Product List/Cultural Competency.” One issue focuses on working with Karen refugees from Burma.

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

[http://www.fhwa.dot.gov/environment/title\\_vi.htm](http://www.fhwa.dot.gov/environment/title_vi.htm)

This website 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 (DHHS) is responsible for enforcing the nondiscrimination requirements of Title VI of the Civil Rights Act of 1964 (Title VI) which include country of origin. It applies to covered entities under the jurisdiction of OCR. This jurisdiction includes entities that conduct programs or activities receiving Federal financial assistance from the Department of Health and Human Services.

**Tuberculosis Training and Education Network (TB ETN)**

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

The 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 developed a searchable cultural competency resource list which is available to health care professionals.

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

A total of 73 persons of Karen ethnicity and born in Burma were selected to participate in the 2007 Centers for Disease Control and Prevention (CDC) study. These respondents were distributed among two study sites at public TB clinics administered by the state or local health department. The study sites were recruited to participate in the study based on local epidemiology, interest, and ability. To elicit a range of responses, both TB patients and non-patients (i.e., persons recruited from the community) were included. Study sites played an active role in choosing which Karen individuals to recruit for the study. CDC aimed to include participants with similar characteristics in both sites to facilitate analysis of the influence of local context on participant responses.

### *Study Population and Participant Recruitment*

Karen participants born in Burma were recruited to participate in the study from two study sites, the Oneida County Health Department in Utica, New York, and the DeKalb County Board of Health in Atlanta, Georgia. This decision reflected the local epidemiological trends, as well as the local need for TB-specific ethnographic information regarding these populations.

This study used a purposive convenience sampling strategy. Beyond country of birth, specific criteria and informal quotas for specific subgroups were also established.

- Age: 18 or older (with a mix of young adult, middle aged, and elderly persons)
- Gender: approximately 50% men and 50% women
- Only one respondent per household
- Residence within area served by the local health department

Participants were recruited either through the community contacts of the bilingual, bicultural researchers (50%) or through recruitment of clinic patients by clinic staff (50%). The clinics aimed to recruit a balance of patients who were either 1) tuberculin skin test (TST) negative, 2) diagnosed with latent TB infection (LTBI), or 3) diagnosed with TB disease. The sampling strategy was not random, but instead followed a qualitative research methodology, which recruited respondents having a variety of demographic and experiential characteristics that enabled the collection of in-depth information across the range of study variables. Each respondent provided informed consent and received monetary compensation for participating in the study. Tables 1 and 2 present a description of the sample of Karen respondents from the two study sites.

Three staff persons at each of the two study sites were interviewed about their experiences in working with Karen patients to augment the data collected from the Karen participants. The staff included a refugee health program supervisor, a TB clinic administrator, a TB coordinator, a case manager, a public health nurse, and a TB clinic physician. All staff persons had direct interaction with Karen clients.

**Table 1. Description of Karen Burmese Cohort**

	Utica, NY n=36	Atlanta, GA n=37	Total N=73
Selected from clinic/HD (%)	27 (75%)	25 (68%)	52 (71%)
Selected from community (%)	9 (25%)	12 (32%)	21 (29%)
Age at interview (median, range)	34 (18–66)	34 (20–64)	35 (18–66)
Age at immigration (median, range)	34 (18–65)	32 (18–63)	34 (18–65)
Years in US (median, range)	1 (0–2)	1 (0–3)	1 (0–3)
Female (%)	17 (47%)	16 (43%)	33 (45%)
From rural area (%)	27 (75%)	32 (87%)	58 (81%)
Household size 4+ persons (%)	10 (28%)	13 (35%)	23 (32%)
Finished secondary education or above (%)	11 (31%)	10 (27%)	21 (29%)
Speaks Karen comfortably (%)	36 (100%)	36 (97%)	72 (99%)
Speaks Burmese comfortably (%)	17 (47%)	12 (32%)	29 (40%)
Speaks English “well” or “very well” (%)	3 (8%)	1 (3%)	4 (6%)

**Table 2. TB Status of Karen Burmese Cohort**

	Utica, NY n=36	Atlanta, GA n=37	Total N=73
Screened (%)	36/36 (100%)	31/37 (84%)	67/73 (92%)
LTBI diagnosis (%)	19/36 (53%)	6/37 (16%)	25/73 (34%)
Started LTBI treatment (%)	13/19 (68%)	5/6 (83%)	18/25 <sup>1</sup> (72%)
Completed or currently on LTBI treatment (%)	13/13 (100%)	5/5 (100%)	18/18 (100%)
Defaulted LTBI treatment (%)	0/15 (0%)	0/5 (0%)	0/20 (0%)
History of/Current active TB disease (%)	3/36 (8%)	1/37 (3%)	4/73 (5%)
Completed or currently on TB treatment (%)	3/3 (100%)	1/1 (100%)	4/4 (100%)

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1. One individual stated she did not start treatment because she was breastfeeding; the other six were reportedly never asked to start treatment.

## Appendix E. Karen Terms and Phrases\*

Health care professionals can use this list of Karen words to communicate simple needs or expressions by saying a phrase or pointing to the picture. Karen language interpreters may also wish to refer to this appendix. Since the graphics were not developed and tested with Karen people, however, this glossary is not meant to be used in lieu of interpretation services.

Terms and Phrases	Karen Equivalent
<b>Basic Expression</b>	
Yes	m̄ay
No	tā māy bà
Thank You	Tā blū
I understand	Yā nā pūh
I don't understand	yā nā tā pūh bà

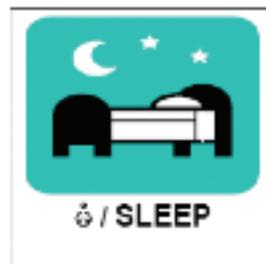
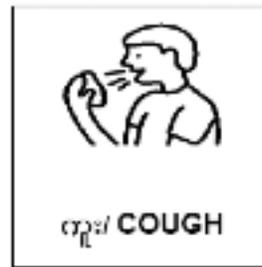
<b>Questions</b>	
What are you doing?	nā mā mā nū lèh
What's wrong?	bà mā nū leh
Do you understand?	nā nā pūh ahh
What's your name?	nā mēe di lèh
Can I help you?	yā mā sūh nā thay ah
Does anyone here speak English?	pwā teh eh gā lēe gloh bà òh ah
Can you translate this for me?	nā gloh htee nay yā tā ēe thay ahh

\* Developed by Eastern Health Transcultural Services, these cue cards are intended for people who have difficulties or problems communicating in English (Eastern Health Transcultural Services, 2003).

## Basics



## Instructions



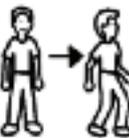
## Family



## Community



**Descriptions/Emotions**

 အိတ် / HOT	 ခုန် / COLD	 မိန်တယူ / DIZZY	 သးစုန် / CONFUSED
 သးဖို / HAPPY	 သးဆူး / SAD	 ပျံတတ် / SCARED	 သးမိန်ထီန် / ANGRY
 တတ်ဘူးသး / TIRED	 ဆူးသး / PAIN	 အိန်ဘူးအိန်သး / RELAXED	 ဟးထီန် / LEAVING
 စုန် / GOOD	 တဂုသး / BAD	 ကနု / SLOW	 ဆူ / FAST

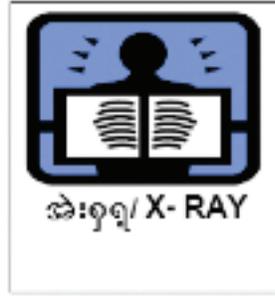
**ဆီးအပတီ / LEVEL OF PAIN**

1      2      3      4      5      6      7      8      9      10

စုန် / LOW

နဲ / BAD

## Medical



# People



ကသံဉ်သရဉ်ဒိဉ်/  
**DOCTOR**



ကသံဉ်သရဉ်/  
**NURSE**



မိသဉ်ကသံဉ်သရဉ်/  
**PAEDIATRICIAN**



ပုၤမၤကွၢ်နိမိ/  
**AUDIOLOGIST**



ပုၤသုပုၤသဉ်သဉ်သဉ်ဒိဉ်ခွၢ်သးသးပုၤမိ/  
**PSYCHOLOGIST**



မိဉ်ခွၢ်တၢ်ဆါကကသံဉ်သရဉ်/  
**PSYCHIATRIST**



ပုၤမၤကွၢ်မိဉ်ချိမိ/  
**OPHTHALMOLOGIST**



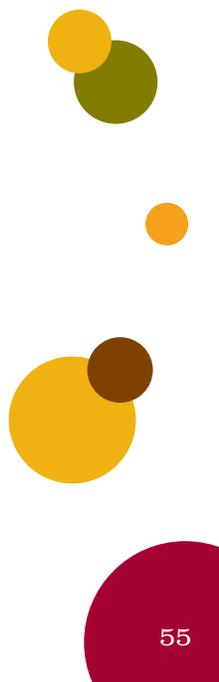
မိဉ်ချိကသံဉ်ကရဉ်/  
**OPTOMETRIST**



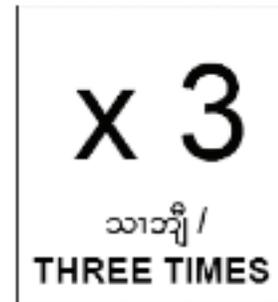
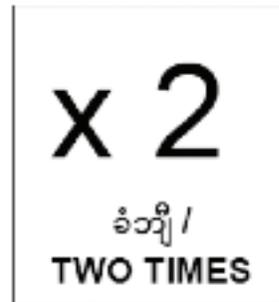
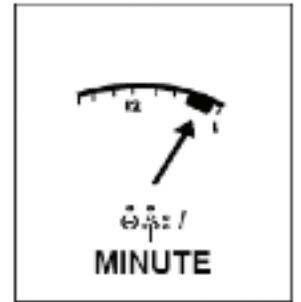
ပုၤဂ့ၢ်မိပုၤမၤတၢ်မိ/  
**SOCIAL WORKER**



ပုၤတဲၤကျိဉ်ထံတၢ်မိ/  
**INTERPRETER**



## Time



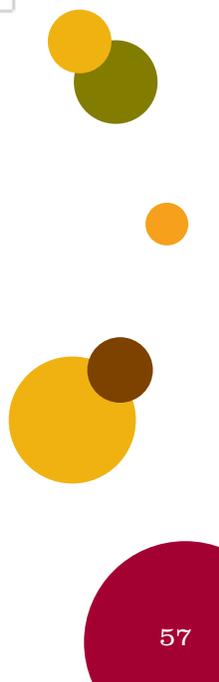
**Days**

မု်တနံၤ / MONDAY	မု်ခံနံၤ / TUESDAY	မု်သာနံၤ / WEDNESDAY	မု်လွံၤနံၤ / THURSDAY
မု်ယဲၤနံၤ / FRIDAY	မု်ယုၤနံၤ / SATURDAY	မု်နွံနံၤ / SUNDAY	

**Months**

လိယနုၤအိၤရံၤ / JANUARY	လိဖၤတြုၤအိၤရံၤ / FEBRUARY	လိမၢ်စး / MARCH	လိအုၤဖြး / APRIL
လိမုၢ် / MAY	လိယုၤ / JUNE	လိယုၤလံ / JULY	လိအိၤကုၢ် / AUGUST
လိစးပထုၤတၢ် / SEPTEMBER	လိအိၤကထိၤတၢ် / OCTOBER	လိနုၤတၢ် / NOVEMBER	လိန့ၢ်စုၤတၢ် / DECEMBER

1/၁	2/၂	3/၃	4/၄	5/၅	
6/၆	7/၇	8/၈	9/၉	10/၁၀	
11/၁၁	12/၁၂	13/၁၃	14/၁၄	15/၁၅	
16/၁၆	17/၁၇	18/၁၈	19/၁၉	20/၂၀	
21/၂၁	22/၂၂	23/၂၃	24/၂၄	25/၂၅	
26/၂၆	27/၂၇	28/၂၈	29/၂၉	30/၃၀	31/၃၁



## Appendix F. Tuberculosis Screening Policies for Persons Overseas

### Technical Instructions for Tuberculosis Screening

The medical screening for tuberculosis among persons overseas applying for U.S. immigration status and nonimmigrants who are required to have an overseas medical examination (referred to as “applicants”) is an essential component of the medical evaluation. Because tuberculosis is a challenging disease to diagnose, treat, and control, these instructions are designed to detect and treat tuberculosis disease among applicants and to reduce the risk of spread of tuberculosis among the U.S. population after immigration.

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 Updated 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), at [cdcQAP@cdc.gov](mailto:cdcQAP@cdc.gov) or 404-498-1600. These Technical Instructions and other information pertinent to them and the medical examination for applicants for U.S. immigration can be found online at <http://www.cdc.gov/immigrantrefugeehealth/exams/ti/panel/tuberculosis-panel-technical-instructions.html>.

**Table 1. Tuberculosis Screening**

**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 tuberculosis disease and is Class A for 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 or an interferon gamma release assay.**

**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] or interferon gamma release assay [IGRA], when required), and sputum testing for *M. tuberculosis* (when required). Please see the Updated 2007 Technical Instructions at DGMQ’s website for complete details: <http://www.cdc.gov/immigrantrefugeehealth/exams/ti/panel/tuberculosis-panel-technical-instructions.html>.

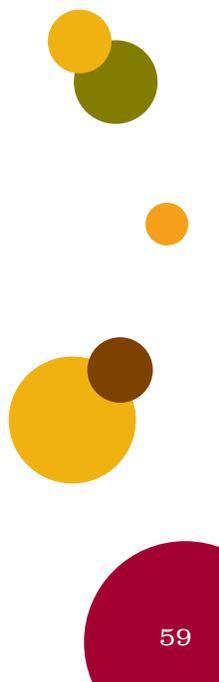
Applicants  $\geq 15$  years of age require a medical history, physical examination, and CXR. If an applicant has a CXR with findings suggestive of tuberculosis (page 5), has signs and symptoms of tuberculosis (page 5), or has human immunodeficiency virus (HIV) infection, the applicant should provide 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.

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 TST or an IGRA. If the TST is  $\geq 10$  mm or the IGRA is positive or if the applicant has signs and symptoms of tuberculosis or has HIV, 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. Applicants who have a CXR with findings suggestive of tuberculosis, signs and symptoms of tuberculosis, or HIV infection 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.

All applicants  $< 2$  years of age living in countries with a WHO-estimated tuberculosis incidence rate of  $\geq 20$  cases per 100,000 population must have a physical examination and history provided by a parent or responsible adult who knows the child best. Those applicants who have signs or symptoms suggestive of tuberculosis or have HIV should have a TST or an IGRA, a CXR (anteroposterior or posteroanterior view and a lateral view), and 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. Information about sputum collection in young children can be found in the Laboratory Testing section of the Updated 2007 Technical Instructions at DGMQ's website for complete details: <http://www.cdc.gov/immigrantrefugeehealth/exams/ti/panel/tuberculosis-panel-technical-instructions.html>.

All applicants  $< 15$  years of age living in countries with a WHO-estimated tuberculosis incidence rate of  $< 20$  cases per 100,000 population must have a physical examination and history provided by a parent or responsible adult who knows the child best. Those applicants who have signs or symptoms suggestive of tuberculosis or have HIV should have a TST or an IGRA, 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) and 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 may have more than one TB Classification. However, they cannot be classified as both Class B1 TB and Class B2 TB. In addition, applicants cannot be classified as Class B3 TB, Contact Evaluation if they are Class A or Class B1 TB, Extrapulmonary. The applicant's classification should be recorded on the Department of State forms. Table 2 is a listing of the tuberculosis classifications and descriptions.



**Table 2: 2007 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, No Treatment</b>	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, Completed Treatment</b>	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 $\geq 10$ mm or positive IGRA but otherwise have a negative evaluation for tuberculosis. The size of the TST reaction or IGRA result, the applicant's status with respect to LTBI treatment, and the medication(s) used should be documented. For applicants who had more than one TST or IGRA, all dates and results and whether the applicant's TST or IGRA converted should be documented. Contacts with TST $\geq 5$ mm or positive IGRA should receive this classification (if they are not already Class B1 TB, Pulmonary).
<b>Class B3 TB, Contact Evaluation</b>	Applicants who are a recent contact of a known tuberculosis case. The size of the applicant's TST reaction or IGRA response should be documented. Information about the source case, name, alien number, relationship to contact, and type of tuberculosis should also be documented.

\* Waivers should be pursued for any immigrant or refugee who has a complicated clinical course and would benefit from receiving tuberculosis treatment in the United States.

## Appendix G. References

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