Promoting Cultural Sensitivity

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

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

千里之行，始于足下

"A journey of a thousand miles begins with a single step."

–Chinese Proverb

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A woman happily holds her infant in China. © 1986 Andrea Fisch. Courtesy of Photoshare.

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Contents

Introduction

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

Intended Audience

This guide is intended for health care providers, community-based workers, program planners, administrators, health educators, and resettlement agencies that work with Chinese communities. This guide is designed to increase the knowledge and cultural sensitivity of health care providers, program planners, and any others serving persons from China. The ultimate aim is to foster culturally competent TB care and services for Chinese in the United States.

About the Guides

Each guide in this series includes the following:

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

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

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

How to Use This Guide

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

Background

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

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

The high incidence of TB in the United States among foreign-born persons poses challenges to public health programs across the country (CDC, 2006d). Although disparities between U.S.-born and foreign-born TB patients are caused by multiple factors, persons born outside the United States often face challenges related to personal or cultural beliefs, behaviors, and needs when accessing TB services. Attempts to control TB 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 among foreign-born populations.

Cultural Competency in Tuberculosis Service Delivery

Cultural competence is an essential element of quality health care and can help improve health outcomes, increase clinic efficiency, and produce greater patient satisfaction (Brach & Fraser, 2000). Although there is no universally accepted definition of cultural competence, it may generally be understood to be a set of attitudes, skills, behaviors, and policies that enable organizations and staff to work effectively in cross-cultural situations. Furthermore, it reflects the ability to acquire and use knowledge of the health-related beliefs, attitudes, practices, and communication patterns of patients and their families in order to improve services, strengthen programs, increase community participation, and close the gaps in health status among diverse population groups (U.S. Office of Minority Health, 2006).

Linguistically appropriate services are a key component of culturally competent health systems. In 2001, the U.S. Office of Minority Health issued Culturally and Linguistically Appropriate Service (CLAS) standards to help health care organizations move toward cultural competence (see Appendix C). Several of these standards are federal mandates supported by Title VI of the Civil Rights Act (1964), which prohibits discrimination on the basis of national origin and language. In summary, these standards aim to ensure that all federally funded health facilities provide services in a language understood by patients.

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

Considerations When Using This Guide

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

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

Clarification of Terms

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

Tips for Providing Culturally Competent Tuberculosis Services to Persons from China

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

Interactions with Chinese Patients and Family Members

- **Not all Chinese dialects are mutually intelligible. To avoid dialectal discordance, know the region of the patient's birthplace before requesting an interpreter.**
- **Keep in mind that the traditionally patriarchal and hierarchical structure of Chinese society may mean that younger females play a subordinate role to men. Older women may have considerable power and may make family and household decisions.**
- **Be aware that traditions, such as ranking family over the individual and the need to avoid loss of face, may affect an individual's approach to health care and medical decision making.**

Social Stigma

- **A substantial degree of stigma and fear of social isolation may be associated with TB. Emphasize the need for short-term isolation while a patient is infectious and that isolation is not necessary for latent TB infection (LTBI). Clarify TB risk factors to dispel any inaccurate beliefs.**

Tuberculosis Diagnosis and Treatment

- **Ask questions to elicit the patient's understanding of TB symptoms, transmission, and prevention so that information can be tailored appropriately. Engaging in a two-way exchange of information offers the opportunity to understand the patient's preconceptions, dispel any inaccurate beliefs, and highlight pertinent messages.**
- **Recognize that among Chinese the traditional, holistic approach to health and illness may include treatments such as acupuncture, acupressure, herbal therapies, and massage. Whenever possible, acknowledge traditional alternative treatments and accept their complementary use.**
- **Somatization, the manifestation of physical symptoms related to psychological distress, is common among Chinese Americans because of the stigma associated with mental health. Therefore, be aware that patients may focus solely on physical problems.**

Tuberculosis Education and Outreach

- To allay a patient's concerns about stigma, always emphasize confidentiality and privacy.
- Tailor information to the age, literacy level, and preferences of the patient. Preferences for many Chinese include pamphlets, one-on-one communication, and videos.
- Increase community awareness of local TB programs and resources by conducting educational outreach activities. Successful outreach activities include community and school presentations, public service announcements on local television and radio stations, and articles in local newspapers and magazines read by Chinese.
- Clarify that a patient's increased TB risk is often associated with past exposure in China, not with personal hygiene.
- Emphasize that services and treatment for TB disease are free. Clarify that other TB-related services, such as LTBI medicines and chest X-rays, are often free or offered at reduced cost at public health departments.

Chapter 1. Chinese History and Immigration to the United States

Chinese Geography and History

With more than 1.3 billion people, China is the world's most populous country. China is also the world's fourth largest country after Russia, Canada, and the United States (Central Intelligence Agency, 2005). Countries that border China include Mongolia to the north; Russia and North Korea to the northeast; the Yellow Sea and the East China Sea to the east; the South China Sea to the southeast; Vietnam, Laos, and Myanmar to the south; and Afghanistan, Pakistan, India, Nepal, and Bhutan to the west (Central Intelligence Agency, 2005). Major cities and regions include the capital, Beijing, the cultural, economic, and communications center of China; Shanghai, the main industrial city; and Hong Kong, the leading commercial center and port (Do, 2000).

China's history dates back nearly 4,000 years, making it one of the oldest civilizations in the world (G. Z. Liu, 2001). Numerous dynasties have ruled over China; the earliest, the Shang Dynasty, originated in 1766 BCE. Other historically important dynasties include the Han Dynasty (206 BCE–220 CE), during which Buddhism and Confucianism were established as the state doctrines, and the Qing Dynasty (1644 CE–1911 CE), the last dynasty. During the Qing Dynasty, Britain introduced opium to China to improve trade, which resulted in opium addiction among Chinese and internal corruption in the government. In the ensuing Opium Wars, China was defeated and forced to sign the Treaty of Nanking, conceding Hong Kong as a colony to Britain (Do, 2000).

Once the Qing Dynasty collapsed in 1911, Sun Yat-sen of the National People's Party became president. Yat-sen, also known as the Father of Modern China, was succeeded by Chiang Kai-shek in 1925. During this time, the Communist Party gained power and popularity. In 1949, after the Communist Party gained control of China during the Chinese Civil War, the leader of the party, Mao Zedong, declared the nation the People's Republic of China (Do, 2000). In the late 1990s, China regained control over colonies, including Hong Kong and Macau, and established them as Special Administrative Regions of China (Central Intelligence Agency, 2005).

Immigration and Resettlement to the United States

Historically, the Chinese have migrated to many areas throughout the world, including the United States. In 1850, only 1,000 Chinese resided in the United States (Spector, 1996). However, by 2000, approximately 2.3 million people in the United States were of Chinese ancestry exclusively, and an additional 400,000 were of partial Chinese descent (Chang & Kemp, 2004). The largest ethnic groups to immigrate to the United States are the Cantonese and Fujianese. The Cantonese have immigrated legally to the United States for many years; however, the Fujianese or "new immigrants" are mostly undocumented and have migrated to the United States only over the last 15 years (Ho, 2003). Chinese immigration to the United States can be characterized by distinct waves.

First Wave

The first wave, known as the Pioneer Family, began arriving in 1840 in response to the need for cheap labor for the Gold Rush and to build the transcontinental railroads (G. Z. Liu, 2001; Spector, 1996). The immigrants encountered discrimination, including the Chinese Exclusion Act of 1882, which barred Chinese laborers and their relatives from entering the United States (Chang & Kemp, 2004; G. Z. Liu, 2001; Spector, 1996). After the Act was implemented, the Chinese population declined steadily, and some who remained in the United States faced institutional racism, persistent humiliation, violence, and loss of property and livelihood (G. Z. Liu, 2001).

Second Wave

The second wave, during 1920–1940, primarily consisted of small business families. The Immigration Act of 1924 allowed Chinese immigrants to work in the United States but without their wives and families. In 1930, the law changed to allow wives of Chinese merchants and Chinese women married to American citizens to enter the United States (G. Z. Liu, 2001). To maintain cultural traditions, many Chinese immigrants settled together, and these places became areas known today as Chinatowns (Spector, 1996).

Third Wave

During 1943–1964, the third wave of Chinese immigrants, referred to as the "Reunited Family," arrived in the United States. The name refers to the reform in immigration policy that allowed Chinese wives to reunite with their husbands. In addition, Chinese men were allowed to return to their native land to marry (G. Z. Liu, 2001).

Fourth Wave

The fourth wave, during 1965–1977, consisted of family workers and students. The Immigration and Naturalization Act of 1965 assigned a flat annual quota of 20,000 immigrant visas to the Chinese, which allowed Chinese families, many of whom were working class, to enter the United States (Library of Congress, 2002). Before 1978, when the United States established diplomatic relations with mainland China, the majority of visas went to the Taiwanese. Many of the Taiwanese who immigrated during this time were students and remained to work after graduation (G. Z. Liu, 2001).

In 1978, new quotas allowed 20,000 immigrants per year from Taiwan, 20,000 per year from mainland China, and an additional quota for people from Hong Kong (G. Z. Liu, 2001). The new quotas provided opportunities for students and scholars to study or teach in the United States, and many chose to remain. Ethnic Chinese from war-torn countries, such as Vietnam, Laos, and Cambodia, also have immigrated to the United States. Many of these refugees have survived hunger, rape, incarceration, forced migration, and torture (G. Z. Liu, 2001). Today, according to the 2000 U.S. Census, the Chinese are the largest Asian group living in the United States (2002).

Chapter 2. Overview of Chinese Culture

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

Ethnicity

People of Chinese descent originate primarily from the People's Republic of China; the Republic of China (Taiwan); and China's Special Administrative Regions, Hong Kong and Macau (Central Intelligence Agency, 2005; Chang & Kemp, 2004). In mainland China, the Han Chinese constitute 95% of the population, and they are the largest ethnic group in the world (Do, 2000).

Two elderly women in China.

The Han, commonly called Chinese in English, are known as *Han-ren* in China and Taiwan (X. Liu, 2004). The remaining 5% of mainland China's population is composed of 55 other indigenous ethnic groups. Many of the groups do not consider themselves Chinese; they inhabit northwestern and western China, inner Mongolia, and border regions around India, Nepal, Afghanistan, Russia, Central Asia, and Vietnam (Do, 2000).

Language and Communication

Because of the numerous ethnic groups, many distinct languages and dialects are spoken in mainland China. The Chinese language dialect, Mandarin, is the most widely spoken (by 70% of Chinese) and is the official language in Taiwan and the People's Republic of China. Mandarin is taught in all schools; therefore, even those who speak other dialects understand some Mandarin (K. Lin, 2003).

Cantonese, another major dialect, is spoken in Hong Kong, Vietnam, Malaysia, Singapore, Christmas Island, and the Guandong province of mainland China. The Hakka dialect is spoken in Malaysia, Indonesia, and Brunei; the Hokkien dialect is spoken in Malaysia and Singapore (Chang & Kemp, 2004; Queensland Health, 2003). Other dialects include Xiang, Min, Gan, and Wu (Chang & Kemp, 2004). Though all dialects are written using the same characters, not all dialects are mutually intelligible (Chin, 2005).

Suggestion

- Not all Chinese dialects are mutually intelligible. To avoid dialectal discordance, know the region of the patient's birthplace before requesting an interpreter.
- Avoid asking "yes or no" questions. To elicit a patient's understanding of his or her diagnosis, treatment, or other health issues, ask open-ended questions that call for more than a simple one-word response.

Among the Chinese, communication styles often reflect cultural values. Direct eye contact with authority figures and elders is usually avoided, as this conveys disrespect. On the other hand, direct eye contact between members of the opposite sex may be considered flirtatious (Chin, 2005). Shaking hands is a common way to greet people, though a nod or slight bow is acceptable. Like many Asian cultures, the Chinese typically communicate indirectly and rarely say no directly. Rather, they may nod politely to avoid confrontation. Silence may be difficult to interpret, because it can convey respect, disagreement, or lack of understanding. Additionally, touching is uncommon, though it is acceptable in a health care setting if the clinician first explains the need (Chin, 2005).

Religion

Religion, including the philosophical systems of Taoism and Confucianism and beliefs derived from Buddhism, Catholicism, Protestantism, and Islam, plays a significant role in the lives of many Chinese. Taoism emphasizes the relationship between people and nature and is a significant influence on Chinese culture. Confucianism, which serves as the basis for social and interpersonal relationships, advocates reverence in the family and benevolence in government administration (X. Liu, 2004). Confucianism suggests that harmony is achieved through proper relations, such as child to parent or student to teacher (Chang & Kemp, 2004; Chin, 2005).

Suggestion

- Recognize that Chinese society is based on a patriarchal system. Clinicians may need to involve the head of a household in discussions, although permission should be sought from the patient.
- To allay a patient's concerns about stigma, always emphasize confidentiality and privacy.

Among religions in China, Buddhism has an estimated 66–100 million followers and is the most widely practiced (Central Intelligence Agency, 2005; U.S. Department of State, 2007). Ancestor worship is also frequently practiced, especially during major holidays, such as Chinese New Year (Chang & Kemp, 2004; Chin, 2005). An estimated 1%–2% of people practice Islam (G. Z. Liu, 2001; U.S. Department of State, 2007), and approximately 3%–4% practice Christianity (Central Intelligence Agency, 2005). According to official estimates, there are roughly 15 million Protestants and 5 million Catholics in China, though unofficial estimates are much higher (U.S. Department of State, 2007). After immigrating to the United States, many Chinese convert to Christianity (Chin, 2005; G. Z. Liu, 2001).

Food and Dress

Food has special significance in Chinese culture. Focus is often placed on texture, flavor, color, and aroma (K. Lin, 2000). Though diet varies by region, vegetables are an important part of the diet in every region. In the North, the main staples are wheat, corn, millet, and fresh vegetables. When fresh vegetables are unavailable, preserved cabbage, potatoes, and radishes are substituted. In the South, rice and sweet potatoes are staples, and fresh vegetables are usually available year round (X. Liu, 2004).

A mother and child plant rice in China.

Red meat, fish, and poultry are also important in the Chinese diet, though soybeans and tofu are often substituted as a protein source. Among the Chinese, lactose intolerance is common and contributes to calcium deficiency, especially common among elderly Chinese women (K. Lin, 2000; X. Liu, 2004). Malnutrition is also prevalent in China; nutrition-related chronic diseases cause nearly 15,000 deaths every day (X. Liu, 2004). Iron deficiency and iron deficiency anemia are the most widespread nutrition deficiency problems, particularly among women and children (X. Liu, 2004).

The traditional Chinese garment for women is called the *qipao* in Mandarin or *cheongsam* in Cantonese. Although originally designed as a long, loose robe with slits for ease of movement, later designs included shorter lengths and fitted waistlines. The modern *qipao* is made of silk or cotton and has a high collar, short sleeves, and a slit on the side (Yu, Kim, Lee, & Hong, 2001).

For men, traditional clothing is a tunic or jacket (*sam*) over trousers (*koo*). The jacket is fastened with buttons or ties across the chest and down the right side (Yu et al., 2001). The Chinese also may wear amulets, including jade or a rope around the waist, for luck and good health (Chin, 2005). Though elements of traditional Chinese dress are fashionable in many Asian and Western cultures, most Chinese no longer wear traditional costume (Yu et al., 2001).

Social Structure, Family, and Gender

Traditional Chinese culture values the family over individual well-being and personal rights. Values that form the social foundation of Chinese society include humility, emotional self-control, filial piety through reverence for parents, family recognition through achievement, and conformity to norms that avoid bringing shame to the family (Chang & Kemp, 2004). Extended families are common, and two or three generations often live in the same household (Chin, 2005).

Chinese society is traditionally patriarchal and hierarchical. Elders are highly respected and are addressed by their title and last name (Chin, 2005). Eldest males make most decisions, and females assume a subordinate role to men. When a woman marries, she becomes part of her husband's family (Chin, 2005). Older women have considerable power and often make family and household decisions (Chin, 2005; Queensland Health, 2003). Additionally, older children tend to have authority over younger children (Chang & Kemp, 2004; McLaughlin & Braun, 1998; Queensland Health, 2003). In general, families are private and may not discuss family-related matters with non-family members (Chang & Kemp, 2004).

Two elderly women wear three-inch lotus shoes in rural China. The ancient custom of foot binding, banned in 1911, has caused severe disabilities for many elderly women, even in today's China. © 1989 Henrica A.F.M. Jansen. Courtesy of Photoshare.

Suggestion

- Keep in mind that the traditionally patriarchal and hierarchical structure of Chinese society may mean that younger females play a subordinate role to men.
- Older women may have considerable power and may make family and household decisions.

Suggestion

- Be aware that traditions, such as ranking family over the individual and the need to avoid loss of face, may affect an individual's approach to health care and medical decision making.
- Whenever possible, provide language-appropriate information, such as pamphlets appropriate to the literacy level of the patient.

In China, sons are valued traditionally more than daughters and are perceived as an investment in the future (Lai-wan, Eric, & Hoi-yan, 2006). A son is considered a breadwinner (Chin, 2005), while a daughter, because she becomes part of a husband's family upon marriage, is often viewed as a drain on limited family resources (Lai-wan et al., 2006). The preference for sons, combined with China's 1979 "One Child Only" policy, which restricts families to a single child regardless of sex, has produced a society that is "missing girls," because female fetuses are often aborted (Do, 2000). However, resistance by Chinese families and international objections to the "One Child Only" policy have led to exceptions, including allowing couples in rural areas with a firstborn female to have a second child and allowing ethnic minority couples to have more than one child (Hardee, Xie, & Gu, 2003; Lai-wan et al., 2006). Despite traditional views and restrictions on childbearing, the role of females in Chinese society continues to evolve.

Education and Literacy

In Chinese culture, education is valued highly and considered essential for success. Children who do poorly in school are viewed as bringing shame upon their families (Chin, 2005). In mainland China, 90.9% of the population is literate (defined as the ability to read and write and aged 15 years or older). Literacy rates are approximately 10% higher for males than females (95.1 and 86.5, respectively) (Central Intelligence Agency, 2005).

Children at a day care center near Beijing.
© D. Hinrichsen. Courtesy of Photoshare.

According to the U.S. Census Bureau, 6% of Chinese living in the United States speak English in the household, and 93% speak Chinese or another Asian/Pacific Islander language (2000). Additionally, almost 71% of foreign-born Chinese living in the United States have a high school diploma or higher, and nearly 43% have a bachelor's degree or higher (U.S. Census Bureau, 2000).

Common Values

Although the Chinese have diverse beliefs and values, many maintain traditional values long after acclimation to Western society. These include Confucian-based values such as harmony in interpersonal relationships, the emphasis of family over the individual, respect for elders, a high value placed on formal education and literacy, and the value of sons over daughters (Chin, 2005; X. Liu, 2004; Postgraduate Medical Council of New South Wales, n.d.). The concept of "face," or dignity, prestige, and status in the eyes of others, is also very important in Chinese culture. Face can be given, taken away, earned, or lost on the basis of one's actions or behavior, and one individual's wrongdoing can result in an entire family's loss of face (Chin, 2005). Because stigma associated with illness may cause a family's loss of dignity, it can influence health behaviors and medical decision making.

A woman happily holds her infant in China. © 1986 Andrea Fisch. Courtesy of Photoshare.

Socioeconomic Position in the United States

For more than a century, Chinese from many socioeconomic backgrounds have immigrated to the United States, and the primary goal in immigrating has been economic survival (G. Z. Liu, 2001). Among Chinese families in the United States, about 7% have an annual income less than $10,000; however, the median income ($52,600) is slightly higher than that of the general U.S. population ($50,000). Approximately 11.5% (compared with 9.2% among the general U.S. population) of Chinese families lived below the 1999 poverty line (U.S. Census Bureau, 2000).

In addition, Chinese are less likely than the general U.S. population to have finished high school; 71% are high school graduates or higher, compared with 80.4% of the general U.S. population (U.S. Census Bureau, 2000). In 2000, the average Chinese household in the Unites States was 2.90 persons (Reeves & Bennett, 2004). Nearly 18% of Asian Americans do not have health insurance, compared with 11.2% of non-Hispanic whites. Among the adult Chinese population aged 18–64 years, 20% are uninsured, compared with 14% among non-Hispanic whites of the same age group (Asian & Pacific Islander American Health Forum, 2006).

Traditional Health Beliefs and Practices

The traditional Chinese approach to health and illness focuses on the balance between body, mind, and spirit, commonly expressed as *yin* and *yang*. Balance may be internal and external, hot and cold, or emptiness and excess (Chin, 2005; X. Liu, 2004). *Yin* and *yang* are viewed as dynamic, complementary, and not necessarily oppositional. They symbolize the principle that for every action there is an equal and opposite reaction (Ehling, 2001). Because one cannot exist without the other, imbalance can lead to illness (Chang & Kemp, 2004).

Some Chinese may believe that physical illness stems from an imbalance of *yin* and *yang*, whereas mental illness is due to a lack of emotional harmony (Chin, 2005). Illness also may be caused by fate or interference from ancestors or others in the spirit world who seek revenge for wrongdoing or lack of self-control in behavior (McLaughlin & Braun, 1998; Postgraduate Medical Council of New South Wales, n.d.).

Others among the Chinese may believe illness is influenced by consuming specific foods or medicines (Chang & Kemp, 2004; K. Lin, 2000). The appropriately balanced diet, including the five traditional flavors (sour, bitter, sweet, pungent, and salty), is known as "health through proper diet" (X. Liu, 2004). Before seeking Western treatment, traditional Chinese often will use specific foods, herbs, and special soups to treat illness (K. Lin, 2000). Because both food and illness can be classified as "hot" (*yang*) or "cold" (*yin*), to restore balance, a *yang* illness is usually treated with *yin* foods, and vice versa. Because of this belief, some Chinese who are diagnosed with tuberculosis (TB) may ask if certain foods will affect their illness and treatment. (See Appendix E for a short glossary of food classifications.)

Suggestion

- Illness is traditionally thought to be caused by an imbalance of "hot" and "cold" and influenced by consuming specific foods or medicines that counterbalance the illness.
- Western medicine is often considered "hot." Be prepared for patients to ask what they should or should not eat as part of treatment.

In the prevention, diagnosis, and treatment of disease, traditional Chinese medicine focuses holistically on the relationship between the body and environmental, social, and geographical factors (Chang & Kemp, 2004; X. Liu, 2004; Spector, 1996). Traditional Chinese medicine emphasizes prevention and determining the root cause of a disease once it develops (X. Liu, 2004). Traditional treatments include acupuncture, acupressure, massage, and the use of compounds (e.g., herbs and metals) (Chang & Kemp, 2004; Postgraduate Medical Council of New South Wales, n.d.). Many Chinese believe good health is promoted through exercise, eating a balanced diet, and maintaining harmony with family and friends (Chin, 2005).

When treating illnesses, the Chinese may rely on traditional medicine to restore balance or *qi* (pronounced "chee") (Ehling, 2001). *Qi*, the body's life force and energy, is believed to travel through the body and connect the organs by meridians accessible at specific points on the body. To address symptoms, a therapist treats the points to access the body's *qi*. Each point can have multiple functions, and different points can be used in conjunction as part of treatment for acute and chronic ailments.

Treatment of acute conditions often results in nearly immediate relief, whereas treatment of chronic conditions usually requires more time to restore balance. The two main therapies associated with this treatment are acupuncture and acupressure. In acupuncture, extremely fine needles are inserted just below the skin on the body points. Acupressure uses the same points, but therapists massage them one or two at a time. Acupressure usually has milder effects than acupuncture (Ehling, 2001).

A woman with her child tends farm in China.
© 1986 Andrea Fisch. Courtesy of Photoshare.

Traditional Chinese medicine classifies TB as a disease caused by a deficiency in the lungs of *qi* and *yin,* and by an invasion of evil (*xie*) comparable to the concept of bacterial infection in biomedical terms (Ho, 2006). Traditional practitioners may describe TB as *feibing, fei jie he*, or *feilao*, terms that relate to lung disease. Though no equivalent biomedical term for TB exists in traditional Chinese medicine, *fei jie he* is generally used for an infectious lung disease that requires isolation (Ho, 2006). To treat TB, traditional practitioners may suggest Western antibiotics in conjunction with traditional medicine. Traditional practitioners generally do not dispute the effectiveness of antibiotics; however, they may consider that the holistic approach warrants traditional treatment to restore the deficiencies in *yin* and *qi* associated with TB (Ho, 2006).

Although less common in the West, herbal therapy is one of the oldest Asian treatments. The major difference between herbal and Western drug therapy is that herbal therapy uses the whole plant, animal, or mineral substance, whereas a drug uses the active ingredient extracted from the substance (Ehling, 2001). Traditional herbal medicines come in various forms, including prepackaged pills, freeze-dried granules, or loose mixtures for brewing tea (Ehling, 2001).

Suggestion

- Recognize that among Chinese the traditional, holistic approach to health and illness may include treatments such as acupuncture, acupressure, herbal therapies, and massage.
- Whenever possible, acknowledge traditional alternative treatments and accept their complementary use.

Health Care-seeking Behaviors

Among the Chinese in the United States and in China, delays in care seeking are not uncommon (K.-M. Lin & Cheung, 1999; Ma, 1999; Zhang, Tang, Jun, & Whitehead, 2007). In China, people may delay seeking care because of the lack of affordable care. In 1997, the Chinese government reformed the urban health insurance system to create a single, standardized system and increase coverage, especially for the urban employed (Xu, Wang, Collins, & Tang, 2007). Over the next 5 years, however, no significant effect on coverage was noted, particularly among rural dwellers, who make up 80% of the population and whose TB prevalence is higher (X. Liu, 2004; Xu et al., 2007; Zhao, Zhao, & Liu, 2003). Lack of health insurance and increased cost of care owing to the changes in the health care infrastructure have resulted in a severe lack of affordable TB services in rural China and, consequently, in delays in seeking care (Zhang et al., 2007).

A woman threshes wheat in China.
© 1988 Andrea Fisch. Courtesy of Photoshare.

In China, care seeking often involves choosing from many resources. Because the People's Republic of China awards Chinese and Western medicine the same status, people may use either treatment practice or a combination of both (X. Liu, 2004). Although traditional practitioners focus primarily on Chinese medicine during formal schooling, they also receive basic training in Western medicine. Thus, traditional practitioners can treat and cure patients using methods from both systems (X. Liu, 2004).

Chinese in the United States also may use a combination of traditional and Western health care and even travel back to China or Taiwan for treatment (Chang & Kemp, 2004; Ma, 1999). People who immigrated 40–60 years ago tend to believe strongly in folk medicine and traditional healing, while newer immigrants tend to combine traditional and Western practices (Chin, 2005).

Some Chinese may rely upon family as the first and sometimes only source of health care and may make health decisions on the basis of what is best for the family rather than themselves (Chang & Kemp, 2004). Other Chinese may use traditional home remedies for minor illnesses such as colds, but seek care from medical providers for more serious diseases, such as heart disease, cancer, hepatitis, and TB (Chin, 2005; Ma, 1999). Chinese immigrants may prefer to consult physicians of their own ethnic background, and women may prefer same-sex providers (Ma, 1999; Queensland Health, 2003).

Suggestion

- Chinese patients may wear amulets for good health. If possible, clinicians should avoid removing these articles during consultation.
- Recognize concerns about stigma and conduct consultations in settings that ensure privacy.

Some Chinese feel that Western medicine focuses too specifically on the ailing part of the body rather than on the root cause of the disease, as in traditional Chinese medicine. As a result, some choose Western health services for acute illnesses, but choose a doctor of Chinese medicine for a more holistic approach (X. Liu, 2004). In the United States, whether Chinese use Western health services may be affected by health insurance status and the high cost of services (Ma, 1999). People with health insurance more likely use Western health services. For people without health insurance, however, the emergency room is often their only source for health care and is a last resort option (Ma, 1999). Some Chinese may be apprehensive about Western care because of a lack of understanding of the health care system. Furthermore, transportation difficulties and communication and cultural differences, especially those associated with health beliefs, may deter some Chinese from using Western health services (Ma, 1999).

Suggestion

- Lack of health insurance can hinder efforts to obtain health care in the United States. Emphasize the availability of free or low-cost medications at public health departments.
- Recognize that barriers to seeking mental health care may be related to stigma, lack of insurance, and lack of culturally appropriate services.

Chapter 3. The Health of the Chinese

Health Statistics at a Glance

Tuberculosis

In China

- China is the second most (TB)-prevalent country in the world, accounting for 17% of the global TB burden in 2003 (WHO, 2004).
- In China in 2005, the estimated TB incidence was 100 per 100,000 (WHO, 2007b).
- In 2004, more than 5% of China's TB cases were multidrug-resistant (WHO, 2005c).

In the United States

- In the United States in 2005, 5% of TB cases among foreign-born persons were diagnosed among persons from China (CDC, 2006d).

HIV/AIDS

- In China in 2005, an estimated 650,000 HIV infections and 31,000 AIDS deaths were reported (WHO, 2006a).

Substance Use

- In China, nearly two of every three adult males are smokers (Averbach et al., 2002; X. Liu, 2004).

Diabetes Mellitus

- In China, the estimated number of people with diabetes is more than 30 million and continues to rise (World Diabetes Foundation, 2007).
- In mainland China, the diabetes prevalence rate among the adult population is lower than in Hong Kong and Singapore, where rates are 9%–12% (World Diabetes Foundation, 2007).
- Due to changes in lifestyle, diet, and physical activity, the risk of developing diabetes increases significantly when Asians immigrate to the United States (Fushimoto, 1995).

End-stage Renal Disease

- In major cities in China, the incidence of end-stage renal disease (ESRD) is estimated to be 102 cases per million (S. Lin, 2003).
- Asians in the United States are nearly twice as likely to have ESRD as non-Hispanic whites (Karter et al., 2002).
- New ESRD cases are increasing at a rate of 11% per year for Asian/Pacific Islanders, compared with 6% per year for non-Hispanic whites (U.S. Department of Health and Human Services, 2000).

Cancer

- In all regions in China, lung cancer is one of the most common cancers for males and females (Prenh et al., 1999).
- In 2000 in China, cancer cases were estimated to be 2.1 million (Yang, Parkin, Ferlay, Li, & Chen, 2005).

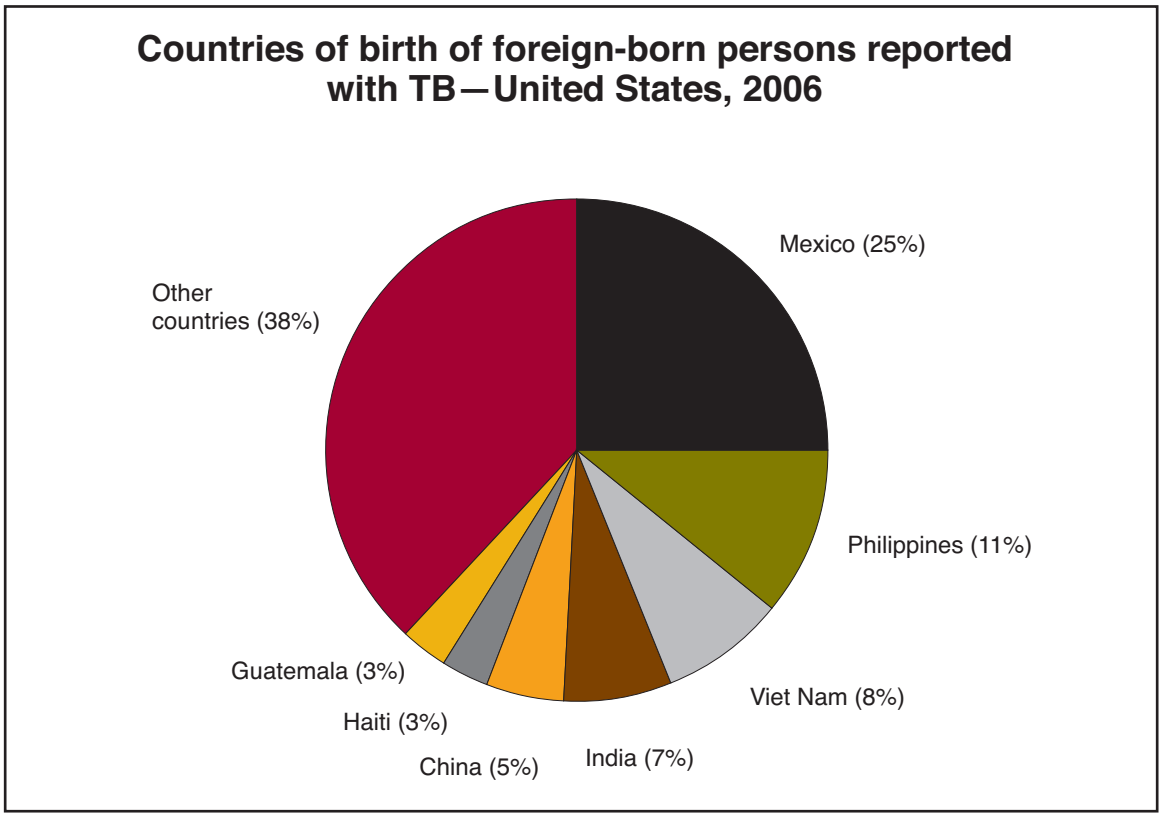
Tuberculosis Among the Chinese

In China

In 2003, China accounted for 17% of the total global TB burden, making it the second most TB-prevalent country in the world after India (WHO, 2004). In 2005, the estimated incidence of TB in China was 100 per 100,000, and the prevalence was 208 per 100,000 (WHO, 2007b). More than 5% of all TB cases are multidrug-resistant, which is defined as being resistant to at least isoniazid and rifampin (WHO, 2007b). The TB prevalence in rural areas, where almost 80% of the population resides, is almost twice that in urban areas. Consequently, TB is one of the top 10 leading causes of death in rural China (X. Liu, 2004).

Over the past 15 years, the Chinese Ministry of Health has greatly improved TB control (Chen et al., 2002; China Tuberculosis Control Collaboration, 1996, 2004; Dye, Fengzeng, Scheele, & Williams, 2000; Teng & Squire, 2005). The Second National Tuberculosis Program, implemented during 1991–2000, set new national targets for TB control and increased directly observed treatment short-course (DOTS) coverage in urban and rural areas (Zhao et al., 2003). In 2003 and 2004, the Chinese government committed to meeting global targets for TB diagnosis and treatment by the end of 2005 (WHO, 2005b). The commitment resulted in greatly expanded coverage of DOTS and a significant decrease in TB prevalence in many areas of China (Teng & Squire, 2005; WHO, 2004). By the end of 2005, China reached the global targets of 70% case detection and 85% treatment success (WHO, 2007b).

Figure 3-1.*



* From CDC, 2007

In the United States

In the United States, people from China accounted for 5% (n=392) of TB cases among all foreign-born persons in 2005 (CDC, 2006d). During 2001–2005, the TB case count among persons born in China was 1,904. Over that period, 26.6% of cases were extrapulmonary, and 8.9% were determined to be resistant to isoniazid. In 2005, 15% of all reported TB cases among Chinese adults occurred among those who had been in the United States for less than 1 year, 18% for 1–4 years, and 55% for 5 or more years. For the remaining 12%, the number of years in the United States before diagnosis was unknown (CDC, 2006d). Please see Appendix F for information about TB screening policies for persons overseas.

Bacille Calmette-Guérin

Bacille Calmette-Guérin (BCG) is currently used in many parts of the world as a vaccine against TB. In China in 2006, BCG vaccine coverage at birth was 92% (WHO, 2007a). Post-vaccination tuberculin reactivity is not an indicator of the protective efficacy of BCG vaccination, because it is not an indicator of immunity to *Mycobacterium tuberculosis*. Reaction to a tuberculin skin test caused by BCG vaccination wanes rapidly in individuals who receive the vaccine in the neonatal period and more slowly in those vaccinated at an older age (Menzies, 2000).

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

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

Tuberculosis-related Health Issues

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

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

Of these conditions, those that are most relevant to people from China are further explored here.

HIV/AIDS

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

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

In China in 2005, an estimated 650,000 HIV infections and 31,000 AIDS deaths occurred (WHO, 2006a). In 2003, WHO/UNAIDS estimated that the adult prevalence of HIV/AIDS in China was 0.1% to 0.2% (WHO, 2005a). In 2002, the prevalence of HIV among adults with TB was 0.7% (WHO, 2005a). HIV prevalence in China is higher among certain vulnerable populations and

in some geographical areas, including many Southern provinces and Yunnan, Guangxi, Henan, Xinjiang, and Guangdong provinces. Injection drug users (IDUs) are the largest at-risk population and have HIV rates as high as 80% in some areas (WHO, 2005a). Surveillance data suggest that HIV infection rates among commercial sex workers and men who have sex with men (MSM) are increasing. Evidence also suggests that the HIV/AIDS epidemic is becoming generalized, as HIV infection among females and mother-to-child transmission has increased.

Factors that exacerbate the epidemic include drug use, the availability of commercial sex, a low overall awareness of HIV/AIDS, widespread stigma and discrimination, large-scale population mobility and migration, illegal blood transfusion practices, and low rates of condom use (X. Liu, 2004; WHO, 2005a). In Chinese culture, talk of sex is often viewed as taboo, making dissemination of AIDS information a challenge for health care workers. If no effective strategies are implemented, AIDS cases in China may reach an estimated 10 million before 2010 (X. Liu, 2004).

Among Asian/Pacific Islanders (APIs) in the United States, the estimated number of annual AIDS cases diagnosed increased from 346 in 1998 to 497 in 2003. Through 2003, an estimated total of 7,166 APIs received a diagnosis of AIDS, 87% of whom were men (CDC, 2003). Although APIs represented less than 1% of all HIV/AIDS cases in the United States during 2001–2004, APIs had the highest estimated annual percentage increase in HIV/AIDS diagnoses of all races/ethnicities (8.1% for males and 14.3% for females) (CDC, 2006c).

HIV transmission among API men occurs primarily among MSM, followed by men who have high-risk heterosexual contact or are IDUs. In 2005, MSM transmission accounted for 71% of all AIDS diagnoses among APIs to date (CDC, 2006a). Among API women, HIV transmission occurs most often among women who have sex with men who are at increased risk, followed by women who are IDUs (CDC, 2006a). Table 3-1 presents the estimated number of diagnosed AIDS cases in the United States in 2005 and cumulatively since the beginning of the epidemic. APIs make up less than 1% of the total diagnosed AIDS cases (CDC, 2005).

Table 3-1. Total AIDS cases in the United States by race/ethnicity

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

Substance Use

Both TB and drug use are prevalent in crowded, low-income areas. As a result, drug users are 2–6 times more likely to contract TB than nonusers (CDC, 2004). In China, nearly two of every three adult males are smokers, with the highest prevalence among those living in the countryside. Some estimates indicate that more than 300 million men in China, more than the entire U.S. population, are smokers (American Lung Association, 2006; Averbach et al., 2002; X. Liu, 2004).

Because China lacks a legal age limit for smoking, people often begin smoking very young. Furthermore, offering a cigarette to someone is considered a common gesture of friendship (X. Liu, 2004). Among adolescents, studies show that smoking prevalence is much higher among males than females. Among senior high school students, the prevalence of ever having smoked was 46.0% among males, compared with 5.5% among females (U.S. Department of Health and Human Services, 1998).

In the United States, though APIs have a low overall prevalence of smoking, smoking rates tend to be high among some Southeast Asian groups and Chinese American males (American Lung Association, 2006). Smoking rates are important to note because of the potential link between smoking and TB (den Boon et al., 2005; Kolappan & Gopi, 2002; H.-H. Lin, Ezzati, & Murray, 2007). A case control study conducted in India during 1993–1996 showed a positive association between tobacco smoking and pulmonary TB (Kolappan & Gopi, 2002). More recently, both a meta-analysis and a population survey conducted in South Africa showed consistent evidence that smoking is associated with an increased risk of contracting TB (den Boon et al., 2005; H.-H. Lin et al., 2007).

Regarding alcohol use, studies suggest that APIs use alcohol at lower rates than many ethnic groups in the United States (Makimoto, 1998; National Institute on Alcohol Abuse and Alcoholism, 2002). However, rates of alcohol use vary significantly among API groups. Chinese Americans have lower lifetime prevalence of alcohol use than Americans of Japanese, Korean, and Filipino descent (Makimoto, 1998).

Diabetes Mellitus

People diagnosed with diabetes are at a higher risk of progressing from LTBI to TB disease. TB occurs more frequently in diabetics and causes greater mortality (Guptan & Shah, 2000). Because of changes in lifestyle, diet, and physical activity, the risk of developing diabetes increases significantly among Asians who immigrate to the United States (Fushimoto, 1995).

In China, an estimated 30 million people and rising have been diagnosed with diabetes (World Diabetes Foundation, 2007). Over the past 20 years, type 2 diabetes has increased because of the development of China's Western-influenced market economy and the introduction of fast food restaurants into many Chinese cities (X. Liu, 2004; Steinman & Birshtein, 2007). Diabetes prevalence in the People's Republic of China is lower than in Hong Kong and Singapore, where prevalence ranges from 9% to 12% of the adult population (World Diabetes Foundation, 2007).

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 among APIs than whites. New cases are increasing at 11% per year among APIs, compared with 6% per year among non-Hispanic whites (U.S. Department of Health and Human Services, 2000).

Cancer

Because China lacks national-level information systems, cancer incidence is estimated on the basis of existing cancer registries, which cover only a small percentage of the population (Yang et al., 2005). In 2000 in China, cases were estimated at 2.1 million (1.3 million in men, 0.8 million in women). The most common types vary by geographic region and sex (Yang et al., 2005).

In mainland China: Among males during 1988–1992, lung cancer was most common, making up 26% of all cancer cases, followed by cancer of the stomach (20%), liver (12%), esophagus (6%), and colon (5%) (Prenh et al., 1999). Among females during that same time, lung cancer and breast cancer were the most common (both at 16%), followed by stomach (13%), liver (7%), and colon (6%) (Prenh et al., 1999).

In Hong Kong and Singapore: At 94 cases per 100,000 for males and 37 cases per 100,000 for females, lung cancer rates for China were highest in Hong Kong and Singapore. Among males during 1988–1992, lung cancer was 24% of the full cancer burden. Other common cancers among men included liver (11%), nasopharynx (9%), colon (8%), and stomach (7%). Among females during that same time, breast cancer was most common (16% of all cancers), followed by lung (15%), colon (10%), cervix uteri (7%), and stomach (6%) (Prenh et al., 1999).

In the United States: Among Chinese males during 1988–1992, the most common cancers were lung (18%), prostate (16%), colon (10%), liver (8%), and rectum (5%) (Prenh et al., 1999). For Chinese females during that same time, the most common cancers were breast (26%), lung (12%), colon (11%), corpus uteri (5%), and rectum (5%) (Prenh et al., 1999).

Hepatitis B

Although hepatitis B does not increase the risk of progressing from LTBI to TB disease, it may affect treatment because TB drugs are potentially hepatotoxic. Compared with the U.S. average, hepatitis B is 25–75 times more common among immigrants from Cambodia, Laos, Vietnam, and China (U.S. Office of Minority Health, 2005). Although most people get rid of the virus within 6 months, roughly 10% of people infected with hepatitis B develop a chronic, lifelong infection that increases the chance of permanent liver damage (Office of Global Health Affairs, 2004). Additionally, hepatitis B is a strong risk factor for liver cancer: about 90% of liver cancer patients in China test positive for hepatitis B surface antigen (Prenh et al., 1999).

Special Issue

Mental Health

Because of cultural views about psychological well-being and illness, mental health is an extremely complex issue among the Chinese. The traditional focus on the body and mind as a single unit can lead to more frequent somatic complaints, because patients may focus on physical discomforts rather than emotional or psychological concerns (K.-M. Lin & Cheung, 1999). Somatization, or manifesting physical symptoms related to psychiatric or emotional disorders, is common among Chinese Americans (Daus, Borme, Trieu, & Chen, 2006).

Among all Asians Americans, including Chinese, low use of mental health services is well documented (Barreto & Segal, 2005; K.-M. Lin & Cheung, 1999; Matsuoka, Breaux, & Ryujin, 1997; Spencer & Chen, 2004). U.S. national data show that Asian Americans are three times less likely than Caucasians to use mental health services (Matsuoka et al., 1997). Results from the Chinese American Psychiatric Epidemiological Studies indicate that, despite experiencing emotional problems, anxiety, or issues with drugs, alcohol, or mental health in the last 6 months, only 17% of Chinese Americans sought care (Daus et al., 2006; Spencer & Chen, 2004).

The barriers to seeking mental health care include stigma associated with mental health, lack of medical insurance, and the lack of culturally appropriate services to allow effective diagnosis of illness. Because mental illness is sometimes considered punishment for past wrongdoing, a diagnosis has the potential to bring considerable shame on the family (Asian Community Mental Health Services, n.d.; Barreto & Segal, 2005; Daus et al., 2006; K.-M. Lin & Cheung, 1999; Spencer & Chen, 2004). Because many Chinese exhaust traditional and alternative treatments first, even when a person seeks care, it is often after symptoms have become severe (Spencer & Chen, 2004). As a result, diagnoses of major depression and post-traumatic stress disorder are often made late.

Suggestion

- If emotional concerns are raised, be mindful that some Chinese may be reluctant to seek care. Provide referrals and emphasize confidentiality.
- Somatization, the manifestation of physical symptoms related to psychological distress, is common among Chinese Americans because of the stigma associated with mental health. Therefore, be aware that patients may focus solely on physical problems.

Chapter 4. Common Perceptions, Attitudes, and Beliefs About Tuberculosis Among the Chinese

Findings from Tuberculosis-specific Behavioral and Social Science Research

In 2003, the Centers for Disease Control and Prevention (CDC) conducted an ethnographic study of 26 Chinese-born people in the United States to understand better the tuberculosis (TB)-related experiences, perceptions, and attitudes of the Chinese. In this chapter, this study is referred to as "the CDC study." (See Appendix D for a description of the study design, methods, and study population.) The information presented in this chapter comes from both the CDC study and other TB-related behavioral and social science literature concerning the Chinese. It should be noted that the CDC study findings have limited generalizability because of the study's small, non-randomly selected sample; thus, the information will not apply to all Chinese. 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.

Although levels of understanding vary, many Chinese recognize that TB is a respiratory disease. In the CDC study, most respondents associated TB with the lungs, and almost half used a phrase equivalent in English to "terrible lung." Others described TB as a disease caused by coughing, a foreign virus, or when the "lung is overworked." Almost all respondents could name common TB symptoms: cough was the most frequently mentioned, followed by blood associated with cough. One respondent acknowledged, "When people get infected, they always cough and their immune system is usually weakened."

Suggestion

- Ask questions to elicit the patient's understanding of TB symptoms, transmission, and prevention so that information can be tailored appropriately.
- Engaging in a two-way exchange of information offers the opportunity to understand the patient's preconceptions, dispel any inaccurate beliefs, and highlight pertinent messages.

Some Chinese may not understand the means of TB transmission or its prevention. Many respondents in the CDC study believed that transmission occurred through saliva or by sharing food or utensils with a person diagnosed with TB. One respondent explained, "(TB) is usually caused by more than one particular reason. They may get TB from their bad respiratory system, smoking, bad air conditions, and fatigue, which weaken their immune system's function." A few respondents associated TB with smoking. This belief is particularly interesting given the high rates of smoking among the Chinese and the growing body of literature that shows an association between smoking and an increased risk of developing TB (Kolappan & Gopi, 2002).

Suggestion

- Clarify how TB is and is not transmitted.
- Be prepared to emphasize known risk factors and to discuss the potential association of smoking and the increased risk of developing TB.
- Clarify that a patient's increased TB risk is often associated with past exposure in China, not with personal hygiene.

Many Chinese are aware of the difference between TB disease and latent TB infection (LTBI). For the most part, respondents could differentiate between active TB and LTBI. One female respondent explained, "When the germs in our body wake up, then we have it." In addition, most respondents understood why they were being treated. One male explained, "The purpose of the treatment was to prevent me from getting TB disease and help me to adjust to the U.S. environment. TB was a very hard and difficult disease to treat in the past and it was not curable. It was a very horrible disease."

Respondents in the CDC study also discussed barriers to TB treatment. Respondents who had defaulted on their treatment cited difficulties with the length of treatment and the size of the pills. Traditionally, Chinese medicines and herbs take various forms, including small prepackaged pills, freeze-dried granules, or substances to decoct into a medicinal tea (Ehling, 2001). Familiarity with medicine in these forms may contribute to difficulty with larger pills.

Suggestion

- Although many Chinese may recognize the difference between TB disease and latent TB infection, avoid making assumptions.
- Assess your patient's level of understanding, and tailor information to the age, literacy level, and preferences of the patient. Preferences may include pamphlets, one-on-one communication, and videos.

Although many Chinese believe TB is a serious disease, they worry less about contracting it. When asked about their chances of contracting TB, one respondent in the CDC study said, "(Chinese people) are not too worried about TB. They would worry more about getting cancer than TB. Since TB can be cured nowadays, they do not pay any special attention to TB." Though most described TB as very serious, many added that TB is curable. Those who did not consider TB serious justified their statement by mentioning treatment. One respondent said that "in the past, TB was an

absolutely fatal disease, but nowadays, it is not a fatal disease if you take the medications and TB vaccine." Most respondents felt that Chinese living in the United States worried little about TB because "people have very good medication" or "because in the United States, the air condition is good and the health care system and quality are excellent."

If they suspected TB, Chinese living in the United States would likely see a physician, though health insurance may influence the decision. All respondents in the CDC study reported that if an individual in the United States suspected TB, he or she would go to a physician for treatment. One study of the use of health services among Chinese immigrants found that most favored a combination of traditional Chinese and Western medicines (Ma, 1999). The study also found that Western medicine may be preferred as the more effective treatment for acute diseases such as TB (Ma, 1999).

When specifically questioned about care-seeking decisions, some respondents in the CDC study noted that having health insurance may influence the decision to see a physician. A random survey of more than 1,800 Chinese Americans in San Francisco found similar results: the use of health services was strongly correlated with income, and "not enough money to pay for care" was a frequent response for not using health services (Daus et al., 2006). The association between having health insurance and the use of health services is further documented in the literature on mental health services use (Abe-Kim, Hwang, & Takeuchi, 2002; Spencer & Chen, 2004).

Suggestion

- Emphasize that services and treatment for TB disease are free.
- Clarify that other TB-related services, such as LTBI medicines and chest X-rays, are often free or offered at reduced cost at public health departments.

The stigma and social repercussions associated with TB may negatively influence behaviors. In the CDC study, about half of participants noted that having TB would change the way they felt about themselves. The anticipated changes varied widely, including concerns about changes in self-perception and transmitting the disease to others, and that a TB diagnosis would result in stress and fear of isolation. As one participant noted, "I will think of myself as not normal anymore."

Literature indicates that discrimination arises from negative stereotypes about TB and its relation to poverty. Participants in one study of underrepresented populations (including Hispanics, blacks, and Asians) cited concerns that a TB diagnosis would lead to avoidance by friends and family and the possibility of losing one's job (Kelly, 1999). In the CDC study, most respondents also reported that disclosure would negatively affect employment and social relationships. Many stated that Chinese diagnosed with TB would not tell others, because others would discriminate against them, treat them differently, or isolate them. Several respondents indicated that in Chinese culture it is inappropriate to discuss illness. A 2004 telephone survey of more than 3,000 Hong Kong Chinese found that stigma associated with TB (4.9%) was greater than that associated with SARS (3.8%).

Suggestion

- A substantial degree of stigma and fear of social isolation may be associated with TB. Emphasize the need for short-term isolation while a patient is infectious and that isolation is not necessary for LTBI.
- Clarify TB risk factors to dispel any inaccurate beliefs.

Almost all respondents in the CDC study wanted TB information, preferring pamphlets and community talks most frequently. Although nearly all participants in the CDC study received formal TB education in school in China, more than half who had received services at the local TB clinic never received any TB information from a health care worker in the United States. Nearly every participant wanted more information, and some specified that they wanted to know how TB spreads and is prevented. Many who had received information in the United States cited pamphlets as the most helpful format, because they "could read at their own pace." Community talks were also frequently specified, followed by videos, TV, radio, and the Internet. Commenting on the need for a variety of formats, one participant remarked, "All of them are good because different people have different needs."

Suggestion

- Increase community awareness of local TB programs and resources by conducting educational outreach activities.
- Successful outreach activities include community and school presentations, public service announcements on local television and radio stations, and articles in local newspapers and magazines read by Chinese.

Conclusion

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

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

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

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

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

Suggestion

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

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

Appendix B. Tips for Working with Interpreters

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

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

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

Appendix C. Tuberculosis and Cultural Competence Resources

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

General Tuberculosis Resources

Centers for Disease Control and Prevention, Division of Tuberculosis Elimination
http://www.cdc.gov/tb

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

Tuberculosis Education and Training Resources
http://www.findtbresources.org

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

Resources For Chinese Patients

SPIRAL: Selected Patient Information Resources in Asian Languages
http://www.library.tufts.edu/hsl/spiral/chinese.html

This Web site provides patient education materials in Chinese on a variety of topics, including three TB-specific documents, "Pills to Prevent Tuberculosis," "Taking the Fear Out of TB," and "Tuberculosis Information."

Tuberculosis Fact Sheets in Chinese
http://www.bphc.org/health/atoz.asp?id=31

These two fact sheets in the Chinese language are available through the Boston Public Health Commission. The titles are "TB Skin Test" and "What is TB."

Virginia Division of Tuberculosis Control
http://www.vdh.virginia.gov/epidemiology/DiseasePrevention/Programs/Tuberculosis/Patients/brochureLanguage.htm

This Web site offers Chinese-language brochures about TB. Titles include "Do I Need a TB Skin Test?," "Just the Facts About BCG and TB," "Stop TB Infection Before It Makes You Sick," "TB and HIV: A Dangerous Partnership," "TB Disease: You Need Treatment To Make You Well," "What Is a TB Skin Test?," and "What You Should Know About Taking Tuberculosis Medicines."

Resources For Providers

The American Medical Association
http://www.ama-assn.org
http://www.ama-assn.org/ama/pub/category/6759.html
The American Medical Association offers a *Cultural Competence Compendium*, a 460-page resource guide, to help physicians and other health professionals communicate with patients and provide individualized, respectful, patient-centered care. Selected sections of the book are available at the Web site.

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

Cough It Up!
http://www.dshs.state.tx.us/lab
This videotape, available at the Texas Department of State Health Services' Web site, provides information about how to supply health care providers with a sputum sample.

Cross-Cultural Tuberculosis Guide: Cultural Influences on TB-Related Beliefs and Practices of Filipinos, Vietnamese, Chinese, and Koreans
http://www.findtbresources.org/scandocs/AD30408.pdf
This book presents information about TB practices and beliefs among Asian Americans and makes recommendations on how to improve TB-related communication with Asian Americans.

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

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

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

EthnoMed
http://www.ethnomed.org
The EthnoMed Web site hosted by Harborview Medical Center, University of Washington, Seattle, contains information about cultural beliefs and medical issues pertinent to the health care of recent immigrants to Seattle, many of whom are refugees fleeing war-torn parts of the world.

Guidance to Federal Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons
http://www.hhs.gov/ocr/lep/revisedlep.html
This Web site offers guidance to help federally funded programs comply with regulations affecting people with limited English proficiency.

Linguistic and Cultural Aspects of Tuberculosis Screening and Management for Refugees and Immigrants
http://ethnomed.org/ethnomed/clin_topics/tb/tb.html
This site presents the transcript of a presentation that focused on TB screening, case management, and linguistic and cultural differences between Western and non-Western approaches to medicine.

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

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

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

Appendix D. Centers for Disease Control and Prevention Study Summary

A total of 26 persons born in China were selected to participate in the 2003 Centers for Disease Control and Prevention (CDC) study of tuberculosis (TB). These respondents were recruited from one study site in Boston, Massachusetts. The site was recruited on the basis of local epidemiology, interest, and ability to participate. To elicit a range of responses, both TB patients and people recruited directly from the community (i.e., people who were not patients at the local TB clinic) were included.

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

Study Population and Participant Recruitment

In Boston, Massachusetts, participants born in China were chosen by the study site staff to participate. This decision reflected the local epidemiological trends, as well as the need for TB-specific ethnographic information regarding this population.

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

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

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

Table D-1. Description of Chinese cohort

	N = 26, n (%)
Recruited from clinic/health department	13 (50)
Age at interview (mean, range)	39.3, 19–63
18–24	7 (27)
25–44	5 (19)
45–63	14 (54)
Years in United States (mean, range)	8.8, 2–28
1–4 years	11 (42)
≥5 years	15 (58)
Female	12 (46)
From urban area	23 (88)
Completed high school	17 (65)
English speaking	13 (50)
English literate	10 (39)
Any language literate	26 (100)

Table D-2. Tuberculosis (TB) status of Chinese cohort

	N = 26, n (%)
Screened*	25/26 (96)
TB disease diagnosis	3/25 (12)
Started TB treatment	3/3 (100)
Completed or currently on TB treatment	3/3 (100)
LTBI† diagnosis	16/25 (64)
Started LTBI treatment	13/16 (81)
Completed or currently on LTBI treatment	11/13 (85)

* Screened by one or more methods, such as tuberculin skin test, chest radiography, symptom screening, or sputum.
† Latent TB infection.

Appendix E. Glossary of *Yin* and *Yang* Foods

The following glossary, adapted from the sources cited, lists common foods and their *yin* and *yang* classification in traditional Chinese medicine. A "hot," or *yang,* illness is generally treated with "cold," or *yin,* foods and vice versa. Tuberculosis (TB) is considered a hot illness due to "lung heat" and requires a strong counteraction for deficiencies in *yin* (Traditional Chinese Medicine and Acupuncture Health Information Organization, 2005). This list can help guide providers faced with questions about recommended foods during TB illness or treatment. Though providing a referral to a practitioner of traditional Chinese medicine is best, a basic understanding of *yin* and *yang* foods may help in communicating with Chinese patients.

Table E-1.*

Yin foods	*Yang* foods
Soy products, such as tofu or bean sprouts	Foods generally high in fat, protein, and calories
Some meats, such as crab or duck	Meat, such as chicken, pork, or beef
Fruit, such as watermelon or star fruit	Warm spices, such as cinnamon or nutmeg
Cold drinks and water	Alcoholic beverages
Vegetables, such as watercress, cucumber, carrots, or cabbage	Eggs, glutinous rice, sesame oil, ginger, bamboo, and mushrooms

Cooking foods a certain way also can influence *yin* or *yang* quality. Poaching duck, for instance, creates a strong *yin* food; whereas, if the duck were roasted, its *yin* quality would diminish.

Table E-2.*

Yin qualities	*Yang* qualities
Boiling	Deep-frying
Poaching	Roasting
Steaming	Stir-frying

* Adapted from Chang & Kemp, 2004; Loecher, O'Donnell, Faelton, & Prevention Magazine Health Books, 1997; Lu, 1986; Parkinson, 1999; and The Feng Shui Institute, n.d.

Appendix F. Tuberculosis Screening Policies for Persons Overseas

This section is adapted from the 1991 "Technical Instructions for Medical Examination of Aliens" issued by the Immigrant, Refugee, and Migrant Health Branch of the Division of Global Migration and Quarantine (DGMQ), Centers for Disease Control and Prevention (CDC) (CDC, 1991). As new 2007 technical instructions are being applied to specific groups over time, please contact CDC's Immigrant, Refugee, and Migrant Health Branch of DGMQ at 404-498-1600 for up-to-date information. You may also access http://www.cdc.gov/ncidod/dq/technica.htm.

Technical Instructions for Tuberculosis Screening

A medical examination, which includes screening for tuberculosis (TB), is mandatory for all refugees entering the United States and for all applicants outside the United States applying for an immigrant visa. Aliens in the United States who apply for adjustment of their status to permanent resident also require an examination. Aliens applying for nonimmigrant visas (temporary admission) may be required to undergo a medical examination at the discretion of the consular officer overseas or immigration officer at the U.S. port of entry if there is reason to suspect that an inadmissible health-related condition exists.

CDC's DGMQ provides the technical instructions and guidance to panel physicians conducting the medical examination. If an immigrant or refugee has an inadmissible health-related condition, a waiver is required for the applicant to enter the United States. This also applies for an applicant who is in the United States and applying for adjustment of status to permanent resident. Section 212(g) of the Immigration and Nationality Act provides for the waiver of health-related grounds of inadmissibility.

Table F-1. Requirements for tuberculosis evaluation

Procedure	Required for
Review of history	All applicants.
Chest radiograph	All applicants 15 years of age or older. Applicants 15 years of age or younger whose skin test is positive (see below).
Tuberculin skin test	Applicants 15 years of age or younger who are suspected of having TB or who have a history of contact with a known TB case.
Sputum smear examination	Any applicant with a chest radiograph suggestive of clinically active pulmonary TB.

NOTE:

- Pregnant women with symptoms suggestive of active TB must receive a chest radiograph. If the radiograph is compatible with active tuberculosis, sputum smears must be obtained.
- Applicants whose chest radiographs show only calcified granuloma, calcified primary complex, calcified lymph node, or fibrosis, scarring, or pleural thickening with no radiologic or clinical evidence of active tuberculosis are not required to have sputum smears.

Appendix G. References

Abe-Kim, J., Hwang, W. C., & Takeuchi, D. (2002). Predictors of help seeking for emotional distress among Chinese Americans: Family matters. Journal of Consulting and Clinical Psychology, 70(5), 1186–1190.

American Lung Association. (2006). Smoking and Asian Americans/Pacific Islander fact sheet. Retrieved February 29, 2008, from http://www.lungusa.org/site/pp.asp?c=dvLUK9O0E&b=36001.

Asian & Pacific Islander American Health Forum. (2006). Health insurance coverage: Asian Americans and Pacific Islanders. Retrieved February 29, 2008, from http://www.apiahf.org/resources/pdf/AAPI_Insurance_coverage_Fact_Sheet.pdf.

Asian Community Mental Health Services. (n.d.). Newsbrief: Asians, depression, and suicide, and the death of Iris Chang. Retrieved February 29, 2008, from http://www.acmhs.org/iris_chang_newsbrief.htm.

Averbach, A. R., Lam, D., Lam, L.-P., Sharfstein, J., Cohen, B., & Koh, H. (2002). Smoking behaviors and attitudes among male restaurant workers in Boston's Chinatown: A pilot study. Tobacco Control, 11(II), ii34–ii37.

Badri, M., Wilson, D., & Wood, R. (2002). Effect of highly active antiretroviral therapy on incidence of tuberculosis in South Africa: A cohort study. The Lancet, 359, 2059–2064.

Barreto, R. M., & Segal, S. P. (2005). Use of mental health services by Asian Americans. Psychiatric Services, 56(6), 746–748.

Brach, C., & Fraser, I. (2000). Can cultural competency reduce racial and ethnic disparities? A review and conceptual model. Medical Care Research and Review, 57(1), 181–217.

Centers for Disease Control and Prevention. (1991). Technical instructions for medical examination of aliens. Atlanta, GA: U.S. Department of Health and Human Services.

Centers for Disease Control and Prevention. (1999). Self study modules on tuberculosis, chapter 9: Patient adherence to tuberculosis treatment. Atlanta, GA: U.S. Department of Health and Human Services.

Centers for Disease Control and Prevention. (2000). Targeted tuberculin testing and treatment of latent tuberculosis infection. Morbidity and Mortality Weekly Report, 49(RR06), 1–54.

Centers for Disease Control and Prevention. (2003). HIV/AIDS surveillance report: HIV infection and AIDS in the United States. Atlanta, GA: U.S. Department of Health and Human Services.

Centers for Disease Control and Prevention. (2004). Core curriculum on tuberculosis. Retrieved December 10, 2007, from http://www.cdc.gov/tb/webcourses/CoreCurr/index.htm.

Centers for Disease Control and Prevention. (2005). HIV/AIDS surveillance report: HIV infection and AIDS in the United States. Atlanta, GA: U.S. Department of Health and Human Services.

Centers for Disease Control and Prevention. (2006a). Cases of HIV infection and AIDS in the United States and dependent areas, 2005. HIV/AIDS Surveillance Reports, 17, 37.

Centers for Disease Control and Prevention. (2006b). Effective TB interviewing for contact investigation: Self study modules. Atlanta, GA: U.S. Department of Health and Human Services.

Centers for Disease Control and Prevention. (2006c). Racial/ethnic disparities in diagnoses of HIV/AIDS—33 states, 2001–2004. Morbidity and Mortality Weekly Report, 55, 121–125.

Centers for Disease Control and Prevention. (2006d). Reported tuberculosis in the United States: 2005. Atlanta, GA: U.S. Department of Health and Human Services.

Centers for Disease Control and Prevention. (2007). Reported tuberculosis in the United States: 2006. Atlanta, GA: U.S. Department of Health and Human Services.

Central Intelligence Agency. (2005). The world factbook: China. Retrieved January 14, 2006, from http://www.cia.gov/cia/publications/factbook/geos/ch.html.

Chang, B.-J., & Kemp, C. (2004). China. In C. Kemp & L. A. Rasbridge (Eds.), Refugee and immigrant health: A handbook for health professionals (pp. 132–141). Cambridge: Cambridge University Press.

Chen, X., Zhao, F., Duanmu, H., Wan, L., Wang, L., Du, X., et al. (2002). The DOTS strategy in China: results and lessons after 10 years. Bulletin of the World Health Organization, 80, 430–436.

Chin, P. (2005). Chinese. In J. G. Lipson & S. L. Dibble (Eds.), Culture and clinical care. San Francisco: UCSF Nursing Press.

China Tuberculosis Control Collaboration. (1996). Results of directly observed short-course chemotherapy in 112,842 Chinese patients with smear-positive tuberculosis. The Lancet, 347(8998), 358–362.

China Tuberculosis Control Collaboration. (2004). The effect of tuberculosis control in China. The Lancet, 364(9432), 417–422.

Daus, G. P., Bormet, M., Trieu, S. L., & Chen, D. (2006). APIAHF health brief: Chinese in the United States. Retrieved February 29, 2008, from http://www.apiahf.org/resources/pdf/Chinese_in_the_United_States.pdf.

den Boon, S., van Lill, S. W. P., Borgdorff, M. W., Verver, S., Bateman, E. D., Lombard, C. J., et al. (2005). Association between smoking and tuberculosis infection: a population survey in a high tuberculosis incidence area. Thorax, 60, 555–557.

Do, H. (2000). EthnoMed: Chinese cultural profile. Retrieved February 29, 2008, from http://www.ethnomed.org/ethnomed/cultures/chinese/chinese_cp.html.

Dubos, R. J., & Dubos, J. (1952). The white plague: Tuberculosis, man and society. New Brunswick, NJ: Rutgers University Press.

Dye, C., Fengzeng, Z., Scheele, S., & Williams, B. (2000). Evaluating the impact of tuberculosis control: Number of deaths prevented by short-course chemotherapy in China. International Journal of Epidemiology, 29(3), 558–564.

Ehling, D. (2001). Oriental medicine: An introduction. Alternative Therapies, 7(4), 71–82.

Fushimoto, W. (1995). Diabetes in America: Diabetes in Asian and Pacific Islander Americans. Bethesda, MD: National Diabetes Data Group.

Girardi, E., Antonucci, G., Vanacore, P., Libanore, M., Errante, I., Matteelli, A., et al. (2000). Impact of combination antiretroviral therapy on the risk of tuberculosis among persons with HIV infection. AIDS, 14(13), 1985–1991.

Girardi, E., Antonucci, G., Vanacore, P., Palmieri, F., Matteelli, A., Iemoli, E., et al. (2004). Tuberculosis in HIV-infected persons in the context of wide availability of highly active antiretroviral therapy. European Respiratory Journal, 24, 11–17.

Grieco, E. M., & Cassidy, R. C. (2001). Overview of race and Hispanic origin: Census 2000 brief. Washington, DC: U.S. Census Bureau.

Guptan, A., & Shah, A. (2000). Tuberculosis and diabetes: An appraisal. Indian Journal of Tuberculosis, 47(3), 2–8.

Hardee, K., Xie, Z., & Gu, B. (2003). Family planning and women's lives in rural China. International Family Planning Perspectives, 30(2), 68–76.

Ho, M.-J. (2003). Migratory journeys and tuberculosis risk. Medical Anthropology Quarterly, 17(4), 442–458.

Ho, M.-J. (2006). Perspectives on tuberculosis among traditional Chinese medical practitioners in New York City's Chinatown. Culture, Medicine and Psychiatry, 30(1), 105–122.

Jones, J. L., Hanson, D. L., Dworkin, M. S., & DeCock, K. M. (2000). HIV-associated tuberculosis in the era of highly active antiretroviral therapy. The International Journal of Tuberculosis and Lung Disease, 4(11), 1026–1031.

Karter, A., Ferrara, A., Liu, J., Moffet, H., Ackerson, L., & Selby, J. (2002). Ethnic disparities in diabetic complications in an insured population. JAMA, 287(19), 2519–2527.

Kelly, P. (1999). Isolation and stigma: The experience of patients with active tuberculosis. Journal of Community Health Nursing, 16(4), 233–241.

Kleinman, A. (Ed.). (1986). Illness behavior: A multidisciplinary model. New York: Plenum.

Kleinman, A., & Benson, P. (2006). Anthropology in the clinic: The problem of cultural competency and how to fix it. PLoS Medicine, 3(10), e294.

Kolappan, C., & Gopi, P. G. (2002). Tobacco smoking and pulmonary tuberculosis. Thorax, 57, 964–966.

Lai-wan, C. C., Eric, B., & Hoi-yan, C. C. (2006). Attitudes to and practices regarding sex selection in China. Prenatal Diagnosis, 26, 610–613.

Library of Congress. (2002). Immigration: The changing face of America. Retrieved February 29, 2008, from http://memory.loc.gov/learn/features/immig/alt/chinese.html.

Lin, H.-H., Ezzati, M., & Murray, M. (2007). Tobacco smoke, indoor air pollution and tuberculosis: A systematic review and meta-analysis. PLoS Medicine, 4(1), e20.

Lin, K. (2000). Ethnomed: Chinese food cultural profile. Retrieved February 29, 2008, from http://www.ethnomed.org/ethnomed/cultures/chinese/chinese_food.html.

Lin, K. (2003). EthnoMed: Chinese language profile. Retrieved February 29, 2008, from http://ethnomed.org/ethnomed/cultures/chinese/chin_lang.html.

Lin, K.-M., & Cheung, F. (1999). Mental health issues for Asian Americans. Psychiatric Services, 50(6), 774–780.

Lin, S. (2003). Nephrology in China: A great mission and momentous challenge. Kidney International, 63(83), S108–S110.

Lipson, J. G., & Dibble, S. L. (Eds.). (2005). Providing culturally appropriate health care. In Culture and clinical care (First ed., pp. 250–263). San Francisco: UCSF Nursing Press.

Liu, G. Z. (2001). Chinese culture and disability: Information for U.S. service providers. Buffalo, NY: Center for International Rehabilitation Research Information and Exchange.

Liu, X. (2004). Han. In C.R. Ember & M. Ember (Eds.), Encyclopedia of medical anthropology: Health and illness in the world's cultures (pp. 703–717). New York: Kluwer Academic/Plenum Publishers.

Loecher, B., O'Donnell, S. A., Faelton, S., & Prevention Magazine Health Books. (1997). New choices in natural healing for women. New York: Rodale Press.

Lopez-Gatell, H., Cole, S. R., Hessol, N. A., French, A. L., Greenblatt, R. M., Landesman, S., et al. (2007). Effect of tuberculosis on the survival of women infected with human immunodeficiency virus. American Journal of Epidemiology, 165(10), 1134–1142.

Lu, H. C. (1986). Chinese system of food cures: Prevention & remedies. New York: Sterling Publishing Company.

Ma, G. (1999). Between two worlds: The use of traditional and Western health services by Chinese immigrants. Journal of Community Health, 24(6), 421–437.

Makimoto, K. (1998). Drinking patterns and drinking problems among Asian-Americans and Pacific Islanders. Alcohol Health and Research World, 22(4), 270–275.

Markowitz, N., Hansen, N. I., Lewis, V. A., Schoenbaum, E. E., Vermund, S. H., Klein, R. S., et al. (1997). Incidence of tuberculosis in the United States among HIV-infected persons. Annals of Internal Medicine, 126, 123–132.

Matsuoka, J. K., Breaux, C., & Ryujin, D. H. (1997). National utilization of mental health services by Asian Americans/Pacific Islanders. Journal of Community Psychology, 25(2), 141–145.

McLaughlin, L., & Braun, K. (1998). Asian and Pacific Islander cultural values: Considerations for health care decision making. Health and Social Work, 23(2), 116–126.

Menzies, D. (2000). What does tuberculin reactivity after Bacille Calmette-Guerin vaccination tell us? Clinical Infectious Diseases, 31(Suppl 3), S71–S74.

Mitnick, C., Furin, J., Henry, C., & Ross, J. (1998). Tuberculosis among the foreign-born in Massachusetts, 1982–1994: A reflection of social and economic disadvantage. The International Journal of Tuberculosis and Lung Disease, 2(9), S32–S40.

National Cancer Institute. (n.d.). Dictionary of cancer terms. Retrieved December 11, 2007, from http://www.cancer.gov/dictionary.

National Institute on Alcohol Abuse and Alcoholism. (2002). Alcohol and minorities: An update. Retrieved February 29, 2008, from http://pubs.niaaa.nih.gov/publications/aa55.htm.

Office of Global Health Affairs. (2004). Background on potential health issues for Hmong refugees from Wat Tham Krabok. Bethesda, MD: U.S. Department of Health and Human Services.

Parkinson, R. (1999). Yin and yang in Chinese cooking. Retrieved February 29, 2008, from http://chinesefood.about.com/library/weekly/aa101899.htm.

Postgraduate Medical Council of New South Wales. (n.d.). Cultural diversity in health: Chinese community. Retrieved February 29, 2008, from http://www.diversityinhealth.com/regions/asia/chinese.htm.

Prenh, A., Lin, S., Clarke, C., Packel, L., Lum, R., Lui, S., et al. (1999). Cancer incidence in Chinese, Japanese, and Filipinos in the US and Asia, 1988–1992. Union City, CA: Northern California Cancer Center.

Queensland Health. (2003). Chinese community health profile. Brisbane, Queensland: Queensland Government.

Reeves, T. J., & Bennett, C. E. (2004). We the people: Asians in the United States. Census 2000 special reports. Washington, D.C.: U.S. Census Bureau.

Santoro-Lopes, G., Felix de Pinho, A. M., Harrison, L. H., & Schechter, M. (2002). Reduced risk of tuberculosis among Brazilian patients with advanced human immunodeficiency virus infection treated with highly active antiretroviral therapy. Clinical Infectious Diseases, 34, 543–546.

Selwyn, P. A., Hartel, D., Lewis, V. A., Schoenbaum, E. E., Vermund, S. H., Klein, R. S., et al. (1989). A prospective study of the risk of tuberculosis among intravenous drug users with human immunodeficiency virus infection. New England Journal of Medicine, 320, 545–550.

Sepkowitz, K. (2001). Tuberculosis control in the 21st century. Emerging Infectious Diseases, 7(2), 259–262.

Spector, R. (1996). Health and illness in the Asian/Pacific Islander American community. In R. Spector (Ed.), Cultural diversity in health and illness (Fourth Ed.). Stamford, CT: Appleton & Lange.

Spencer, M. S., & Chen, J. (2004). Effect of discrimination on mental health service utilization among Chinese Americans. American Journal of Public Health, 94(5), 809–814.

Steinman, R. A., & Birshtein, B. K. (2007). Treatment and awareness of type 2 diabetes in Beijing, China, compared to New York. The Diabetes Educator, 33(2), 282–290.

Teng, S., & Squire, S. B. (2005). What lessons can be drawn from tuberculosis (TB) control in China in the 1990s? An analysis from a health system perspective. Health Policy, 72, 93–104.

The Feng Shui Institute. (n.d.). The world of yin yang. Retrieved February 29, 2008, from http://www.feng-shui-institute.org/yinyang.htm.

Thomas, D.-J. (2006). Mycobacterial diseases in HIV-positive patients. Journal of Pharmacy Practice, 19(1), 10–16.

Title VI of the Civil Rights Act of 1964: Prohibition against exclusion from participation in, denial of benefits of, and discrimination under federally assisted programs on ground of race, color, or national origin, Pub. L. No. 88-352, 78 Stat. 252 (1964).

Traditional Chinese Medicine and Acupuncture Health Information Organization. (2005). Pulmonary tuberculosis acupuncture point treatment. Retrieved February 29, 2008, from http://tcm.health-info.org/Acupunture/treatment/pulmonary-tuberculosis.htm.

U.S. Census Bureau. (2000). Profile of selected demographic and social characteristics: 2000. Washington, D.C.: U.S. Census Bureau.

U.S. Census Bureau. (2002). The Asian population: 2000. Census 2000 Brief. Retrieved February 29, 2008, from http://www.census.gov/prod/2002pubs/c2kbr01-16.pdf.

U.S. Department of Health and Human Services. (1998). Tobacco use among U.S. racial/ethnic minority groups—African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, and Hispanics: A report of the Surgeon General. Atlanta, GA: Centers for Disease Control and Prevention.

U.S. Department of Health and Human Services. (2000). Healthy People 2010. Retrieved February 29, 2008, from http://www.healthypeople.gov.

U.S. Department of State. (2007). Background note: China. Retrieved February 29, 2008, from http://www.state.gov/r/pa/ei/bgn/18902.htm.

U.S. Office of Minority Health. (2005). Asian American profile. Retrieved February 29, 2008, from http://www.omhrc.gov/templates/content.aspx?ID=3005.

U.S. Office of Minority Health. (2006). What is cultural competency? Washington, D.C.: U.S. Department of Health and Human Services.

Whalen, C., Horsburgh, C. R., Hom, D., Lahart, C., Simberkoff, M., & Ellner, J. (1995). Accelerated course of human immunodeficiency virus infection after tuberculosis. American Journal of Respiratory and Critical Care Medicine, 151, 129–135.

Whalen, C., Nsubuga, P., Okwera, A., Johnson, J. L., Hom, D. L., Michael, N. L., et al. (2000). Impact of pulmonary tuberculosis on survival of HIV-infected adults: A prospective epidemiologic study in Uganda. AIDS, 14, 1219–1228.

World Diabetes Foundation. (2007). National diabetes programme: China. Retrieved February 29, 2008, from http://www.worlddiabetesfoundation.org/composite-119.htm.

World Health Organization. (2004). Country profile: China. Geneva: World Health Organization.

World Health Organization. (2005a). China: Summary country profile for HIV/AIDS treatment scale-up. Geneva: World Health Organization.

World Health Organization. (2005b). WHO report 2005: Global tuberculosis control–surveillance, planning, financing. Geneva: World Health Organization.

World Health Organization. (2005c). World Health Organization TB epidemiological profile as of 31-May-2005. Geneva: World Health Organization.

World Health Organization. (2006a). Epidemiological fact sheets on HIV/AIDS and sexually transmitted infections: China 2006 update. Retrieved February 29, 2008, from http://www.who.int/globalatlas/predefinedReports/EFS2006/EFS_PDFs/EFS2006_CN.pdf.

World Health Organization. (2006b). The global plan to stop TB 2006–2015: Actions for life, towards a world free of tuberculosis. Retrieved December 10, 2007, from http://www.who.int/bulletin/volumes/85/5/06-038513/en/index.html.

World Health Organization. (2007a). Baccille Calmette Guerin vaccine: Reported estimates of BCG coverage. Retrieved February 29, 2008, from http://www.who.int/vaccines/globalsummary/immunization/timeseries/tscoveragebcg.htm.

World Health Organization. (2007b). Country profile: China. Retrieved February 29, 2008, from http://www.who.int/countries/chn/en.

Xu, L., Wang, Y., Collins, C. D., & Tang, S. (2007). Urban health insurance reform and coverage in China using data from National Health Services Surveys in 1998 and 2003. BMC Health Services Research, 7(37).

Yang, L., Parkin, D. M., Ferlay, J., Li, L., & Chen, Y. (2005). Estimates of cancer incidence in China for 2000 and projections for 2005. Cancer Epidemiology, Biomarkers & Prevention, 14(1), 243–250.

Yu, H. L., Kim, C., Lee, J., & Hong, N. (2001). An analysis of modern fashion designs as influenced by Asian ethnic dress. International Journal of Consumer Studies, 25(4), 309–321.

Zar, H. J., Cotton, M. F., Strauss, S., Karpakis, J., Hussey, G., Schaaf, H. S., et al. (2007). Effect of isoniazid prophylaxis on mortality and incidence of tuberculosis in children with HIV: Randomised controlled trial. BMJ, 334, 105–106.

Zhang, T., Tang, S., Jun, G., & Whitehead, M. (2007). Persistent problems of access to appropriate, affordable TB services in rural China: Experiences of different socioeconomic groups. BMC Public Health, 7(19), 1–12.

Zhao, F., Zhao, Y., & Liu, X. (2003). Tuberculosis control in China. Tuberculosis, 83, 15–20.

Zuber, P. L. F., McKenna, M. T., Binkin, N. J., Onorato, I. M., & Castro, K. G. (1997). Long-term risk of tuberculosis among foreign-born persons in the United States. JAMA, 278(4), 304–307.