

# **Cardiovascular Risk in the Cambodian Community**

**Formative Research from  
Lowell, Massachusetts**



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
National Institutes of Health  
National Heart, Lung, and Blood Institute



A collaborative report from the National Heart, Lung, and Blood Institute,  
the Asian & Pacific Islander American Health Forum,  
and Lowell Community Health Center

# Table of Contents

Acknowledgments.....	iii
I. Foreword.....	v
II. Executive Summary.....	1
III. Introduction.....	2
IV. Methodology.....	3
A. Community-Based Partner.....	3
B. Data Collection.....	3
C. Instruments.....	3
D. Interviewer Training.....	3
E. Translation of Research Instruments.....	4
V. Demographics.....	4
VI. Results.....	6
A. What Does the Heart Symbolize?.....	6
B. Concept of Health.....	6
C. Prevention and Causes of Poor Health or Illness.....	6
D. Major Health Concerns.....	7
E. Cambodian Lifestyle in the United States and in Cambodia.....	7
i. Nutrition.....	7
ii. Physical Activity.....	8
iii. Tobacco.....	9
iv. Alcohol.....	11
v. Stress.....	11
vi. Mental Health.....	12
F. Personal Health.....	13
i. Perceptions of Obesity.....	13
ii. Factors Associated With Cardiovascular Disease.....	13
iii. Perceptions of High Blood Pressure.....	13
iv. Perceptions of High Blood Cholesterol.....	14
v. Perceptions of Heart Disease.....	14
vi. Changes in Lifestyle Because of Heart Disease.....	14
vii. Alternative Health Practices.....	14
G. Health Education and Promotion.....	15
i. Health Information Sources.....	15
ii. Engaging Community Residents in Heart Health.....	16
iii. Barriers to Accessing Medical Help or Services.....	16
VII. Discussion.....	16

VIII.	Limitations of the Study.....	19
IX.	Conclusion .....	19
X.	Appendices.....	20
	A. Appendix A: Informed Consent Forms.....	21
	i. Focus Group.....	22
	ii. Key Informant Interview.....	23
	iii. Indepth Interview .....	24
	B. Appendix B: Training Materials .....	25
	i. Key Informant Interview Training Protocol .....	26
	ii. Key Informant Interview Training Handout.....	27
	iii. Indepth Interview Training Protocol.....	30
	iv. Indepth Interview Training Handout .....	31
	C. Appendix C: Interview Guides .....	36
	i. Focus Group Guide .....	37
	ii. Key Informant Interview Guide.....	43
	iii. Indepth Interview Guide .....	49

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## I. Foreword

The *Healthy People 2010* report outlines the current status of the Nation's health and the health objectives to be reached by the end of the decade. The two main goals of *Healthy People 2010* are to increase the quality and years of healthy life and to end disparities in the burden of disease. The National Heart, Lung, and Blood Institute (NHLBI) is committed to meeting the goals set forth in *Healthy People 2010*, including ending the burden of disease for all racial and ethnic groups. The Institute has developed education programs and initiatives to address high blood pressure, high blood cholesterol, early warning signs of heart attack, asthma, obesity, and sleep disorders.

According to the 2000 Census, more than 1.8 million Southeast Asians are living in the United States, and more than 9 percent (171,937) of those are Cambodians. From 1975 to 2000, Cambodians, with Vietnamese and Laotians, made up the largest group of refugees to immigrate to the United States.<sup>1</sup> Beginning in the mid- to late-1970s, thousands of Cambodians fled Cambodia to escape the atrocities of the Khmer Rouge.<sup>2</sup> The largest numbers of Cambodians live in Long Beach, California, and in Lowell, Massachusetts. Sizable communities also exist in Pennsylvania and Washington State.

We now have the opportunity to build partnerships within Cambodian communities and to focus local community action on creating heart disease prevention activities. Through the development and implementation of focused, culturally sensitive, and language-appropriate heart health strategies, we can help to prevent the development of heart disease risk factors in Cambodian communities and help to address the Healthy People 2010 goal of eliminating racial and ethnic disparities in heart disease risk. Together, we can make a difference!



Claude Lenfant, M.D.  
*Director*  
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<sup>1</sup> U.S. Department of Health and Human Services. Administration for Children and Families. *Office of Refugee Resettlement Annual Report to Congress, 2000*.

<sup>2</sup> Wetzel L, Huong J. EthnoMed: Cambodian Cultural Profile, 1995.

## II. Executive Summary

Asian Americans and Pacific Islanders (AAPIs) are the fastest growing racial/ethnic group in the United States. They have varying socioeconomic characteristics, levels of acculturation, immigration history, and health profiles. The AAPI population is extremely diverse; its members have ancestral ties to approximately 50 Asian and Pacific Islander nations. Heart disease is the leading cause of death among these groups, but its impact on each group varies. Although few studies exist on the cardiovascular health of Cambodians in the United States, several studies suggest that they are at high risk for cardiovascular disease (CVD) based on their lifestyle behaviors.<sup>3</sup>

The National Heart, Lung, and Blood Institute (NHLBI) worked in partnership with the Asian & Pacific Islander American Health Forum (Health Forum) to conduct an assessment of the cardiovascular health status of AAPIs. The Cambodian community is the third of four AAPI populations studied. The other populations studied are Filipinos, Vietnamese, and Native Hawaiians.

This report focuses on the Cambodian population. Three formative research methods were used to study the Cambodian communities: (1) focus groups with staff and volunteers from a local community service agency, (2) key informant interviews with community leaders, and (3) indepth interviews with community residents conducted by trained bilingual (English and Khmer) facilitators. This report provides insights into the Cambodian community, its perceptions and knowledge of heart disease, and motivations to making healthy lifestyle changes.

Results from this study indicate that Cambodians in the United States are at high risk for developing CVD. Stress from acculturation and financial problems, as well as mental health problems are primary issues that plague this refugee population. Nevertheless, the need for healthy eating habits, regular checkups with a health care professional, physical activity, smoking cessation, and other heart healthy practices are important concerns identified by the community. Health education interventions for Cambodians should focus on primary prevention of heart disease risk factors and behavior modifications.

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<sup>3</sup> Ma GX, Tan Y, Feeley RM, et al. Perceived risks of certain types of cancer and heart disease among Asian American smokers and non-smokers. *Journal of Community Health* 2002; 27(4): 233 – 46.



### III. Introduction

Since 1972, the NHLBI has translated and disseminated information to the public to promote public health and prevent and control heart, lung, and blood diseases and sleep disorders. To date, the NHLBI has supported national cardiovascular health initiatives for the African American, American Indian/Native American, and Latino populations. This is its first national effort in support of a National Asian American and Pacific Islander (AAPI) Cardiovascular Initiative. NHLBI's main objective is to collaborate with AAPI community-based organizers, key informants, and community members to conduct cardiovascular health needs assessments in specific ethnic communities.

In August 2000, NHLBI funded the Asian & Pacific Islander Health Forum (Health Forum) to conceptualize and implement a formative research project to gain a greater understanding of the attitudes and knowledge of health practices related to CVD among selected AAPI communities. This report highlights the main findings from the Cambodian community.

The 2000 Census reports that the second largest concentration of Cambodians (19,696) live in Massachusetts, and one-half of the Cambodian residents in Massachusetts live in the city of Lowell.<sup>4</sup>

It is believed that the true size of the Cambodian community may be much larger, because of underreporting in the immigrant and refugee population.

The information collected under this project was approved as part of the Office of Management and Budget (OMB) blanket clearance project. Blanket clearance number 0937 was approved and administered by the National Institutes of Health (NIH) as a means to expedite the collection of consumer information to enhance program planning and development activities and to improve delivery to and utilization of health information by NIH customers.

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<sup>4</sup> U.S. Census Bureau. The U.S. Census 2000.

## **IV. Methodology**

### **A. Community-Based Partner**

For the Cambodian needs assessment study, the Health Forum partnered with Lowell Community Health Center (LCHC). LCHC provides culturally appropriate health care services to immigrants, particularly Southeast Asians, in the city of Lowell.

### **B. Data Collection**

The data were collected through three methods:

1. Focus group  
Focus group participants included 1 LCHC staff member and 10 community residents. The focus group, facilitated by the primary investigator from the Health Forum, was conducted in English and Khmer; most participants spoke in Khmer. The focus group was tape recorded, transcribed, and translated.
2. Key informant interviews  
Four key leaders from the Cambodian community were interviewed. Interviewees were required to have held a leadership position in the Cambodian community of Lowell, Massachusetts.
3. Community indepth interviews  
Interviews were conducted with 26 Cambodian community residents. Interviewees, ages 18–70, had low incomes and literacy levels; 10 interviewees were over age 50. Of the 26 interviewees, 22 were conducted in Khmer; 4 were conducted in English.

### **C. Instruments**

Three sets of questionnaires were developed: focus group questions, key leader questions, and community resident questions. Focus group and key leader questions were designed to capture information about individual experiences and observations on community health attitudes and behaviors. The indepth interview questions were designed to capture information about individual health practices. Unless otherwise specified, the quantitative data in this report are based on the findings from 26 community residents.

### **D. Interviewer Training**

The training materials used to conduct focus groups in the Cambodian community were revised slightly by the Health Forum to make them culturally appropriate for this study. One interviewer at LCHC was trained to conduct the key informant interviews, and four other interviewers were trained to conduct the indepth interviews.

## E. Translation of Research Instruments

Step 1: The instruments used to conduct the Filipino and Vietnamese cardiovascular risk assessments were reviewed to ensure cultural appropriateness for the Cambodian cardiovascular risk assessment.

Step 2: LCHC staff modified the instruments to make them culturally and linguistically appropriate, reduce repetition, and increase clarity in the interview process. In addition, some questions pertaining to the refugee experience were added. All changes were approved by NHLBI.

Step 3: Two independent translators provided a written translation of the revised documents. LCHC staff approved the translations before adopting them for use.

## V. Demographics

The participants in this study varied greatly by age, gender, occupation, and socioeconomic status. The following tables and figures provide a demographic description of the different target groups participating in the Cambodian project in Lowell. Of the 26 community residents interviewed, 14 were male, and 12 were female. The mean age was 48 years old (SD=13.51 years).

**Table 1. Number of participants by needs assessment methodology, sex, and age**

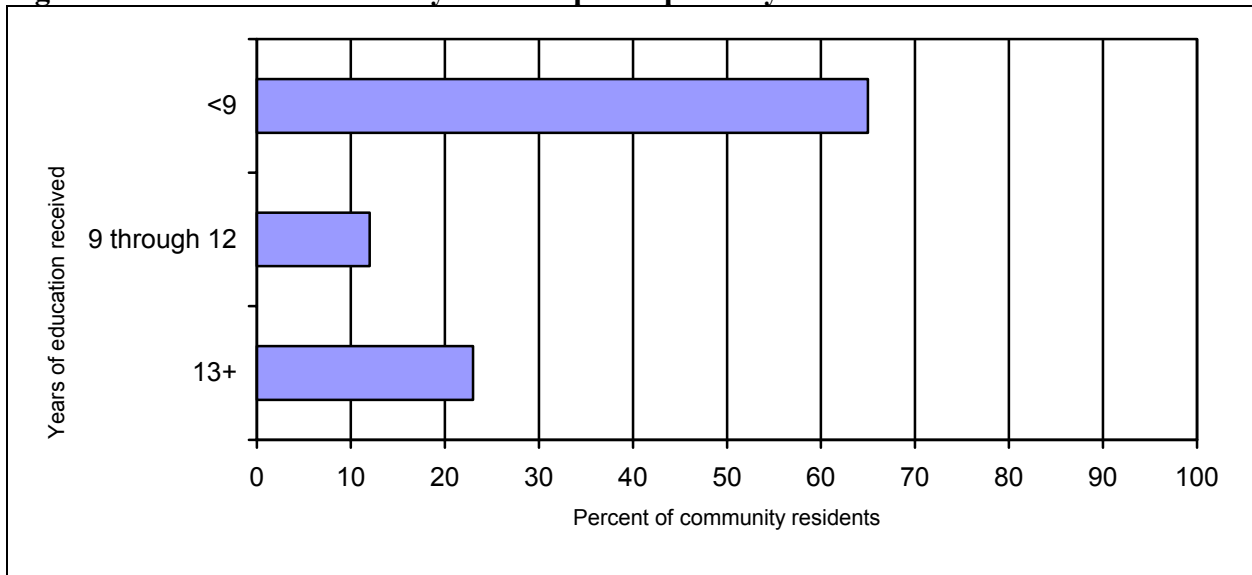
Group	Male	Female	Age range
Focus group	7	4	24–70 years old
Key leaders interview	2	2	38–45 years old
Community residents interview	14	12	25–68 years old
Total	23	18	24–70 years old

**Table 2. Number and percent of community resident participants by age and sex**

Age: Grouped by sample distribution	Male	Female	Total (%)
25–29 years old	2	1	3 (11.5%)
30–45 years old	6	4	10 (38.5%)
46–60 years old	2	4	6 (23.1%)
61+ years old	4	3	7 (26.9%)
Total	14	12	26 (100%)

In general, the community residents sampled had low levels of educational attainment. Of the 26 community residents, 23 percent had received 13 or more years of education, and 12 percent had received 9–12 years of education. (See figure 1.) Among all community resident participants, 65 percent had received less than 9 years of education.

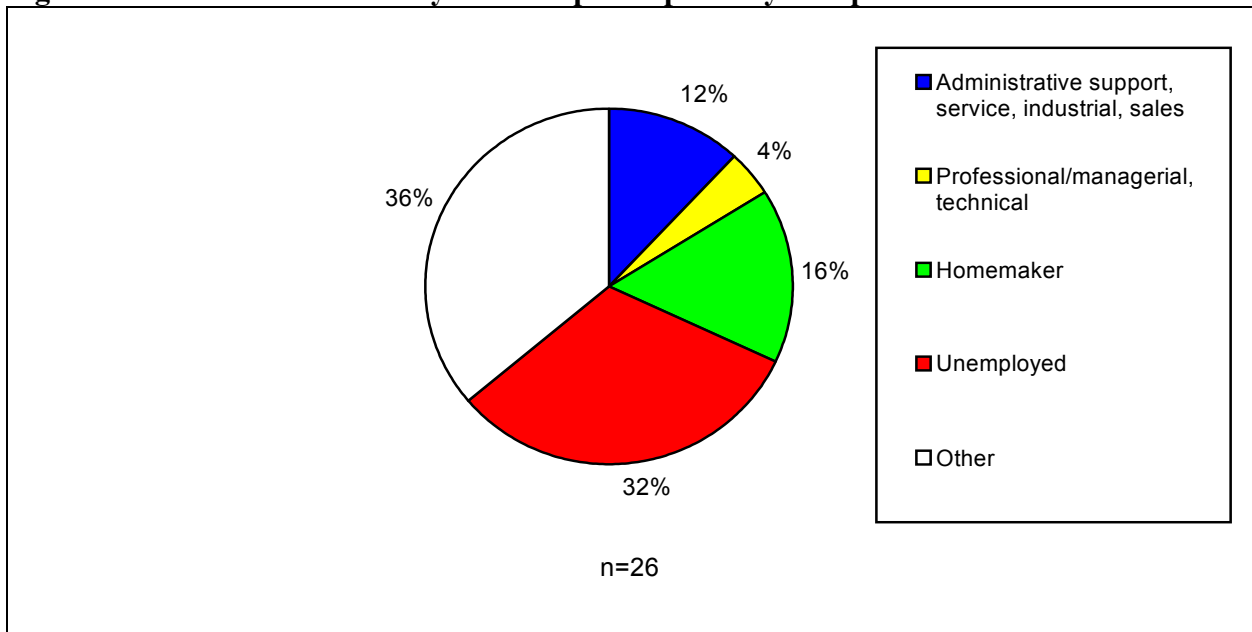
**Figure 1. Percent of community resident participants by educational attainment**



Of the 26 community residents, 12 percent were employed in administrative support, service, industrial, or sales positions, and 4 percent were employed in professional/managerial or technical positions. (See figure 2.) Nearly half (48 percent) did not receive a steady income because they were either unemployed or homemakers. (See figure 2.)

Not shown in the figure is household income and size. The range of annual household income was \$40,001 to \$60,000. The average household size was 4.7 people. Also not shown in the figure is the fact that the community residents worked an average of 35.1 hours/week (SD=16.11); nearly one-half worked more than 40 hours/week.

**Figure 2. Percent of community resident participants by occupational status**



All community residents interviewed reported that they were born in Cambodia and that Khmer was their native language. Two were naturalized U.S. citizens. The residents' length of stay in the United States ranged from 1–26 years.

## **VI. Results**

### **A. What Does the Heart Symbolize?**

All the participants said that the heart symbolizes love, health, and caring for others. To the key leaders, the heart also symbolizes kindness and the willingness to help and share with others. To the community residents, the heart also symbolizes trust, a whole and fulfilling life, and sympathy.

### **B. Concept of Health**

The focus group participants, key leaders, and community residents all said that good health meant not being sick and not having to see a doctor. Community residents said that people who are healthy live long and happy lives. Community residents defined healthy people as individuals who are physically, mentally, and spiritually balanced.

Key leaders noted that in addition to being happy and having a good strong family, religion plays a significant role in Cambodian health. Because religion is so important to their lives, community residents say that temples are among the most popular places for community gatherings. Temple activities provide congregants with a sense of belonging and serve as a means for expressing and expanding the Cambodian culture. Cultural profiles describe most Cambodians as Buddhist, but a small number are Christian.

### **C. Prevention and Causes of Poor Health or Illness**

Cambodians believe in preventing disease rather than treating it; therefore, focus group participants said medicinal herbs and teas are commonly used to protect one's health. Community residents noted lifestyle behaviors as reasons for poor health, e.g. poor nutrition, lack of exercise, drinking alcohol, stress, fatigue, smoking, substance abuse, and lack of health education. However, none of the interviewees saw a link between lifestyle behaviors and personal risk for heart disease.

Key leaders and focus group participants added that another cause of poor health could be spiritual. They believe that having bad karma or committing a sin will bring one illness. Often, community residents wear jewelry with images of Buddha or they hang cultural and/or religious placards on their doors to protect themselves from illness.

## D. Major Health Concerns

Table 3 lists the major health concerns according to the key leaders in the community (1 is ranked as the most common concern).

**Table 3. Major health concerns**

1	2	3	4
<ul style="list-style-type: none"> <li>▪ CVD (heart disease, high blood pressure, and high blood cholesterol)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Diabetes</li> <li>▪ Hepatitis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Alcohol-related problems</li> <li>▪ Liver cancer</li> <li>▪ Mental illness</li> </ul>	<ul style="list-style-type: none"> <li>▪ Asthma</li> <li>▪ HIV/AIDS</li> </ul>

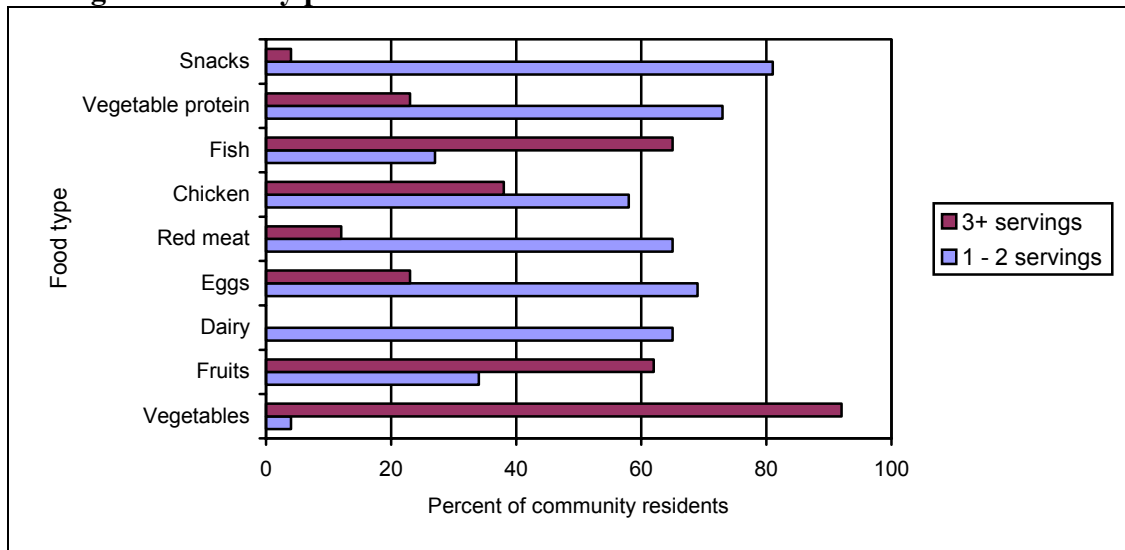
Key leaders felt that the health and wellness of the community are being threatened by high unemployment rates, low job security, poverty, lack of housing, lack of qualified bilingual and bicultural health care providers, and lack of Khmer language health education.

## E. Cambodian Lifestyle in the United States and Cambodia

### i. Nutrition

Each community resident was asked about the type of food they had eaten 2 days before the interview. Generally, the community residents ate healthy food; more than 60 percent had consumed at least 3 or more servings of fruits and vegetables during those 2 days (figure 3). Nearly all the residents ate fresh fruits and vegetables as well as lean meats and lowfat dairy products (data not shown). Also, the residents mostly ate home-cooked meals, and 64 percent of them cooked traditional Cambodian dishes. They rarely ate at fast food restaurants—only when asked by their children. Although most community residents had healthy eating habits, 27 percent did not understand the role of nutrition in heart disease prevention and said that eating a lowfat diet is not important.

**Figure 3. Percent of community residents by type of food reported and number of servings over a 2-day period**



Key leaders stated that a typical Cambodian diet consists of rice, vegetables, fish, and soup. For special celebrations, rice, soup, and fried dishes are more common. Community residents said that traditional Cambodian dishes are typically flavored with fish sauce, monosodium glutamate (MSG), pepper, and lemon grass. Red meat, chicken, fish, and vegetables are usually prepared as part of the main entrees, while fruits are common snacks. The following tables list the types of common ingredients, vegetables, and fruits used in traditional Cambodian dishes.

**Table 4. Ingredients in traditional Cambodian dishes**

Curry paste	Lemon grass	Onion	Sugar
Fish sauce	Lima beans	Pepper	Tamarind
Galanga	Mint	Salt	Vegetable oil
Garlic	MSG	Soy sauce	

**Table 5. Common vegetables**

Beets	Carrots	Green beans	Potato
Bitter melon	Cauliflower	Green peppers	Tomato
Broccoli	Cucumber	Lettuce	Turnip
Cabbage	Eggplant	Peas	Water grass

**Table 6. Common fruits**

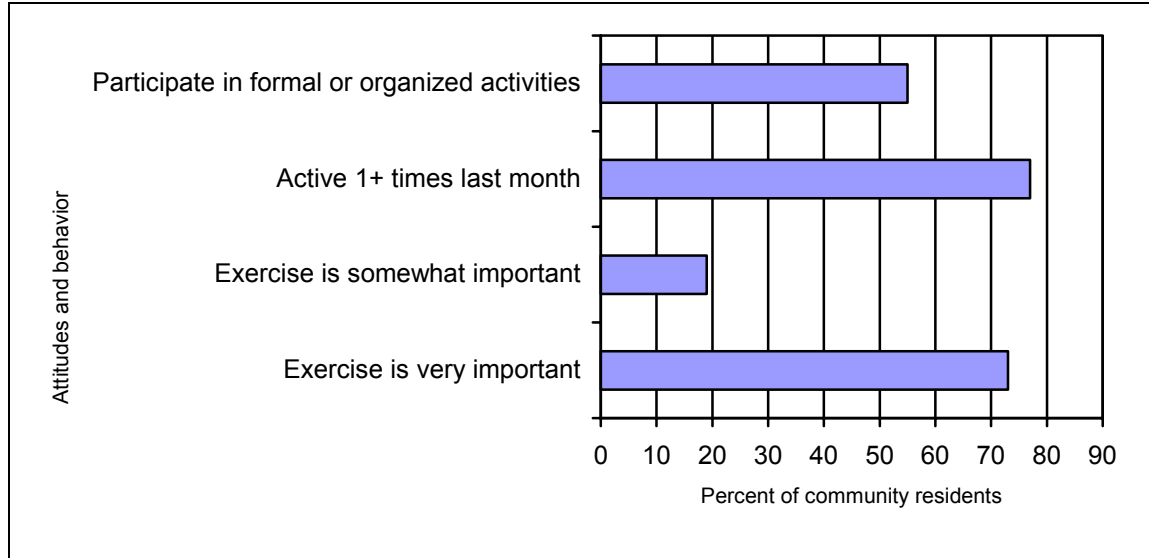
Apple	Grapes	Mango	Plum
Banana	Jackfruit	Nectarine	Strawberries
Durian	Kiwi	Orange	Watermelon
Grapefruit	Lychees	Pear	

The community residents believed that the diets of Cambodians change after migrating to the United States. Cambodians tend to eat more meat and less fish, fruits, and vegetables in the United States. Key leaders said that people living in Cambodian refugee camps were unable to make healthy food choices and were often given salty canned foods. Although focus group participants and community residents think that there are too many preservatives in food and genetically modified foods, they have more opportunities to choose healthy foods because of the variety and affordability of food in the United States.

**ii. Physical Activity**

In general, the community residents thought that physical activity was important. Seventy-seven percent of the residents were active at least once last month. More than one-half were regularly involved in formal or organized activities, but not necessarily at a rigorous level (figure 4).

**Figure 4. Percent of community residents engaging in physical activity by attitudes and behavior**



The community residents were asked about the physical activities in which they were most involved. Table 7 lists those activities.

**Table 7. Physical and recreational activities in which residents are most involved**

Dancing	Running	Walking
Gardening	Swimming	Weight lifting
Housework	Volleyball	

Key leaders observed that stress, lack of time, lack of motivation, and lack of support were the top reasons people do not exercise. Because of these reasons, key leaders think that asking people to exercise at least 30 minutes a day several times a week would be too demanding. However, community residents said that people can become motivated if they understood the importance of physical activity in disease prevention and overall health.

The community residents said temple-sponsored activities and exercise programs are two formal physical activities in which people are most involved. Picnics and sporting events at temples bring family and friends together. Events held at faith-based organizations are particularly important for older community residents, since the elderly are frequently inactive and prefer to spend time praying and socializing at temple rather than being physically active in their neighborhood.

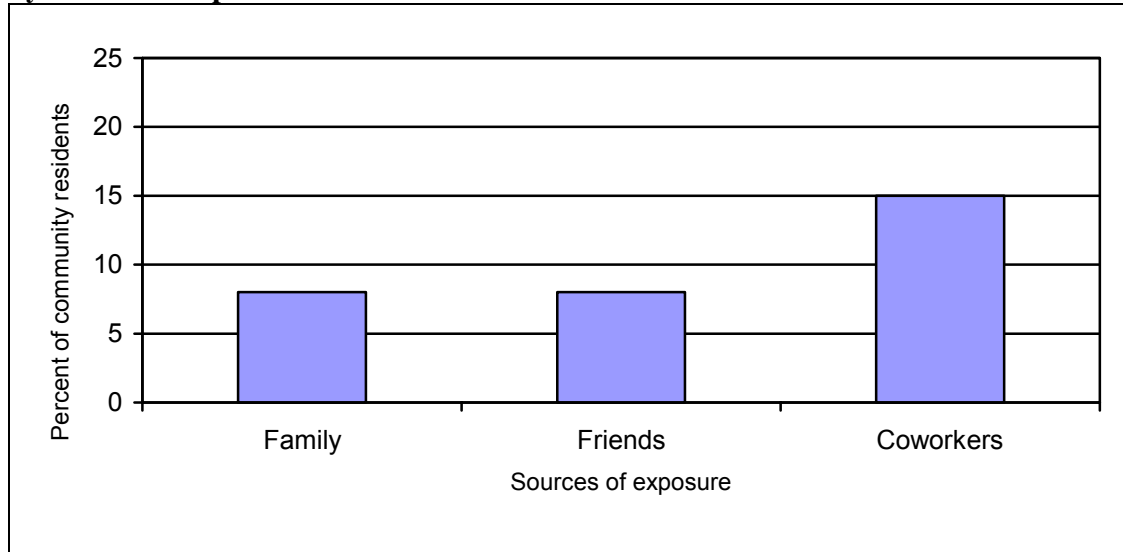
### iii. Tobacco

Among the 26 community residents, nearly 30 percent were smokers or had smoked in the past. Of the 6 smokers, 1 smoked 20 cigarettes a day, 3 smoked once a day, 1 smoked once a week, and 1 smoked once a month. The residents who were exposed to



environmental tobacco smoke were exposed through family members (8 percent), friends (8 percent), and coworkers (15 percent). (See figure 5.)

**Figure 5. Percent of community residents exposed to environmental tobacco smoke by source of exposure**



Some of the smokers tried to quit smoking, while others had no intention of quitting. The community residents correctly identified some of the ways smoking can harm the body (e.g., causes lung diseases, makes one weak, and can kill), but the key leaders explained that quitting the smoking habit is hard. They said that the addiction to tobacco is too great and existing tobacco cessation programs are difficult to follow or do not meet their needs.

Focus group participants and key leaders agreed that smoking is a common practice in Cambodian culture. It is more socially acceptable for men than women to smoke. Focus group participants and community residents say that family, friends, and social norms (i.e., smokers live a “trendy” lifestyle) are the biggest influences leading people to smoke in the United States. Focus group participants believed that peer pressure and media campaigns encouraging smoking play a large role in influencing teens to start smoking. Table 8 lists the most common socialization factors the community residents named as influences leading Cambodians to smoke.

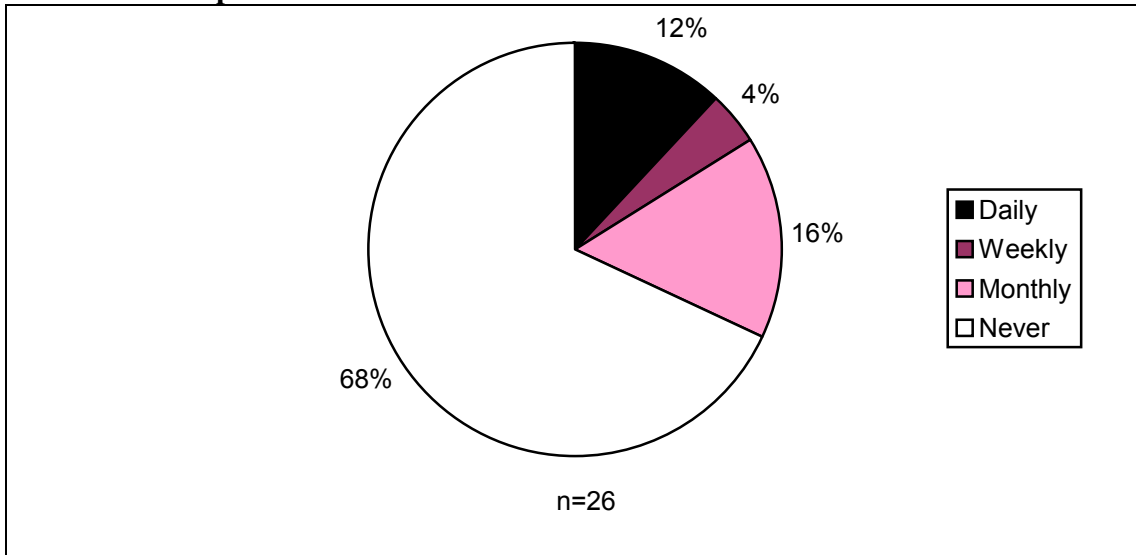
**Table 8. Factors that influence smoking**

Social Pressure	Environment	Individual Factors	Media
<ul style="list-style-type: none"> <li>▪ Peer pressure</li> <li>▪ Family</li> <li>▪ Coworkers</li> <li>▪ Friends</li> </ul>	<ul style="list-style-type: none"> <li>▪ Social gatherings</li> <li>▪ Smokers in the home</li> <li>▪ Cultural and social norm</li> </ul>	<ul style="list-style-type: none"> <li>▪ Entertainment</li> <li>▪ Habit</li> <li>▪ Depression</li> <li>▪ Stress</li> <li>▪ Building self-confidence</li> </ul>	<ul style="list-style-type: none"> <li>▪ Books</li> <li>▪ Magazines</li> <li>▪ Television and radio</li> <li>▪ Free promotional items</li> </ul>

**iv. Alcohol**

Of the 26 community residents, 7 drink alcohol regularly. Figure 6 displays the frequency of community residents’ drinking: 12 percent reported drinking daily, 4 percent drink weekly, 16 percent drink monthly, and 68 percent never drink (figure 6).

**Figure 6. Percent of community residents who drink alcohol by frequency of alcohol consumption**



According to focus group participants, alcohol use is also a part of the Cambodian culture and is more common among youth. They explained that drinking is a leisure and social activity known to relieve stress, aid in sleep, and even boost energy, depending on the situation.

**v. Stress**

The focus group participants, key leaders, and community residents all said that stress significantly affects their health status. Table 9 lists the factors that increase stress according to all three categories of interviewees.

**Table 9. Common causes of stress**

Financial worries	Relationships
Adaptation and acculturation	Health
Generation gap within the family	Communicating in English
Work	Caring for someone who is not well
Housing	Distance from the homeland
School	

Although many causes of stress were named, three were most often named—financial worries, adaptation and acculturation, and generation gaps. These are discussed below.

Financial worries are a major source of stress for Cambodians. Focus group participants said that people often work several jobs to make enough money to support the family. They add that Cambodians typically have below-average incomes, thus decreasing their opportunities for higher education and higher paying jobs.

Adaptation and acculturation also cause great stress for the Cambodian community. Immigrating to the United States often means separating family members from their social support networks. Without community support and extended family members nearby, immigrants have a more difficult time adjusting to their new environment.

A generation gap between grandparents, parents, and children is another cause for stress. The focus group participants said that Cambodian youth who grow up in the United States live in a culture that their parents and grandparents do not fully understand. Parents feel isolated from their children, resulting in tension within the family.

Table 10 lists the ways community residents relieve stress.

**Table 10. Common methods of stress relief**

Exercising (includes walking and group sports)	Window shopping
Talking with friends	Having a picnic
Driving around town	Meditating
Watching movies	

**vi. Mental Health**

Focus group participants said that mental health plays an important role in the overall health of Cambodians. In fact, mental health problems are one of the most prevalent health problems among Cambodian immigrants. Several studies have shown that post-traumatic stress disorder, depression, and anxiety all appear in this population, sometimes crippling the victims.<sup>5</sup>

Mental health disorders stemming from the refugee experience have resulted in Cambodians making the least progress in adjusting to life in the United States, compared to other Southeast Asians, further exacerbating stress levels.<sup>6</sup>

The focus group participants explained that when people in the community feel stressed, they turn to monks for spiritual healing. Cambodians prefer monks, because Cambodia has no mental health professionals (e.g., psychiatrists and psychologists).

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<sup>5,6</sup> Palinkas LA, Pickwell SM. Acculturation as a risk factor for chronic disease among Cambodian refugees in the United States. *Social Science and Medicine* 1995; 40(12): 1643–53.

## F. Personal Health

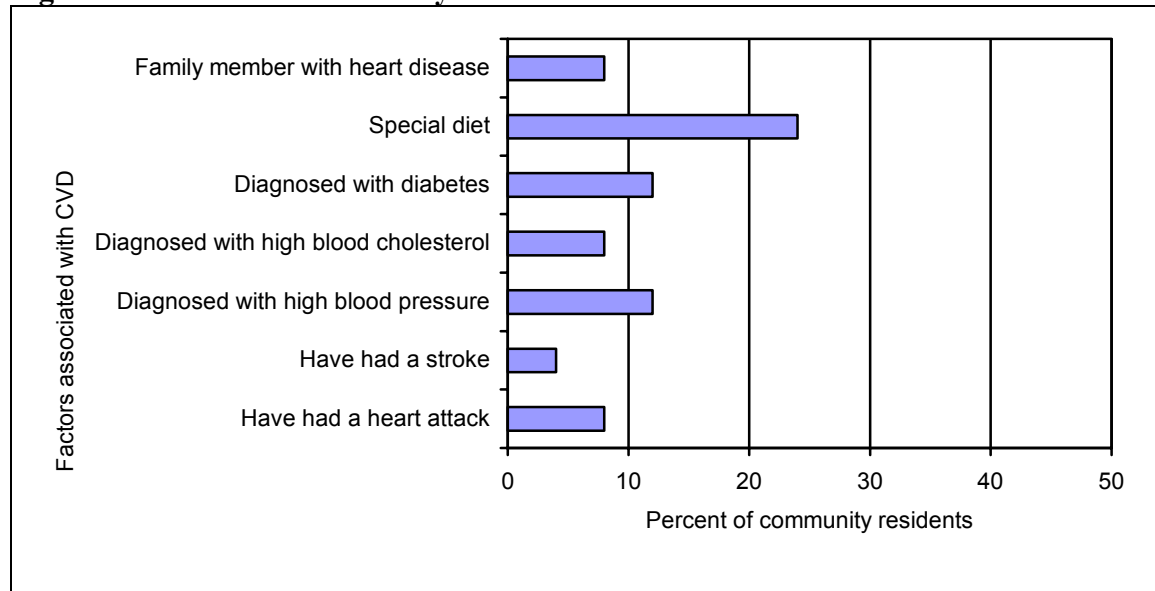
### i. Perceptions of Obesity

All the interviewees said that in the Cambodian culture being overweight or obese is a positive reflection of one's health, wealth, and happiness. They added that many Cambodians find overweight and obese people attractive because it is a "rich disease," i.e., people who have a lot of money can afford to buy and eat lots of food. The interviewees correctly identified a poor diet, overeating, and living a sedentary lifestyle as causes of overweight and obesity. However, targeted programs are needed to educate the community about the health consequences of overweight and obesity as well as how to maintain a healthy weight.

### ii. Factors Associated With Cardiovascular Disease

When the community residents were surveyed, 8 percent had family members with heart disease. When asked about their own heart disease risk, 24 percent were on a special physician-ordered diet; 12 percent were diagnosed with diabetes; 8 percent were diagnosed with high blood cholesterol; 12 percent were diagnosed with high blood pressure; 4 percent had had a stroke; and 8 percent had had a heart attack. (See figure 7.)

**Figure 7. Percent of community residents with various CVD-related factors**



### iii. Perceptions of High Blood Pressure

All the interviewees said the community lacks knowledge and understanding of high blood pressure. Although key leaders and community residents identified a high-sodium diet as one cause of high blood pressure, focus group participants said the community has misconceptions about what high blood pressure is and how to treat it. Early intervention

and education for the prevention of high blood pressure is important for this population, because high blood pressure has been documented in Cambodian school-aged children.<sup>7</sup>

#### **iv. Perceptions of High Blood Cholesterol**

All the interviewees said that knowledge and understanding about high blood cholesterol is also lacking. The interviewees recognized the factors associated with increasing high blood cholesterol levels, such as eating foods high in fat and cholesterol and a lack of exercise. However, they believed those behaviors to be strongly linked to diabetes rather than heart disease.

#### **v. Perceptions of Heart Disease**

Although the interviewees correctly identified lack of physical activity, high blood cholesterol, poor diet, smoking, and alcohol abuse as risk factors for heart disease, more education about heart disease is needed. For instance, high blood pressure and overweight were not mentioned as other risk factors for heart disease. Community residents said that most Cambodians with heart disease do not know that they have it.

Information about heart disease is shared from one person to another, usually family members or friends, by word of mouth and is based on personal experiences. The key leaders said that many people are afraid of sudden death from a heart attack or stroke.

#### **vi. Changes in Lifestyle Because of Heart Disease**

The key leaders stated that when people are diagnosed with heart disease, they are inclined to visit their physicians more regularly. Although people are advised by their physicians to eat a proper diet, get enough sleep, and be physically active every day, according to the key leaders, residents need skills and social support to comply with their physicians' advice. Key leaders believe that people have a difficult time changing their health behaviors, even after being diagnosed with heart disease, because few skill-building programs and support groups exist to encourage healthy lifestyle changes.

#### **vii. Alternative Health Practices**

The interviewees said that people only seek medical care when they are sick. The focus group participants and key leaders said that traditional Eastern medicine is the first line of defense against disease. Community residents see Western medicine as more effective, but Eastern medicine is preferred because it is more accessible. Cambodians traditionally manage illness with self-care and self-medication. Traditional self-care includes home remedies, over-the-counter medication, herbal medicine, coining, cupping, prayers with

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<sup>7</sup> Munger RG, Gomez-Marín O, Prineas RJ, et al. Elevated blood pressure among Southeast Asian refugee children in Minnesota. *American Journal of Epidemiology* 1991; 133(12): 1257–65.

monks, and consultations with palm readers. Because Western medicine is costly, Cambodian immigrants generally consult Western physicians only when their own remedies do not work.

Community residents who have health insurance (approximately 65 percent) prefer Western medicine and even feel more comfortable with a non-Cambodian health care provider. Focus group participants added that the younger generation of Cambodians has greater trust in Western medicine. These findings indicate that new immigrants are more likely to choose self-care and traditional medicine, whereas more acculturated Cambodians are more likely to choose Western medicine.

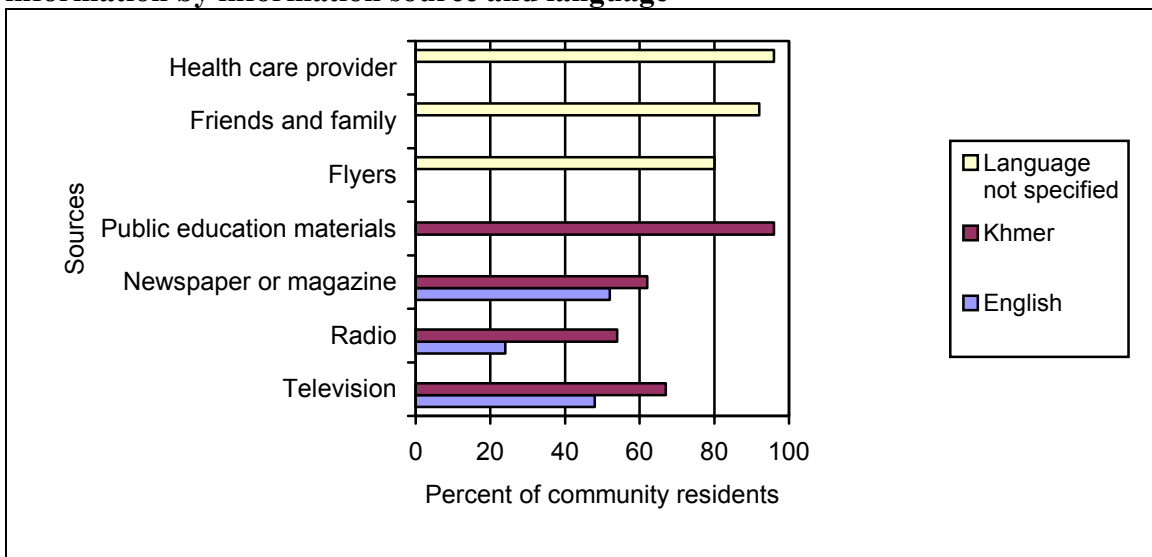
## G. Health Education and Promotion

### i. Health Information Sources

Key leaders said that, although many people get health information through family and friends, media can play an important role in health education to reach a larger portion of the population at one time. Community outreach materials (e.g., flyers), radio, newspaper, and television are the media most utilized for distribution of information.

Figure 8 shows the percentage of residents who seek health information, the sources, and the preferred language. Most residents prefer health information in Khmer rather than English. In fact, 96 percent of the residents felt that it was important to have public health education and prevention materials in their native language.

**Figure 8. Percentage of community residents who report sources of health information by information source and language**



## ii. Engaging Community Residents in Heart Health

The key leaders and community residents said that community health centers, mutual assistance associations, and temples are the sites most frequently attended for health care services.

## iii. Barriers to Accessing Medical Help or Services

All of the interviewees said the three biggest barriers to accessing medical help or services are: (1) cultural and linguistic barriers between patients and health care providers, (2) transportation issues, and (3) high cost of health care. These barriers are particularly troublesome for new immigrants.

## VII. Discussion

Findings from this cardiovascular health needs assessment will aid the development of future heart health programs in the Cambodian community. This section discusses specific ideas for prevention and intervention programs recommended by focus group participants, key leaders, and community residents.

- *Provide programs that help build trust between patients and providers*

Gaining the trust of Cambodians is the first step to providing health care to this population. Disease prevention, from a Western viewpoint, is a new concept to many Cambodians. Results from a heart health education intervention pretest, conducted in Ohio, found that only 10.7 percent of 224 Cambodian immigrants surveyed were aware of the ways to prevent heart disease.<sup>8</sup> Moreover, Cambodians, particularly new immigrants, cannot communicate effectively in English. Community residents recommended that culturally competent and/or bilingual providers or health educators have increased personal contact with the community they serve through home visits. The residents believed that, in this intimate setting, providers and educators can effectively distribute health education materials and answer questions about the American health care system. Community residents also recommended open houses at local hospitals and clinics so that the public can become familiar with Western medical facilities and practices in a friendly manner.

- *Teach behavior change for the prevention of CVD*

The participants in this study understood that poor health is a result of poor health behaviors. They also understood that diseases should be prevented. However, their knowledge about prevention was limited to Eastern medicine, in which medicinal herbs and teas as well as religious placards are popular methods of prevention. Programs teaching behavior change for prevention are necessary to help reduce this population's risk for CVD. While some participants

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<sup>8</sup> Chen, Jr. MS, Anderson J, Moeschberger M, et al. An evaluation of heart health education for Southeast Asians. *American Journal of Preventive Medicine* 1994; 10(4): 205–8.

practiced healthy behaviors and even knew about risk factors, they were unable to identify the causal relationship between their own health behaviors and the prevention of heart disease. This claim is supported by a study that showed that 94 percent of Southeast Asians in Ohio had no knowledge of CVD, and 85 percent had no knowledge of prevention.<sup>9</sup>

- *Improve access to health information*

The interviewees stressed the need for improved access to health information. Key leaders believed that the most effective way to educate Cambodians about heart health is through free community workshops that are culturally appropriate and offer personal testimonies and hands-on activities. Community residents said that workshops could be enhanced with tips on stress management. They also said that health fairs are popular in the Cambodian community.

- *Improve the quality of health information*

Key leaders said that health messages that are essential address the causes, prevention, and treatment of high blood pressure, high blood cholesterol, obesity; tips on how to stop smoking and drinking too much alcohol are also needed. Key leaders said there are significant numbers of both elders and youth in the Cambodian community. Khmer is the main language used in the community, especially among the elderly; however, English is widely spoken among the younger generation. Therefore, health education information must be available in Khmer and English to reach a wider audience by using few words, simple vocabulary, and colorful illustrations. A recent mental health needs assessment of refugees by the Massachusetts Department of Mental Health found that literacy and English proficiency levels were low among Cambodians living in Massachusetts—only 5.3 percent of the people surveyed could communicate in English.<sup>10</sup>

Key leaders said that health information in an audio and/or video format is preferred. Written materials about preventive health are often discarded, as individuals may not be able to read them or do not believe the information applies to them. Furthermore, Cambodians in the United States are predominantly illiterate or semiliterate in their own language—many came from rural areas where schools and education were inaccessible.<sup>11</sup>

- *Conduct prevention and intervention programs at faith-based organizations*

The Cambodian culture and religion play a significant role in the way Cambodians live. Temples and other faith-based organizations help new immigrants, who are seeking support and guidance, to build relationships within their chosen community. Other residents go to temple to pray and meet friends. All Cambodians celebrate Cambodian holidays at temples, such as the Khmer New Year and the Water Festival. Because temples are common and comfortable gathering places for the community residents, they are suitable venues for heart health intervention programs.

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<sup>9</sup> Chen, Jr. MS, Kuun P, Guthrie R, et al. Promoting heart health for Southeast Asians: A database for planning interventions. *Public Health Reports* 1991; 106(3): 304–9.

<sup>10</sup> Massachusetts Department of Public Health, Office of Refugee and Immigrant Health. *Refugees and Immigrants in Massachusetts: An Overview of Selected Communities*, 1999.

<sup>11</sup> Wetzel L, Huong J. EthnoMed: Cambodian Cultural Profile, 1995.



- *Teach coping strategies*

Stress is a major issue for any refugee community. Aside from its impact on one's mental health, stress may increase the presence of risk factors such as high blood pressure. Programs teaching individuals and families how to cope with financial burdens, language barriers, acculturation, and so forth, can give people greater ability to take care of themselves and their families. If more attention is needed, consistent followup and referrals should be made. Focus group participants recommended peer role models or mentoring programs for youth-related problems.

- *Offer nutrition and cooking classes*

Sodium-based sauces are staple ingredients of Cambodian diets, as in other Asian diets. Frequent consumption of high sodium foods increases one's chances for high blood pressure and consequently developing heart disease. Therefore, key leaders recommended that classes should be offered to the public on proper nutrition, including cooking demonstrations of lowfat and low-salt recipes.

- *Improve smoking cessation programs*

Key leaders said that smokers found quitting smoking very difficult because of a lack of culturally appropriate smoking cessation programs in Cambodian communities. Programs should be tailored to men, as more Cambodian men than women smoke, and should include strategies on how to overcome peer pressure, particularly for youth.

Also, stressing the consequences of smoking may be an effective way to help this population quit smoking. A recent 5-year study, on the decisional balance for smoking cessation of Southeast Asian men in the United States, sampled 101 Cambodian men in Franklin County, Ohio.<sup>12</sup> The study found that men who were exposed to more messages on the negative consequences of smoking were more successful in quitting smoking than those who heard positive messages about the health benefits of being a nonsmoker.

- *Provide community activities to promote physical activity*

To encourage the community to become more physically active, focus group participants recommended increasing opportunities for group sports for various age groups. For example, soccer and volleyball appeal to youth, while gardening would appeal to the elderly. These programs can take place at the local gyms, parks, and community center. It is important to offer transportation options ranging from carpools to walking buddies. Key leaders believe that group activities will help community residents build support groups, self-esteem, and ultimately improve their physical fitness.

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<sup>12</sup> Lafferty CK, Heaney CA, Chen MS. Assessing decisional balance for smoking cessation among Southeast Asian males in the United States. *Health Education Research Theory and Practice* 1999; 14(1): 139–46.

## **VIII. Limitations of the Study**

- More detailed information is needed on various aspects of the Cambodian diet. A list of traditional dishes, as well as descriptions of food preparations, can better assess the effects of diet and eating behaviors on the community's risk for CVD.
- Some survey questions were repetitive and require further modification.
- This study was limited by a small geographic area and relatively small sample size. Results should not be generalized either to the larger Cambodian community in Massachusetts or to all Cambodians in the United States. Epidemiological studies and qualitative research to further assess CVD risk are warranted. Mixed-methods research, especially studies conducted in partnership with CBOs, would enhance the capacity to develop more informed and effective CVD prevention and intervention programs.

## **IX. Conclusion**

The present assessment of this population shows high risk for heart disease in Cambodian communities. Individuals who were surveyed had limited knowledge of heart disease, were not regularly screened, ate increasingly high-fat and high-sodium foods, had low levels of physical activity, smoked, and lived stressful lifestyles.

Further studies on Cambodian-specific heart disease risk are needed to support future community heart health programs. The Cambodian population continues to grow at a rapid rate in the United States, consequently increasing the burden of CVD in this country. Tailored interventions offered through community health clinics, mutual assistance associations, and faith-based organizations are ideal networks for reaching the Cambodian community with heart health messages.

The plight of Cambodian refugees is fraught with acculturation, language barriers, and financial strains. Their struggles to establish a happy and peaceful life in the United States should inspire all minority health advocates to help build healthy hearts in all Cambodian communities.

## **X. Appendices**

## **Appendix A: Informed Consent Forms**

## Focus Group

Contact person(s): Name  
Address  
Phone number

Thank you for your interest and willingness to help us. You are being asked to participate in a discussion group. We hope to learn more about better ways to reach people in the community. We want to do this by better understanding your health, your health attitudes and beliefs, and your local community health services. We do not expect these discussion questions or the interview to cause you any discomfort.

If you decide to volunteer, you will be asked to participate in a discussion group that should require about 1–2 hours.

Participant's Initials: \_\_\_\_\_

You will receive \$30 for your invaluable input and participation. Also, this community assessment may have implications for prevention of heart disease and development of interventions to improve the health of the community.

You will not be asked to provide your name or any other identifying information on the questionnaires.

If you feel uncomfortable at any time, you should feel free to leave the discussion or interview.

Participant's Initials: \_\_\_\_\_

Permission: Your signature, below, will indicate that you have decided to volunteer as a discussion/interview participant and that you have read and understood the information provided above.

Signature of Participant \_\_\_\_\_  
Signature of Investigator \_\_\_\_\_

Date \_\_\_\_\_  
Date \_\_\_\_\_

## Key Informant Interview

Contact person(s): Name  
Address  
Phone number

Thank you for your interest and willingness to help us. You are being asked to participate in a discussion group. We hope to learn more about better ways to reach people in the community. We want to do this by better understanding your health, your health attitudes and beliefs, and your local community health services. We do not expect these discussion questions or the interview to cause you any discomfort.

If you decide to volunteer, you will be asked to participate in a discussion group that should require about 1–2 hours.

Participant's Initials: \_\_\_\_\_

You will receive \$20 for your invaluable input and participation. Also, this community assessment may have implications for prevention of heart disease and development of interventions to improve the health of the community.

You will not be asked to provide your name or any other identifying information on the questionnaires.

If you feel uncomfortable at any time, you should feel free to leave the discussion or interview.

Participant's Initials: \_\_\_\_\_

Permission: Your signature, below, will indicate that you have decided to volunteer as a discussion/interview participant and that you have read and understood the information provided above.

Signature of Participant \_\_\_\_\_  
Signature of Investigator \_\_\_\_\_

Date \_\_\_\_\_  
Date \_\_\_\_\_

## Indepth Interview

Contact person(s): Name  
                                  Address  
                                  Phone number

Thank you for your interest and willingness to help us. You are being asked to participate in a discussion group. We hope to learn more about better ways to reach people in the community. We want to do this by better understanding your health, your health attitudes and beliefs, and your local community health services. We do not expect these discussion questions or the interview to cause you any discomfort.

If you decide to volunteer, you will be asked to participate in a discussion group that should require about 1–2 hours.

Participant's Initials: \_\_\_\_\_

You will receive \$15 for your invaluable input and participation. Also, this community assessment may have implications for prevention of heart disease and development of interventions to improve the health of the community.

You will not be asked to provide your name or any other identifying information on the questionnaires.

If you feel uncomfortable at any time, you should feel free to leave the discussion or interview.

Participant's Initials: \_\_\_\_\_

Permission: Your signature, below, will indicate that you have decided to volunteer as a discussion/interview participant and that you have read and understood the information provided above.

Signature of Participant \_\_\_\_\_  
Signature of Investigator \_\_\_\_\_

Date \_\_\_\_\_  
Date \_\_\_\_\_

## **Appendix B: Training Materials**



## Key Informant Interview Training Protocol

1. Go over the purpose of the program and the scope of the study.
2. Discuss the target population.
3. Talk about the questionnaire.
4. Talk about using a conversational interview style.
5. Talk about tape recording the interview.
6. Stress the importance of neat handwritten notes.
7. Talk about the cultural and linguistic appropriateness of the interview protocol.
8. Take a break.
9. Practice role-playing the interview, following my example. Go over the following steps.
  - a. Making an appointment.
  - b. Creating a timeline.
  - c. Finding a location for the interview.
  - d. Arranging travel.
  - e. Confirming with the interviewee the day before.
  - f. Signing the informed consent form.
  - g. Conducting the interview.
  - h. Looking at NHLBI materials.
10. Find a partner with whom to practice.
11. Discuss any further modifications or issues.
12. Schedule a followup training if needed.

## **Key Informant Interview Training Handout**

### **Purpose**

To collect information about community health needs, knowledge, attitudes, behaviors, and cultural beliefs and practices about having a healthy heart and preventing heart disease from four Asian American and Pacific Islander groups. These ethnic groups include Filipino, Vietnamese, Cambodian, and Native Hawaiian. The information obtained through active community participation will be used to guide the development of culturally and linguistically appropriate resources to increase the community's awareness of heart disease and encourage heart healthy behaviors.

- Personal and demographic information
- Health education
- Community health services

It is very important to write your notes neatly so that we can read them later. Please write your notes in English, or translate them afterwards into English.

### **Who Should Be Invited to Participate in a Key Informant Interview?**

Some of you will be doing key informant interviews. Each CBO should interview two key informants. Key informants should be people who are seen as leaders in the Cambodian community. They may hold a position of leadership (e.g., a director of a program, political leader, active teacher) or they may be leaders through their efforts outside of a formal job (i.e., a person who is active in the community but isn't necessarily paid to do their community work).

### **Cultural and Language Appropriateness**

When we designed the interview protocol, we knew that each interviewer would have his or her own style and also his or her own suggestions about how useful the questions are and whether they are culturally appropriate. We will go over the questionnaire (in English and in the native language) section by section and discuss it. If we agree upon modifications, we can hand mark them on the forms. I will make multiple copies of ones with modifications. You will use these revised questionnaires when you do your interviews.

### **Pre-Interview**

It is important to call the interviewees right away to schedule interviews. Tell them that they have been identified as leaders in the community, and that you would like to interview them to learn more about heart health and the Cambodian community. Inform them that the program is sponsored by the National Heart, Lung, and Blood Institute and is partnered with the Asian & Pacific Islander American Health Forum and your CBO. They will receive \$20 as a token of appreciation for doing the interview. Let them know that the interview should last about 1 hour and 15 minutes. Tell them that their names will not be used, but the information they provide will help develop health promotion programs for Cambodians. Let them know that you would

like to tape record the interview to ensure that we capture everything they discuss in the interview.

Tell them when you are available, and see if they can interview during one of those times. Please schedule for 1½ hours of their time, and let them know where the interview will be (e.g., at your CBO or at their office, if you are willing to travel). Make sure you have some time before and after the scheduled interview time, in case the person comes late or if the interview runs long.

***Confirm appointments:*** Call them the day before or the day of the interview to confirm they can still do the interview. It really helps to do this, so that they know when they are coming. If there is a problem, you can reschedule.

### **At the Interview**

Thank them for coming to the interview. Tell them you will be interviewing them about health issues, but first you would like them to look at the informed consent form and to sign it. Briefly describe the informed consent form. They can look at it as you talk. Give them time to read it themselves, and to ask you questions if they have any. If they agree, then they need to initial and sign the form, and you will also sign. You will keep one copy, and they will keep the other copy.

***Tape recording:*** The questions in this interview are designed to gather a lot of information from each person. We want to hear their opinions, their experiences, and their ideas for their community. Because of this, we would like to you to tape record the interview. You will need to ask consent from the person. If they say no, then we will rely solely on your notes. If they say yes, then you can have them initial the line on the form that gives their consent to tape record, and you can begin tape recording.

***Note taking:*** It is very important for you to take neat notes while you are interviewing the key informants. It is especially critical if they do not agree to be tape recorded.

### **Advice about the Interview Process**

***Open-ended questions:*** Open-ended questions are questions that don't have a yes/no or black/white/brown answer. An example of an open-ended question would be if I asked you, "What kind of fruits do you like?" The person can answer however they like, such as, "I like papaya, mango, and bananas." They can also answer, "I don't like fruit at all."

On the other hand, closed questions are useful when you are asking a lot of people the same questions. You want to give them choices, so that you can analyze what a large group of people said about something. For example, if I ask you, "Do you like apples or bananas better?" I have only given you two choices that are predetermined. You can say either apples or bananas. This is an example of a closed question. In the indepth interview questionnaire, there are many multiple-choice questions (questions that have a set number of answers are also closed questions) such as, "How stressful is your life?" Possible responses could be: (a) not stressful, (b) a little stressful, (c) somewhat stressful, and (d) very stressful. If I asked this question of a group of soldiers stationed in Virginia, where there is no current military conflict, I could add up their answers and have a pretty good sense of how stressful their lives were. Then I could ask a group

of soldiers stationed in the Middle East, where there is conflict, and I would be able to compare their answers with those of the soldiers in Virginia. We could guess that where there is military conflict, there might be more stress. Multiple-choice questions are helpful when asking general questions for larger groups of people.

You can still make comparisons when you ask open-ended questions, but the type of information you gather with open-ended questions tells you more information about a certain subject. For example, I could ask the soldiers, “What causes you stress in your job?” Their answers would give me more depth (more information about one subject). But it would be harder to ask a group of 300 soldiers in each place to tell me what causes their stress, and then to put together all of their answers in a simple fashion. We would have to take into consideration complex answers like, “missing home because they just had their first child; a particular supervisor doesn’t like them; the food is bad; they have allergies to a certain plant in the region.” These kinds of answers are very rich in telling us about their experiences, but it would be hard to say that most soldiers are stressed because of one reason.

In summary, open-ended questions and closed questions have different purposes. During the key informant interview, you will ask mostly open-ended questions, because we are interested in detailed information about certain subjects from a few people. During the indepth interview, we are looking for detailed information about some subjects, but also simple categories of information on other subjects for comparison with larger numbers of people. So, for the open-ended questions you will take notes, and for the closed questions you will circle a choice.

*Use examples:* Sometimes it can be helpful to use examples. The problem with giving examples right away is that once people hear the examples you read, they tend to pick one of those choices. If you don’t give them those examples, they are likely to answer in their own way. For instance, if I ask you, “Whom do you generally go to when you feel sick? For example, the doctor or your mom.” The person may respond by saying the doctor when, in fact, they may actually tend to look up their illness in a book. But, because you gave them an example, they picked one of them. Psychologically, this is called “leading” (leading someone to a certain answer by persuasion).

Examples are also helpful when the question is unclear or vague. For instance, I may ask, “What are some cultural practices to treat illness that you were raised with?” The person may wonder what you mean by cultural practices. You could clarify by saying, “For example, in the Chinese culture, some people see an herbalist. Are there things that people do in the Cambodian culture to treat illness that are different from the American culture?” By giving an example, I can show the person what type of question I am asking, because somehow the question wasn’t clear. Again, use examples with caution because they can psychologically lead people to pick the examples you gave.

### **Completing the Interview**

After asking the key informant if they have anything else they would like to add (take notes if they do have things to add), thank the person for their help and for their time. Give them the \$20 dollar stipend. Remind them that if they have any questions, they can call the number on the informed consent form, and someone will try to answer their questions.

## **Indepth Interview Training Protocol**

1. Go over the purpose of the program and the scope of the study.
2. Discuss the target population.
3. Talk about the questionnaire.
4. Talk about using a conversational interview style.
5. Discuss reading most questions directly. Food questions accompany the calendar, which is filled in after the interview is over.
6. Stress the importance of neat, handwritten notes.
7. Talk about the cultural and linguistic appropriateness of the questionnaires.
8. Take a break.
9. Practice role-playing the interview, following my example. Go over the following steps.
  - a. Make an appointment.
  - b. Create a timeline.
  - c. Find a location for the interview.
  - d. Arrange for travel to the interview site.
  - e. Confirm with the interviewee the day before the interview.
  - f. Sign the informed consent form.
  - g. Conduct the interview.
  - h. Look at NHLBI materials.
10. Give instructions on filling out the food questions.
11. Find a partner with whom to practice.
12. Discuss any further modifications or issues.
13. Schedule a followup training if needed.

## **Indepth Interview Training Handout**

### **Purpose**

To collect information about community health needs, knowledge, attitudes, behaviors, cultural beliefs and practices about having a healthy heart and preventing heart disease from four AAPI groups. These ethnic groups include Filipino, Vietnamese, Cambodian, and Native Hawaiian. The information obtained through active community participation will be used to guide the development of culturally and linguistically appropriate resources to increase the community's awareness of heart disease and encourage heart healthy behaviors.

### **Who Should Be Invited To Participate in the Indepth Interviews?**

- Twenty adults, 18–50 years old; 5 adults over 50 years old
- Females and males (equal numbers)
- Immigrant and second-generation Cambodian Americans (equal numbers)
- Persons with high school education or less
- Low-income individuals (divided equally between people with an annual household income of \$5,000 to \$15,000 and people with an annual household income of \$15,001 to \$35,000)

Interview a total of 25 people who fit the above criteria. The reason we ask for equal numbers of men and women and equal numbers in the education and income areas is to get a variety of people and experiences. It may be difficult, however, to find participants who match all the criteria.

### **The Indepth Interview**

During the indepth interview, you will be gathering detailed information about an individual's life including:

- Physical activity
- Eating behaviors
- Tobacco and alcohol use
- Health history
- Personal and demographic information
- Health education
- Community health services

Please remember that you are having a real conversation with the person. Imagine you are really curious about a friend, and you decide to find out as much as possible from him or her. It will be more fun for both you and the person being interviewed if you talk about the issues with genuine interest.

You can read most of the questions out loud and circle or write down their response. The one section that is different is the food section.

It is very important to write your notes neatly so that we can read them later. Please write your notes in English or translate them afterward into English.

### **Cultural and Language Appropriateness**

When we designed the questionnaire, we knew that the interviewers would have their own styles and also their own suggestions about how useful the questions are and whether they are culturally appropriate. We will go over the questionnaire (in English and in the native language) section by section and discuss it. If we agree upon modifications, we can mark them by hand on the forms. I'll make multiple copies of those that have modifications. You will use these revised questionnaires when you do your interviews.

### **Pre-Interview**

It is important to call people right away to schedule interviews. You can tell them that you would like to interview them to learn more about Cambodian health and that they will receive \$15 at the end of the interview. You can let them know that the interview should last about 1 hour and 15 minutes. Tell them that their names will not be used, but the information they provide will help develop health promotion programs for Cambodians.

Tell them when you are available, and see if they can interview during one of those times. Please schedule for 1½ hours of their time, and let them know where the interview will be (e.g., at your CBO or at their house, if you are willing to travel). Make sure you have some time before and after the scheduled interview time, in case the person comes late or the interview runs long.

***Confirm appointments:*** Call them the day before or the day of the interview to confirm they can still do the interview. It really helps to do this, so that they know when they are coming. If there is a problem, you can reschedule.

### **At the Interview**

Thank them for coming to the interview. Tell them you will be interviewing them about health issues, but first you would like them to look at the informed consent form and sign it. Briefly describe the informed consent form. They can look at it as you talk. Give them time to read it themselves, and to ask you questions if they have any. If they agree, then they need to initial and sign the form, and you will also sign. You will keep one copy, and they will keep the other copy.

### **Conducting the Indepth Interview**

It will be helpful to sit with the interviewee at a table or desk. Sit facing the interviewee, but be flexible to move so that he or she can see the form. He or she may, at times, want to see the questions directly to jog his or her memory for answers.

**Section A—Physical Activity:** These are simple questions. Be aware that many people are physically active, but they don't think of it as physical activity because it's not "exercise" or "sports." For example, for many people, their paid work involves physical activity (e.g., custodians and janitors walk a lot; construction workers exert a lot of energy building; caretakers

of young children chase children all day; housekeepers pick up and do physical cleaning). Similarly, people can also be active for nonpaid work (e.g., taking care of one's own small children; doing lots of laundry; gardening; cooking and cleaning). Please make sure you ask about these kinds of activities in addition to the activities many people think of, such as basketball, swimming, Tai Chi, etc.

**Section B—Eating Behaviors:** Instructions for Section B are on the form. We will go through those together. Basically, you are given two calendar sheets. On the first one, you will fill out information about what the interviewee ate the day of the interview (today) and the last 2 days (yesterday and the day before). In your Section B instructions (page 94), you will see questions you can read aloud, and also a list of the types of foods to ask about. These are prompts, which are to help you and the person remember different categories of food as they tell you what they ate.

We are very interested in the ethnic foods they eat, particularly from the Cambodian culture. We are also interested in who generally cooks the food they eat (e.g., do they eat out most of the time, does the mom in the household do most of the cooking, etc.). After you take note of the foods they ate over the last 2 days (2-day data), then you can use the second calendar sheet to discuss a typical week for them. We are interested in asking them about a typical week because what they ate in the last 2 days may be unusual for them (e.g., perhaps they have been sick, so they ate less than usual, or work has been busy so they have eaten a lot of fast food). Remember to use your prompts to cover “who cooks,” what types of ethnic foods, and categories of food such as fruits, fish, grains, etc. After you finish discussing a typical week (“typical week data”), return to page 95 and resume asking questions B1 to B3.

At the end of the whole interview, you will go to page 107, and fill out the answers to the food questions based on the “2-day data.” Please note we are not asking about alcoholic beverages on these charts. That is the next section.

**Section C—Tobacco and Alcohol Use:** This section includes detailed questions about the person's current behaviors and past history of using tobacco and drinking alcohol. Sometimes people are sensitive about talking about these areas. Try to reassure the interviewee that there are no right or wrong answers, and you are not judging them. Sometimes their pattern of using tobacco or drinking may not fit the categories we put on the form. If it does not, please write notes about quantity (how much) and also type of product (e.g., whiskey, beer, red wine, white wine). This information is useful because different drinks have different levels of alcohol.

Several questions ask about how the Cambodian culture views tobacco and also about what tends to influence people to smoke. Please try to engage the interviewee in talking about his or her own views as well as whether those views come from their cultural heritage. Have ideas about tobacco changed in Cambodia since they came to the United States? Here is an opportunity to find out more about cultural norms (how certain cultures tend to do things).

**Section D—Health History:** In this section, you will ask the interviewee about his or her personal and family history of heart problems. You will see many questions that are meant to find out how he or she views different health issues, like “what makes people sick?” and “how people can prevent or avoid getting sick?” You will ask about cultural perspectives on these topics. Similarly, it is important to find out what kind of health and medical services they use.



As you know, people have many ways of treating illness besides going to a Western doctor or hospital. You will help us find out what those ways are, so we can better understand how people think about and treat their health. In this interview, we really want to find out how important people's traditions and cultural practices can be in making decisions about their health.

**Section E—Personal Information:** These questions are very straightforward. If none of the categories fit their answer, then just write down their answer on the form beside the categories.

**Section F—Health Education:** Because this program is being sponsored by the NHLBI, we would like you to ask questions about what kind of health education information they receive, and where and how often they get it. Their answers will help the NHLBI figure out where they should give out health education materials and whether there should be translations into different languages.

**Section G—Community Health Services:** Here we are interested in the person's opinion and ideas about useful health information programs. The NHLBI would like to get ideas from community members about types of programs that people would like to see and where they would like to see them. Treat the person like an expert on what he or she would like to see happen, and how health professionals can effectively reach people in the community.

The last questions involve showing the person some sample pamphlets that NHLBI has published. Ask them if they would like pamphlets like these to be developed for Cambodians and what suggestions they would have for making useful education materials (e.g., translated into Khmer, types of pictures, cookbooks vs. factual information about heart health, etc.).

### **Advice About the Interview Process**

***Open-ended questions:*** Open-ended questions are questions that don't have a yes/no answer. An example of an open-ended question would be if I asked you, "What kind of fruits do you like?" The person can answer however they like, such as, "I like papaya, mango, and bananas." They can also answer, "I don't like fruit at all."

On the other hand, closed questions are useful when you are asking a lot of people the same questions. You want to give them choices, so that you can analyze what a large group of people said about something. For example, if I ask you, "Do you like apples or bananas better?" I have only given you two choices that are predetermined. You can say either apples or bananas. This is an example of a closed question. In the indepth interview questionnaire, there are many multiple-choice questions (questions that have a set number of answers are also closed questions) such as, "How stressful is your life?" Possible responses could be: (a) not stressful, (b) a little stressful, (c) somewhat stressful, and (d) very stressful. If I asked this question of a group of soldiers stationed in Virginia, where there is no current military conflict, I could add up their answers and have a pretty good sense of how stressful their lives were. Then I could ask a group of soldiers stationed in the Middle East, where there is conflict, and I would be able to compare their answers with those of the soldiers in Virginia. We could guess that where there is military conflict, there might be more stress. Multiple-choice questions are helpful when asking general questions for larger groups of people.

You can still make comparisons when you ask open-ended questions, but the type of information you gather with open-ended questions tells you more information about a certain subject. For example, I could ask the soldiers, “What causes you stress in your job?” Their answers would give me more depth (more information about one subject). But, it would be harder to ask a group of 300 soldiers in each place to tell me what causes their stress and then put together all of their answers in a simple fashion. We would have to take into consideration complex answers like, “missing home because they just had their first child; a particular supervisor doesn’t like them; the food is bad; they have allergies to a certain plant in the region.” These kinds of answers are very rich in telling us about their experiences, but it would be hard to say that most soldiers are stressed because of one reason.

In summary, open-ended questions and closed questions have different purposes. During the key informant interview, you will ask mostly open-ended questions, because we are interested in detailed information about certain subjects from a few people. During the indepth interview, we are looking for detailed information about some subjects, but also simple categories of information on other subjects, for comparison with larger numbers of people. Therefore, for the open-ended questions you will take notes and for the closed questions you will circle a choice.

***Use examples:*** Sometimes it can be helpful to use examples. The problem with giving examples right away is that once people hear the examples you read, they tend to pick one of those choices. If you don’t give them those examples, they are likely to answer their own way. For instance, if I ask you, “Whom do you generally go to when you feel sick? For example, the doctor or your mom.” The person may respond by saying the doctor when, in fact, they may actually tend to look up their illness in a book. But, because you gave them an example, they picked one of them. Psychologically, this is called “leading” (leading someone to a certain answer by persuasion).

Examples are also helpful when the question is unclear or vague. For instance, I may ask, “What are some cultural practices to treat illness that you were raised with?” The person may wonder what you mean by cultural practices. You could clarify by saying, “For example, in the Chinese culture, some people see an herbalist. Are there things that people do in the Cambodian culture that people do to treat illness that are different from the American culture?” By giving an example, I can show the person what type of question I am asking, because somehow the question was not clear. Again, use examples with caution because they can psychologically lead people to pick the examples you gave.

### **Completing the Interview**

After asking the interviewees if they have anything else they would like to add (take notes if they do have things to add), thank them for their help and for their time. Give them the \$15 dollar stipend. Remind them that if they have any questions, they can call the number on the informed consent form, and someone will try to answer their questions.

## **Appendix C: Interview Guides**

## Focus Group Guide

Today's Date:

Time:

Focus Group Location:

Address:

Community Organization Sponsor(s):

Focus Group Facilitator:

Focus Group Recorder:

### Sign In Sheet

Name	Age	Sex	Ethnicity	ZIP code	Organization
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

## I. Introduction

- Greetings and thank you for coming. This focus group is to assist us in understanding our community's ideas, attitudes, and practices about heart health, general wellness, and preventive health. This includes the various health and community resources available to you and other community residents.
- This community assessment is being conducted in conjunction with the [*insert name of local organizations*] and the Asian & Pacific Islander American Health Forum. This project is funded by the National Heart, Lung, and Blood Institute in an effort to develop effective messages and programs to promote heart health in the Cambodian community. Your participation is very important because you know your own community best. There are no right or wrong answers to any of the questions. Feel free to express your ideas, opinions, or experiences.
- As you may have noticed, there is a tape recorder in the middle of the table. We hope that having a tape recorder will not make you feel uncomfortable. We want to make sure we capture all your ideas and that we do not miss any of the valuable information the group may offer. The tape recorder ensures this. There will also be a recorder who will be writing your response on the flip chart to make sure that we capture what you are saying correctly.
- Please be assured that your individual comments here today are confidential in the sense that we will not identify, by name, anyone's statements. We would like you to sign an informed consent form to ensure your confidentiality and to affirm your voluntary participation in this discussion.
- Let's go through the informed consent form. [*Pass out informed consent form to participants and go over entire form.*]
- Before we begin, does anyone have any questions or comments?

## II. Attitudes About Heart Disease

*Let's start our discussion*

### A. Cultural Meaning of Prevention

1. What does good health mean to you? Are there any folktales, sayings, or symbols about health in general in your culture?
2. What does the word "prevention" mean in your culture?
3. What does being ill or sick mean to you? Are there any folktales, sayings, or symbols about illness or disease in general in your culture?

## B. Community Health Concerns

1. What do you feel are the top health problems (or diseases/sicknesses) in the [*insert name*] community (e.g., diabetes, cancer, etc.)? [*Use flip chart to list responses. Then ask the group to rank the top five health concerns they have identified.*]

## C. Heart Disease

*Now let's talk more about heart disease (e.g., heart attack, high blood pressure, stroke, or stress) and factors that increase a person's chances of getting heart disease.*

1. If heart disease was mentioned and ranked, ask: Why did you rank heart disease where you did? How concerned are people in the Cambodian community about heart disease compared to what you've just listed? [*If heart disease was not ranked, then ask, How about heart disease? Compared to the problems you mentioned and rank, how important is heart disease in your community?*]
2. How do people in the community think they develop heart disease? [*Probe: What are the causes of heart disease?*]
3. Do you know someone who has heart disease?
4. What are some of the things people can do to prevent heart disease?
5. In the Cambodian culture, how do people take care of the heart? What does the heart symbolize in the Cambodian culture? Are there any folktales or sayings about the heart health in your culture?

*I'm going to ask you some questions about three different topics: high blood pressure, cholesterol, and obesity. There will be the same questions for each topic. Please don't feel like you have to be an expert on these things—I'm asking just to get a sense of what you think.*

## D. High Blood Pressure, Cholesterol, and Weight

1. What do people think high blood pressure is? [*Probe for words used to describe or refer to high blood pressure, such as stress.*]
2. How about high cholesterol?
3. How do people view obesity or being overweight in the Cambodian culture? [*Probe for gender issues.*]
4. How do these issues of high blood pressure, cholesterol, or obesity affect the community's health?
5. What do you think people should do if they are diagnosed with high blood pressure, cholesterol, or obesity?
6. How realistic is it for people to control or manage these health problems?

## E. Smoking

1. How does the Cambodian community view tobacco smoking? How does tobacco smoking affect your health? In what way?
2. How realistic is it for people in the community to quit smoking?

## F. Nutrition

1. What kinds of food do you like to eat? What kinds of food do you like to prepare for you and your family at home?
2. Do you cook anything different for special celebrations?
3. How often do you eat out? What types of food do you eat when you eat out?
4. Do you think that the kinds of food you eat can affect your heart? How?
5. What makes it hard for people to eat foods low in salt?
6. What would help people to eat food low in salt?
7. How realistic is it for people in the community to eat foods low in salt?
8. What was your typical diet like in Cambodia?
9. How did the immigration or refugee processes affect your diet? Have you lived in other countries besides Cambodia and the United States? What did you eat in those places?

## G. Stress

1. Could you talk about the tensions people experience at work, in their family, etc.?
2. How do these tensions affect your health?

## H. Physical Activity and Exercise Patterns

1. When you look around the Cambodian community here in [*insert name of city or town*], how physically active are the people in the community?
2. What types of physical activities or exercise do people do for fun (e.g., at play, sports leagues, etc.)? What types of physical activities or exercise do people do on their own (e.g., morning walks or running)? What types of physical activities or exercise do people do as a group (e.g., sports leagues, exercise classes, community garden, or morning walks with friends)?
3. What types of physical activities or exercise do people do at home (e.g., gardening, lawn mowing, house cleaning)? What types of physical activities or exercise do people do at work (e.g., walking clubs)?
4. What types of physical activities or exercise do people in your community tend to prefer?
5. Why do you think people are not active?
6. What would help people become more active? [*Use a flip chart to list the reasons that make it difficult for people to be physically active and ways to solve or overcome those difficulties.*]
7. How realistic is it for people in the community to exercise 30 minutes on most days of the week?
8. Are there any differences in how active people are or what kinds of activities they do here in the United States vs. in Cambodia?

### III. Health Care Options, Access, and Services

1. When people in the community get sick, what do people tend to do?
2. Whom do they go to see first? [*Probe for use of self-treatment, such as taking herbs, over-the-counter medicine.*]
3. What do people expect from the person they first go see?
4. Do people in the community go for regular health checkups? If so, where do people in the community go for regular health checkups? [*Probe: What other things people do regularly or routinely to maintain their health and well-being, e.g., visit clergy, have acupuncture, etc.?*]
5. What health care services are available in the community or neighborhoods? [*Probe: Are there other health care services people use in the community? Probe for use of non-Western health care services, e.g., traditional healers, herbalists, etc.*]
6. What are some of the reasons that make it difficult for people in the community to receive health care services? [*Use flip chart to record responses. Probe for language, transportation, race/culture, insurance, trust, etc.*]
7. Could you talk about any language barriers that affect people receiving health care?
8. *Using the flip chart as reference, ask:* What would encourage people to use existing health care services in the community?
9. What kinds of heart health education programs and activities do you think could be developed in the community that would reduce the risk for heart disease? What should these programs include? [*Probe: What kinds of activities or programs would encourage people to do things that would lower their blood pressure? What kinds of activities of program would encourage people to exercise more? To eat food with less fat? To eat food with less salt? To maintain a healthy weight?*]

### IV. Sources of Health Information and Languages

1. Where do people in your community get information about health? [*Use the flip chart to make a list of sources of health information. If not mentioned, ask: Do you use the Internet to find information about health?*]
2. How useful or effective are these materials in educating the Cambodian community about heart health issues?
3. Would people receive the information on issues not related to health from the same sources (e.g., community issues such as census participation, immigration, community events)?

*Now, we would like to ask you about any information you receive on heart health or prevention of heart disease—such as brochures, TV ads, radio ads, etc.*

4. What information format is most appealing to the Cambodian community (e.g., brochures, television ads, radio ads, videotapes, audiotapes, interviews, etc.)?
5. What languages or dialects do most people in the Cambodian community [*insert name of city or town*] speak? Which ones do you think are the best languages or dialects for getting information to community residents?



6. Who should deliver health messages to the community? *[Probe for credible spokespersons in the community.]*
7. What activities do people in your community participate in local ethnic group organizations? What about churches? What about ethnic celebrations or events?  
Followup: *Which organizations? Which churches? Which ethnic celebrations or events?*  
Followup: *Why do you think people like to participate that organization? Why do you think people like to participate in that church (or those churches)? Why do you think people like to participate in that celebration/event?*
8. Are there any additional ways in which *[insert name of your CBO]* outreaches to the community?

## **V. Reactions to Selected Health Education Materials**

*Now we would like to get your reactions to a few health education materials. Your input will help us develop Cambodian-specific materials. We want your impressions of these materials. We are not asking you to read the material at this time.*

*[Show materials and ask the group and give them a few seconds to look at it.]*

*Ask the group:* What do you like the best and why? What do you like the least and why?

## **VI. Closing**

- We are now finished with the discussion. Before we leave, does anyone have other responses or comments about the information discussed today?
- Once again, I want to reassure you that everything you said here is today is strictly confidential and anonymous. Your names will not be connected to the information given today.
- Thank you for coming. The information that you have provided is very important. You have been very helpful to us.

## **Key Informant Interview Guide**

Today's Date:

Time:

Interview Location:

Address:

Community Organization Sponsor(s):

Interviewer:

## **I. Introduction**

- Thank you for coming. Because you have been identified as a leader in the Cambodian community, we hope you will assist us in understanding your community's ideas, attitudes, and practices about heart health, wellness, and health promotion and disease prevention. This includes the various health and community resources available to you and other community residents.
- This community assessment is being conducted in conjunction with the Cambodian community organization and the Asian & Pacific Islander American Health Forum. This project is funded by the National Heart, Lung, and Blood Institute in an effort to develop effective messages and programs to promote wellness and heart health in the Cambodian community. Your participation is very important because you have an indepth knowledge and insight into your community.
- Please be assured that your individual comments here today are confidential in the sense that we will not identify by name your statements. We would like you to sign an informed consent form to insure your confidentiality and to affirm your voluntary participation in this discussion.
- Let's go through the informed consent form. [*Give copy of informed consent form and go through entire form.*]
- Before beginning, do you have any questions or comments?

## **II. Respondent Demographic Information**

Age:

Sex:

Ethnicity:

Birth country:

Native language:

Citizenship, which country?

Years in the United States?

What is your role in the community (both formal and informal)?

With what organizations or institutions are you affiliated?

## **III. Community Context and Sources of Information**

1. To begin, can you describe the Cambodian community in [*insert name of city or town*]?  
[*Probe: Are most of the Cambodian people in this community long-term residents? Would you consider it a youthful or an elderly community?*]

2. What languages or dialects do most people in the community speak, and which ones do you think are the most effective for getting information to community residents?
3. How active are most people in the community in local ethnic group organizations, churches, and ethnic celebrations or events?

Followup: *Which organizations, churches and ethnic celebrations or events do people like to go to?*

Followup: *Why do you think people like to go to those organizations, churches, or ethnic celebrations or events?*

4. How do people in your community get information about health? [*Check the sources that participants identify.*]
  - Family, especially those family members in the health care professions
  - Friends, especially those friends in the health care professions
  - Cambodian radio
  - Local English radio
  - Cambodian newspaper
  - Local English newspaper
  - Cambodian television
  - Local English television
  - Community organization newsletter
  - Flyers—community outreach materials
  - Brochures and educational materials in (Western) doctor’s offices, health maintenance organization (HMO), or other health service provider
  - Information from “cultural or traditional” healer (e.g., acupuncturist)
5. What information format is most appealing to the Cambodian community (e.g., brochures, television ads, radio ads, videotapes, or audiotapes, etc.)?
6. What can you tell us about the network of ethnic community organizations and services in [*insert name of city or town*]? Are they well integrated? Are there overlaps in services or efforts by the community organizations?
7. What do you see as the greatest assets of [*insert name of city or town*]? What do you see as some of the important needs?

#### A. Cultural Meaning of Prevention

1. What does good health mean in the Cambodian culture? Are there any folktales, sayings, or symbols about health in general in your culture?
2. What does the word “prevention” mean in your culture?
3. What does being ill or sick mean in the Cambodian culture? Are there any folktales, sayings, or symbols about illness or disease in general in your culture?

#### B. Community Health Concerns

1. What do you feel are the greatest threats to health and wellness in your community?
2. What do you feel are the top five health problems (or diseases/sicknesses) in the community (e.g., diabetes, cancer, etc.)? For whom?

### C. Heart Disease

*Now let's talk about heart disease (e.g., heart attack, high blood pressure, stroke, or stress) and the factors that increase a person's chances of getting heart disease.*

1. If mentioned and ranked ask: Why did you rank heart disease where you did? If not, then ask: How about heart disease? Compared with the problems you mentioned and ranked, how important is heart disease in your community?
2. What is the top concern related to cardiovascular health and heart disease?
3. What do people think are the major causes of heart disease?
4. Do you know someone who has heart disease?
5. What are some of the things people can do to prevent heart disease?
6. In the Cambodian culture, what do people do to take care of their heart? What does the heart symbolize in the Cambodian culture? Are there any folktales or sayings about the heart health in your culture?

*I am going to ask you some questions about three different topics: high blood pressure, cholesterol, and obesity. There will be the same questions for each topic. Please don't feel like you have to be an expert on these things—I am asking just to get a sense of what you think with regard to the community.*

### D. High Blood Pressure, Cholesterol, and Obesity

1. What do you think high blood pressure is?
2. How about high cholesterol?
3. How do people view obesity or being overweight in the Cambodian culture? [*Probe for gender issues.*]
4. How do these issues of high blood pressure, cholesterol, and obesity affect the community's health?
5. What do you think people should do if they are diagnosed with high blood pressure, cholesterol, or obesity?
6. What stops people from controlling their problems with these health issues?
7. How would people control these problems with high blood pressure, cholesterol, or obesity?
8. How realistic is it for people to control or manage these health problems?

### E. Smoking

1. How does the Cambodian community view tobacco smoking? How does tobacco smoking affect your health? In what way?
2. How realistic is it for people in the community to quit smoking?

### F. Nutrition

1. What kinds of food do Cambodian people most often eat for special holidays, family gatherings, or celebrations?

2. Do people in the Cambodian community tend to eat differently or similarly to the way they ate in Cambodia? Please explain. Are the styles of eating in the United States more or less healthy than the old ways? In what way?
3. What was your typical diet like in Cambodia?
4. How did the immigration or refugee processes affect your diet? Have you lived in other countries besides Cambodia and the United States? What did you eat in those places?

#### G. Physical Activity and Exercise Patterns

1. When you look around the Cambodian community here in [*insert name of city or town*], how physically active are the people in the community?
2. What types of physical activities or exercise do people do for fun (e.g., at play, sports leagues, etc.)? What types of physical activities or exercise do people do on their own (e.g., morning walks or running)? What types of physical activities or exercise do people do as a group (e.g., sports leagues, exercise classes, community gardening, or morning walks with friends)?
3. What types of physical activities or exercise do people do at home (e.g., gardening, lawn mowing, and house cleaning)? What types of physical activities or exercise do people do at work (e.g., walking clubs)?
  - a) Why do you think some people are not active?
  - b) What would help people become more active?
4. How realistic is it for people in the community to exercise 30 minutes on most days of the week?

#### V. Health Care Options, Access, and Services

1. When people in the community get sick, what do people tend to do?
2. Whom do they go to see first? [*Probe for use of self-treatment, such as taking herbs, over-the-counter medicine, taking medicine from the Cambodian culture.*]
3. Do people in the community go for regular health checkups? If so, where do people in the community go for regular health checkups?
4. What other things people do regularly or routinely to maintain their health and well-being (e.g., visit clergy, have acupuncture, etc.)?
5. What health care services are available in your community or neighborhood?
6. Are there other health care services people use in the community? [*Probe for use of non-Western health care services, e.g., traditional healers, herbalists, etc.*]
7. What proportion of the community uses Western medicine and health care services? What are the alternative health care services you see people use?
8. Who or what types of organizations are seen as having credibility in providing health care education and/or services?
9. What are some of the factors that make it difficult for folks in the Cambodian community to receive health care services (e.g., language, transportation, race/culture, insurance, trust)?
10. What would encourage people to use existing health care services in the community?
11. If not addressed ask: Do most folks in your community have health insurance? If not, ask: Why do you think that is (e.g., cost, not important, not available)?

12. For heart disease in particular, what kinds of activities do you think could be developed in the community that would reduce the risk for heart disease? What are the elements it should have? [*Probe: What kinds of activities or programs would encourage people to do things that would lower their blood pressure? What kinds of activities of program would encourage people to exercise more? To eat food with less fat? To eat food with less salt? To maintain a healthy weight?*]

## **VI. Reactions to Selected Health Education Materials**

*Now we would like to get your reactions to a few health education materials. Your input will help us develop specific materials for your community. We want your impressions of these materials. We are not asking you to read the materials at this time.*

*What do you like the best and why? What do you like the least and why?*

## **VII. Closing**

- We are now finished with the discussion. Before we leave, do you have other responses or comments about the information discussed today?
- Once again, I want to reassure you that everything you said here today is strictly confidential and anonymous. Your name will not be connected to the information given today.
- Thank you for coming. The information that you have provided is very important. You have been very helpful to us.

## Indepth Interview Guide

### Seven areas are explored:

- Section A: Physical Activity
- Section B: Eating Behaviors
- Section C: Tobacco and Alcohol Use
- Section D: Health History
- Section E: Personal and Demographic Information
- Section F: Health Education
- Section G: Community Health Services

**Note:** This will be administered by a trained interviewer in an interactive discussion. Each CBO will identify and interview 10 participants.

Date:

Time:

Location:

Interviewer:

### Respondent Demographic Information

Age:

Sex:

Ethnicity:

Birth country:

Native language:

Nationality:

Years in the United States:

Number of adults in your household (including self):

Number of children in your household:



## Section A: Physical Activity

- A1. How important is getting daily physical activity for you?
1. Not important
  2. Somewhat important
  3. Very important
  9. N/A
- A2. During the last month, did you participate in any physical activities, such as walking, hiking, basketball, volleyball, swimming, gardening, etc.?
0. No
  1. Yes (If yes, answer the next five questions)
- A2a. Please tell me the type(s) of physical activities that you did.
- A2b. Of these physical activities you just told me about, which is the one you do the most?
- A2c. Which is/are your favorite activities?
- A2d. Are any of your activities in leagues, classes (recreation or school), or some other formal clubs?
- A2e. Which of these activities are with friends, relatives, etc.?
- A2f. Are you physically active at home or at work (e.g., carrying laundry, walking up stairs, physical labor for work like walking, lifting, and building)?
- A3. What motivates you or would motivate you to be physically active?
- A4. What makes it hard for you to be physically active?
- A5. How are physical or recreational activities viewed within the Cambodian culture? Are these activities different or similar in Cambodia and here in the United States?

## Section B: Eating Behaviors

### ***Interviewer Instructions:***

*Please pull out calendar sheets (will be supplied). Explain that you will be going over the calendar with them to ask them some questions about diet and other behaviors.*

*You may wish to state: “Now I’m going to ask you some questions about the foods you eat. I find it’s easiest to talk about it if we look at a calendar together, and just talk about the typical foods you generally have. Is that okay? Thanks. First I’m going to ask you what you ate the last few days, including today. It may seem a little strange, but it will give us a clear understanding of your diet for a few days. Please tell me how typical the last 2 days were in terms of your regular eating habits.”*

*Interviewer will ask what they ate today, yesterday (morning, mid-day, evening, night), and for the last 2 days, including today. As the interviewer writes down the foods on the calendar, they check with the participant as to the accuracy of the information. Note that the interviewer will fill in the answers to food questions at end of the interview (page 56) with or without the participant, depending on the time. This information is based on the 2-day data.*

*After filling in the information from above onto the 2-day calendar, ask the following questions:*

- B1. How important is it to have a lowfat diet?
1. Not important
  2. Somewhat important
  3. Very important
  9. N/A
- B2. Can you name some of the traditional ingredients you put in your food? Name them in your native language. If you could not buy these traditional ingredients, what types of “American” ingredients would you use as a substitute?
- B3. How has living in the United States affected how you eat? Is it more or less healthy? Please be specific.

### **Section C: Tobacco and Alcohol Use**

- C1. Do you smoke cigarettes, cigars, and pipes or chew tobacco? Please specify.
0. No
  1. Yes (If yes, answer the next 4 questions)
  9. N/A
- C2. If you smoke, how long have you been smoking?
- C3. If you smoke, how often do you smoke?
0. Rarely, on special social occasions (How many cigarettes/cigars at an event?)
  1. Occasionally, about once a month (How many cigarettes/cigars on each occasion?)
  2. Regularly, several times a week
  3. Daily
  9. N/A
- C4. On average, about how many cigarettes do you smoke each day?
1. 1–4 cigarettes
  2. 5–8 cigarettes
  3. 9–12 cigarettes (about half a pack)
  4. 12–16 cigarettes
  5. 17–20 cigarettes (about a pack)
  6. 20–40 cigarettes
  7. 40+ cigarettes (2 packs)
  9. N/A
- C5. When you are at home, where do you primarily smoke?
1. Inside the house
  2. Outside the house
  3. Other
  9. N/A
- C6. Did you ever smoke?
0. No
  1. Yes
  9. N/A
- C7. If yes, how long ago did you stop smoking? What method(s) did you use to quit smoking? (If they have smoked off and on: Please describe pattern of quitting and starting again.)
- C8. How long did you smoke? How much did you smoke daily, when you used to smoke?

- C9. Who exposes you to tobacco smoke? (Check all that apply.)
- Family
  - Friends
  - Coworkers or students
  - Clients or customers
  - Strangers
  - Others (specify)
- C10. How do you think tobacco affects your health?
- C11. How do you feel tobacco smoking is viewed in the Cambodian community here in [*insert name of city or town*]?
- C12. How is using tobacco viewed in Cambodia? Do those attitudes affect how you or others in the Cambodian community think about tobacco or smoking?
- C13. What do you think influences Cambodian men, women, and kids to use tobacco (e.g., social gatherings, magazine ads, movies, cultural norms, etc.)?
- C14. Do you drink alcohol?
0. No (If no, then skip to section D)
  1. Yes
  9. N/A
- C15. How often do you drink alcohol?
0. Never
  1. Rarely, on special social occasions. What kind of occasions?
  2. Occasionally, about once a month
  3. Once per week
  4. Regularly, several times a week
  5. Daily
  9. N/A
- C16. When you drink alcohol, what do you tend to drink? How much?
- C17. What motivates you to drink?
- C18. What would motivate you to stop or reduce drinking?
- C19. What makes it difficult to stop or reduce drinking?
- D1. How tall are you?
- D2. How much do you weigh?

## **Section D: Health History**

- D3. Do any of your family members have heart disease?
0. No
  1. Yes
  9. N/A
- D4. Has a doctor ever told you that you have or have had any of the following? (Check all that apply.)
- Diabetes
  - Hypertension (high blood pressure)
  - High cholesterol (How many times?)
  - Heart attack
  - Stroke

***IF YES TO D3 OR D4, THEN ANSWER THE NEXT FOUR QUESTIONS:***

- D5. Do you or a family member have heart disease? How did you or your family member find out about having heart disease?
- D6. How do you think you/your family member developed or got heart disease?
- D7. What do you do to on a daily basis to take care of your heart? Has this resulted in any changes in your family? [*Probe for cultural methods of taking care of the heart.*]
- D8. Can you tell me what it is like to live with heart problems? [*Probe: experiences of living with heart disease.*]
- D9. What does the heart symbolize in your culture?
- D10. Are you on a special diet (lowfat or low salt) ordered by a doctor? Do you follow it? Why or why not?
0. No
  1. Yes
  9. N/A
- D11. Can you share some cultural perspectives on some of these topics? Any differences for men or women?
- What causes illness or bad health?
  - How do you prevent illness?
  - What is the meaning of health?
  - What do people think about heart disease?
  - What do people think about obesity?
  - What do people think causes high blood pressure?
  - What do people think causes high blood cholesterol?
- D12. How do you view Western medicine? [*Probe for cultural attitudes regarding use of Western medicine.*]
- D13. Whom do you generally go to if you get sick? *Probe for the following:*
- Self-treatment of family, friends, etc.
  - Traditional healers (be specific)
  - Western doctor (where do they access this—community, clinic, hospital, etc.?)
- D14. Whom do you prefer to see when you are sick? [*Probe for what they think about Western versus Eastern medicine. Also ask WHEN community members go to see a doctor, if they did not mention it previously.*]
- D15. Do you perceive your life as stressful? [*Probe by asking about the person's life in various contexts.*]
1. Not stressful
  2. Somewhat stressful
  3. Very stressful
  9. N/A
- Are there any tensions in life with children or family now?
  - How about with school or work or finances?
  - Are there any difficulties with language and communication here in the United States?
  - What kinds of tensions arise in families as a result of trying to balance integration into society and preservation of the Cambodian culture?
  - Are there tensions between young and old, newly arrived immigrants and older immigrant communities?

- Are you currently taking care of someone who is not well or because of familial obligation or responsibility (e.g., a sick mother or a grandchild)?

D16. What causes you stress now?

D17. What are of some of things you do to relieve stress?

D18. How important is it for you to do stress-relieving activities?

1. Not important
2. Somewhat important
3. Very important
9. N/A

### Section E: Personal and Demographic Information

E1. How long have you lived in your current community (number of years)?

E2. How many years of education do you and your spouse or partner have?

	Self	Spouse
0. None	<input type="checkbox"/>	<input type="checkbox"/>
1. 1–8 years	<input type="checkbox"/>	<input type="checkbox"/>
2. 9–12 years	<input type="checkbox"/>	<input type="checkbox"/>
3. Technical/professional	<input type="checkbox"/>	<input type="checkbox"/>
4. Community college	<input type="checkbox"/>	<input type="checkbox"/>
5. College (4 years)	<input type="checkbox"/>	<input type="checkbox"/>
6. Postgraduate	<input type="checkbox"/>	<input type="checkbox"/>
9. N/A	<input type="checkbox"/>	<input type="checkbox"/>

E3. What kind of work do you do?

1. Professional/managerial
2. Technical
3. Sales
4. Administrative support (e.g., clerical, secretarial)
5. Service
6. Industrial
7. Homemaker
8. Unemployed
9. Own a business
10. Other (specify)

E3a. How many hours per week do you spend working for pay?

E3b. How many jobs do you have for pay?

E4. What was your annual household income last year (all wage earners in the household)?

1. < \$5,000
2. < \$10,000
3. < \$20,000
4. < \$40,000
5. < \$60,000
6. < \$80,000
7. < \$100,000
8. < \$120,000
9. > \$120,000+
99. N/A

- E5. What language do you use to communicate in your family?
- E6. Are there any problems with language and communication between the generations? How is culture transmitted between the different generations?
- E7. Are you or anyone in your household involved in or is a member of an ethnic organization or association?
0. No
  1. Yes
  9. N/A
- E8. Do you have health insurance? If yes, with whom? [*Probe for the quality and comprehensiveness of health insurance coverage.*]
0. No
  1. Yes
  9. N/A

### **Section F: Health Education**

- F1. How important is it to have regular community health fairs in your neighborhood?
1. Not important
  2. Somewhat important
  3. Very important
  9. N/A
- F2. Have you ever attended a community health fair? [*Probe for how much people in the community attend such fairs.*]
0. No
  1. Yes
  9. N/A
- F3. How important is it to have brochures, pamphlets, videos, and audiotapes in your native language?
1. Not important
  2. Somewhat important
  3. Very important
  9. N/A
- F4. How important is it to have health education programs in your native language?
1. Not important
  2. Somewhat important
  3. Very important
  9. N/A
- F5. How often do you read or learn about health education information?
1. Rarely
  2. When something is wrong with a friend or relative
  3. When something is wrong with me
  4. For general knowledge and awareness
  9. N/A

F6. Do you receive health information from the following?

		Most often	Sometimes	Rarely	Never
1	Friends or family				
2	Health care providers				
3	English radio				
4	Cambodian radio				
5	English television				
6	Cambodian television				
7	Local English newspaper				
8	Cambodian newspaper or magazines				
9	Flyers, community outreach materials				
10	Brochures or educational materials in doctor's office etc.				

### Section G: Community Health Services

G1. What has your doctor or medical plan recommended that you have? (Check all that apply.)

- Cholesterol check
- Blood pressure check
- Blood sugar test
- Electrocardiogram, etc.
- Other

G2. What are some of the problems you have in getting medical help or health services?

G3. What kinds of services are available in the community to help people lead healthier lives?

Do you use these services?

G4. What services would you like to see in the community to help people be healthy?

G5. What is the best way to tell people in your community about services that help them be healthy?

G6. We're almost through with the interview. Is there anything else you would like to add?

G7. We'd like to ask you to look at these pamphlets and tell us if you think it would be useful to have something like it in your native language. [*Show pamphlets, and write comments in the space below.*]

**Interviewer: Please do not forget to fill in the food questions at the end of the interview. They are found on the following pages. After the interview is completed, you will circle the answer on the codes below.**

B4. About how many times was Cambodian food a large part of any of the meals you ate in the past 2 days?

- 0. None
- 1. 1–2 meals
- 2. 3–4 meals
- 3. 5–6 meals
- 4. 7+
- 9. N/A

- B5. About how many times was red meat a large part of any of the meals you ate in the past 2 days?
0. None
  1. 1–2 meals
  2. 3–4 meals
  3. 5–6 meals
  4. 7+ meals
  9. N/A
- B6. Generally speaking, was the red meat...
1. Extra lean
  2. Lean
  3. “Regular”
  9. N/A
- B7. About how many times was chicken large part of any of the meals you ate in the past 2 days?
0. None
  1. 1–2 meals
  2. 3–4 meals
  3. 5–6 meals
  4. 7+ meals
  9. N/A
- B8. Generally speaking, was the chicken...
1. Skinless
  2. With skin
  9. N/A
- B9. About how many times was fish a large part of any of the meals you ate in the past 2 days?
0. None
  1. 1–2 meals
  2. 3–4 meals
  3. 5–6 meals
  4. 7+ meals
  9. N/A
- B10. About how many times was a vegetable protein (tofu, beans, soy product) a large part of any of the meals you ate in the past 2 days?
0. None
  1. 1–2 meals
  2. 3–4 meals
  3. 5–6 meals
  4. 7+ meals
  9. N/A
- B11. About how many times were dairy products a large part of any of the meals you ate in the past 2 days?
0. None
  1. 1–2 meals
  2. 3–4 meals
  3. 5–6 meals
  4. 7+ meals
  9. N/A



- B12. Generally speaking, are the dairy products you use...
1. Fat free (i.e., skim milk)
  2. Lowfat (i.e., 2% fat milk)
  3. Full fat (i.e., whole milk)
  9. N/A
- B13. About how many times were eggs a large part of any of the meals you ate in the past 2 days?
0. None
  1. 1–2 meals
  2. 3–4 meals
  3. 5–6 meals
  4. 7+ meals
  9. N/A
- B14. About how many servings of vegetables did you eat as a part of your meals in the past 2 days?
0. None
  1. 1–2 servings
  2. 3–4 servings
  3. 5–6 servings
  4. 7+ servings
  9. N/A
- B15. Generally speaking, were the vegetables...
1. Dried
  2. Canned/jar
  3. Fresh
  4. N/A
- B16. What types of vegetables do you eat (e.g., green beans, carrots, beets, etc.)?
- B17. About how many servings of fruit did you eat in the past 2 days?
1. 1–2 servings
  2. 3–4 servings
  3. 5–6 servings
  4. 7+ servings
  9. N/A
- B18. Generally speaking, was the fruit...
1. Dried
  2. Canned/jar
  3. Fresh
  9. N/A
- B19. What type of fruits do you eat (e.g., bananas, apples, etc.)?
- B20. Generally speaking, who prepares the foods you eat?
1. Self
  2. Other, same household
  3. Other, not restaurant
  4. A restaurant
  9. N/A

B21. Generally speaking, when you eat red meat, chicken, fish, and vegetables, were they prepared as part of the Cambodian meal?

- 0. No
- 1. Yes
- 9. N/A

B22. What are your favorite snack foods (e.g., candy, chips, cookies, cake, fruit)?

B23. About how many snacks do you eat each day?

- 0. None
- 1. 1–2 snacks
- 2. 3–4 snacks
- 3. 5+ snacks
- 9. N/A

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