

ASIAN AMERICAN
AND PACIFIC ISLANDER
WORKSHOPS
SUMMARY REPORT
ON CARDIOVASCULAR
HEALTH

A hand holding a globe with a volcano and sea scene overlaid. The background is a soft, pinkish-red gradient. The globe is held in the center, with a volcano on the left and a sea scene with figures on the right.


The Gift of the Sea and Volcano

In many ancient tales, myths, and folklores of Asia and the Pacific Islands, the sea represents life-providing sustenance to the people, and the volcano represents power reminding us to respect the forces of nature. Strengthened by the power of the volcano, ancestors navigated the seas to explore new territories, to defend their lands, and to reap the riches hidden in the blue crystal water. The gathering of Asian Americans and Pacific Islanders for these workshops marks the beginning of a new voyage—a journey to harvest the pearls of good health from the sea and share its abundance with the community. Now the journey begins...

Artwork by Leonard R. Barrit

Funding for the AAPI Strategy Workshops was provided by the National Heart, Lung, and Blood Institute and the Office of Research on Minority Health.

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*National Institutes of Health
National Heart, Lung,
and Blood Institute*

*NIH Publication No. 00-3793
March 2000*

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PREFACE

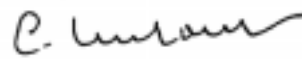
H eart disease is the leading cause of death in the United States, and its impact on Asian Americans and Pacific Islanders (AAPIs) is alarming. While major progress has been made in the national effort to fight heart disease, AAPIs have not fully reaped the benefits of new knowledge and therapies gained from research. Cardiovascular disease (CVD) accounts for 35 percent of all deaths for AAPI men and 36 percent for all AAPI women. The National Heart, Lung, and Blood Institute (NHLBI) has launched the “ASPIRE for Healthy Hearts” project to promote heart health among AAPIs.

The AAPI population is very diverse. Comprised of individuals with ancestral ties to more than 30 Asian and 25 Pacific Islander nations, AAPIs represent the most heterogeneous racial ethnic group in the United States. The recognition of their heterogeneity is an important step in understanding the impact of heart disease on AAPI families and communities. An equally important step in enriching the health and quality of life of AAPIs is the active participation of community members and leaders in defining community health problems and identifying culturally and linguistically appropriate solutions. The NHLBI collaborated with the Molokai General Hospital (MGH) and the Asian and Pacific Islander American Health Forum (API-AHF) to conduct strategy development workshops to explore cardiovascular prevention and

intervention opportunities in AAPI communities. A special thanks is extended to the workshop organizers for ensuring the successful implementation of this endeavor.

The Asian American and Pacific Islander Workshops Summary Report On Cardiovascular Health describes the impact of CVD upon this group and shares community recommendations on how to improve AAPI heart health at the local, state, and Federal levels. The message from the AAPI community is clear: heart disease affects AAPI families and culturally and linguistically appropriate outreach strategies are needed. Indeed, this message echoes the spirit behind Healthy People 2010—eliminate health disparities among all Americans. The road to ensuring cardiovascular health for all will require the dedication and perseverance of the Nation as a whole.

The NHLBI is committed to bringing optimal heart health for all Americans. By working with local communities and other organizations, we can ensure that all Americans live with strong minds, bodies, and hearts.



Claude Lenfant, M.D.

Director

*National Heart, Lung, and Blood Institute
National Institutes of Health*

FOREWORD

It is a pleasure to present the recommendations from the Native Hawaiian Heart Health Initiative Workshop held on December 4-6, 1998 in Moloka`i, Hawai`i and the first National AAPI Cardiovascular Strategy Workshop held on May 8-9, 1999 in San Francisco, California. These workshops addressed priority issues and opportunities for cardiovascular health promotion in the Native Hawaiian and AAPI communities. In addition, the National AAPI Cardiovascular Health Action Plan, derived from the National AAPI Cardiovascular Strategy Workshop, provides an ambitious national agenda for culturally and linguistically appropriate activities.

The Native Hawaiian Heart Health Initiative Workshop was a successful collaboration between the NHLBI and the MGH. This community forum brought over 100 participants (including Native Hawaiian physicians, elders, health workers, and consumers) to develop recommendations aimed at implementing community-based and family-oriented strategies to mobilize individuals, families, and communities to adopt and promote heart healthy behaviors.

The overwhelming response from the community and the Native Hawaiian physicians regarding cardiovascular health in Native Hawaiians have been the driving force behind a statewide effort to include the input of Native Hawaiian communities on all islands. Native Hawaiian Heart Health Initiative Workshops have been conducted on all the islands comprising the State of Hawai`i and reached a total of 519 individuals. The collective thoughts and recommendations from the island communities will provide the underpinnings for a comprehensive heart health initiative for Native Hawaiians.

In addition, the NHLBI worked with the APIAHF to conduct the First National Cardiovascular Health Strategy Workshop in San Francisco,

California. The workshop brought together over 60 individuals representing 11 Asian and Pacific Islander ethnic subgroups (Afghan, Asian Indian, Cambodian, Chinese, Filipino, Hawaiian, Hmong, Japanese, Laotian, Samoan, Vietnamese), 12 states (Arizona, California, Connecticut, Georgia, Hawai`i, Illinois, Massachusetts, New York, Ohio, Pennsylvania, Texas, Washington) and a multi-disciplinary range of expertise (academics, health care providers, health educators, community-based organizers) to identify priority areas in heart health promotion and community outreach strategies to implement effective interventions.

The workshop participants expressed a cogent message: AAPIs with over 50 distinct subgroups are at risk for CVD. The recommendations from these workshops serve as a blueprint for future planning, dialogue, and action to enhance the utilization of cardiovascular health information and thereby meet the important and distinct health needs of each subgroup of the AAPI population.

Given the President of the United States' national commitment of eliminating racial and ethnic disparities in health by the year 2010, we entrust that you will act as a catalyst of change, and implement and follow up on the recommendations set forth by the AAPI community.

Noa Emmett Aluli, M.D.
*Co-Medical Executive Director
Moloka`i General Hospital*

Betty Hong, M.P.H.
*Project Director
Asian and Pacific Islander
American Health Forum*

INTRODUCTION

The U.S. Department of Health and Human Services (DHHS) has declared an ambitious goal: to eliminate health disparities particularly in racial and ethnic minority groups by the year 2010. In addition, the President of the United States recently signed an Executive Order (13125) that focused specifically on elevating the AAPI health issue to a White House priority.

Given these significant events, the NHLBI has established a strong focus on racial/ethnic health disparities. In its initial efforts to address heart health in AAPI communities, the NHLBI collaborated with MGH to conduct a workshop on identifying cardiovascular health needs of Native Hawaiians on December 4-6, 1998 in Hawai`i, and with the APIAHF to conduct a strategy development workshop on May 8-9, 1999 in San Francisco. The purpose of the workshops was to identify key community CVD prevention opportunities among this diverse population. The results of these workshops are presented in this document.

This summary report provides a description of the workshop agenda, a list of discussion questions developed to engage participants in exploring the needs and opportunities for cardiovascular health promotion in the AAPI communities, and community recommendations based on group discussions. In preparation for the workshop, APIAHF collaborated with AAPI researchers and community-based organizations (CBOs) to conduct a literature review of epidemiological research studies, key informant interviews with AAPI CBOs, and ethnographic interviews on food habits and physical exercise. The detailed findings of the key informant and ethnographic interviews are presented in the appendix of this document.

Based on these workshops, community outreach strategies and approaches were developed to promote heart health for AAPIs. These recommendations underscore the importance of multilevel partnerships in initiating and maintaining healthy behaviors in AAPI communities.

NATIVE HAWAIIAN HEART HEALTH INITIATIVE WORKSHOP SUMMARY

Addressing Heart Disease in Native Hawaiians

December 4–6, 1998

Moloka'i, Hawai'i

BACKGROUND

The NHLBI, in collaboration with MGH, conducted an assessment workshop to build upon knowledge gained from Native Hawaiian research efforts and to identify culturally appropriate approaches to improve heart health among Native Hawaiians. More than 100 participants attended the workshop including Native Hawaiian physicians, community-based primary providers, community leaders, community health workers, and consumers.

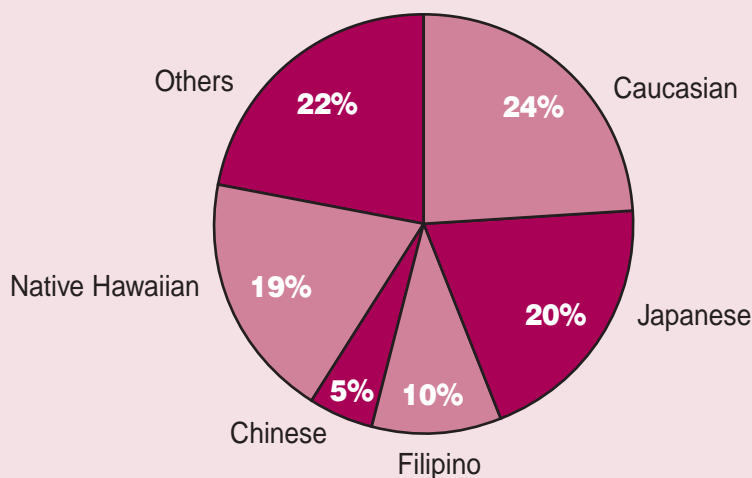
NATIVE HAWAIIAN CARDIOVASCULAR HEALTH PROFILE

Among Pacific Islanders, Hawaiians comprise 57.8 percent of the population. In the State of Hawai'i, Native Hawaiians comprise 19 percent of the total state population (Figure 1). Hawaiians represent about 211,000 persons of the overall

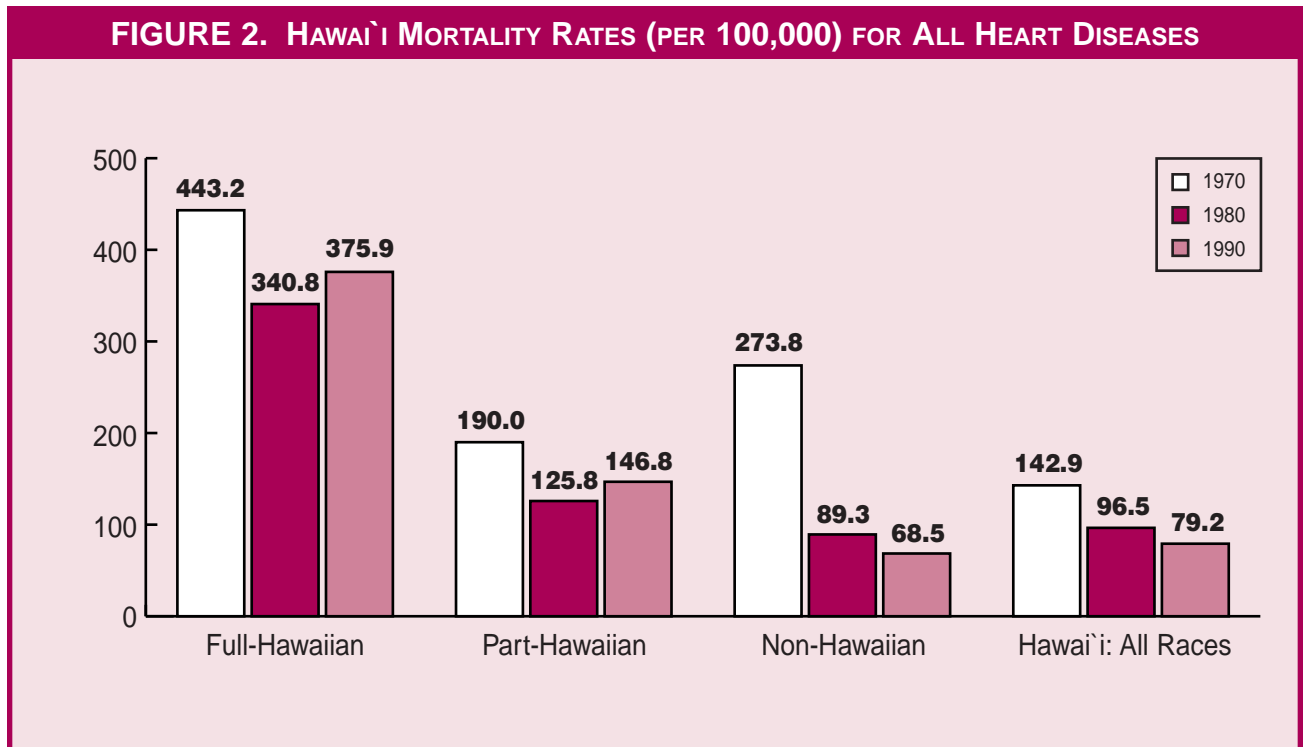
Asian and Pacific Islander population, and Native Hawaiian inclusion in the groups masks and conceals the alarming health disparities that plague the Native Hawaiian community. Diseases of the circulatory system are the leading cause of death among Native Hawaiians. Among the conditions relating to circulatory diseases, heart disease accounts for 80 percent of deaths due to circulatory disease followed by cerebrovascular disease at 14 percent.

The burden of heart disease is disproportionate among Native Hawaiians. The death rate for Hawaiians for heart disease is 66 percent higher than for the total state population (Figure 2). Among Native Hawaiians, the mortality rates for heart disease for full-Hawaiians are the highest—271 percent higher than part-Hawaiians and 382 percent than non-Hawaiians. The prevalence of risk factors is also higher among Native Hawaiians than the state population (Table 1).

FIGURE 1. RACIAL COMPOSITION OF HAWAII, 1992



Source: Hawai'i State Department of Health, Health Surveillance Survey.



Source: Look MA & Braun KL, 1995.

TABLE 1. MAJOR CAUSES OF DEATH, STATE OF HAWAII

Cause of Death	Native Hawaiians (Rate per 100,000)	Total State Populations (Rate per 100,000)
<i>Circulatory Disease</i>	414.7	266.2
Heart Disease	333.4	201.1
Hypertension	3.5	1.9
Cerebrovascular	58.3	51.8
Atherosclerosis	4.3	2.6
Other Circulatory	15.2	8.8
<i>Malignant Neoplasm</i>	231.0	159.7
<i>Accidents</i>	38.8	26.8
<i>Diabetes</i>	34.7	15.1
<i>Influenza/Pneumonia</i>	25.3	28.3

Source: Vital Statistics Office, Hawai'i State Department of Health, 1996.

TABLE 2. CARDIOVASCULAR RISK FACTORS OF NATIVE HAWAIIANS

Risk Factor	Native Hawaiian (percent)	Total State Population (percent)
Cigarette Smoking	27.0	19.0
Acute Drinking	20.0	15.0
Overweight	43.4	24.9
Hypertension	16.0	14.0
High Blood Cholesterol	24.0	33.0

Source: BRFSS: Health Promotion Branch, Hawai'i State Department of Health, 1996.

Moloka`i—The Last Hawaiian Island

The island of Moloka`i provided an appropriate setting for the workshop because it has been referred to as the “last Hawaiian Island.” It has the largest percentage of Native Hawaiians, and its communities maintain a slow-paced rural, face-to-face lifestyle based on a cohesive, family-oriented value system. There is a widespread unemployment rate due to the phasing out of the pineapple industry in the mid-1970s. Moloka`i has 129 miles of roadway, and there is no public transportation system on the island. It is accessible by boat, commercial airline, and air taxi, with an average flight time of 30 minutes between Honolulu or Maui and Moloka`i at the cost of \$100 round trip. The geographic location of Moloka`i represents two health-related barriers affecting this group: lack of accessibility resulting in low rates of participation and lack of Native Hawaiian service providers.

HISTORICAL BACKGROUND

Prior to this workshop, several research projects documented the alarming prevalence of heart disease among Native Hawaiians. In addition, several historical milestones provided opportunities for establishing community-based programs and activities to address Native Hawaiian cardiovascular health. Information related to research endeavors and historical developments are presented in this section.

Spotlight on Workshop Partners

MGH was founded in 1953 and became a subsidiary of the Queen’s Health System in 1987. Services provided by MGH to the community include mental health, preventive health, compassionate care, kidney health, traditional healing practices, specialty clinics, and home care. (www.queens.org/qhs/mgh.htm)

Na Pu`uwai Native Hawaiian Health Care System (NHHCS) is the designated NHHCS for the Islands of Moloka`i and Lana`i. Na Pu`uwai works in collaboration with public and private health sectors in the community (including MGH) to maximize and coordinate existing services to better serve Native Hawaiian clients.

Spotlight on Workshop Partners

The office of Hawaiian Affairs (OHA) is a semi-autonomous state agency whose mandate is to improve the condition of Native Hawaiians and Hawaiians.

(www.oha.org)

Native Hawaiian Health Research Accomplishments

In 1985 a landmark study was conducted on the island of Moloka`i to assess the prevalence of cardiovascular risk factors among Native Hawaiians in a rural island community. The study was done in conjunction with an international cooperative study on sodium intake and blood pressure known as the INTERSALT project. A survey of 256 Native Hawaiian adults, ages 20-59, found that:

- ❑ 65 percent of both males and females were overweight, compared to 27 percent of U.S. adults in the same age group;
- ❑ 42 percent were smokers;
- ❑ Native Hawaiians may be at high risk for premature coronary heart disease (CHD) and stroke due to obesity, hypertension, high blood cholesterol, low high-density lipoproteins (HDL), smoking, and diabetes mellitus;
- ❑ Individuals found to have significant abnormalities in the cardiovascular risk factor studies were often unaware of them, not under treatment, or not under adequate control indicating deficiencies in the health care systems and/or the knowledge of this population about the associated disease processes.

Initial recruitment of participants for this study by researchers resulted in poor turnout. With the involvement of a Native Hawaiian, primary care physician and community members who went door to door to recruit participants, the study

successfully reached 70 percent (n=257) of eligible adults in a specified homestead community. Conditions arranged with researchers, on behalf of the community included: community participation and involvement in use of data and publication of results.

The Establishment of Na Pu`uwai, Inc. (1985)

Na Pu`uwai, Inc. is a nonprofit organization comprised of Native Hawaiian residents from Moloka`i and Lana`i. The name, *na pu`uwai*, meaning hearts or many hearts, represents the life force of the Native Hawaiian community, a force which sends sustenance to the mind, body, spirit, and `aina (land). Na Pu`uwai, Inc. is committed to raising the health status of Native Hawaiians on Moloka`i and Lana`i to the highest possible level and to encourage the maximum participation of Native Hawaiians to achieve this goal. As a result of the 1985 Na Pu`uwai Heart Study, this community group formed the Na Pu`uwai, Inc. to address ongoing research among Native Hawaiians which would be respectful of the Native Hawaiian people and their cultural practices and beliefs.

Na Pu`uwai, Inc. became the first formal group of Native Hawaiians concerned about the health of Hawaiians and the need for community-based research to address the prevention and control of chronic disease. This group recognized that while the Na Pu`uwai Heart Study provided the first in-depth look at CVD in Native Hawaiians, providing the much needed “hard” data, there was critical need for followup care and culturally acceptable interventions.

The Moloka`i Diet Study (1987)

In 1987, Na Pu`uwai, Inc. conducted a study to begin to understand why Native Hawaiians have the poorest health status in Hawai`i. The Moloka`i Diet Study followed the precedent set in the Na Pu`uwai Heart Study by involving community members in the design, implementation, and evaluation of the study. The dramatic positive results of the traditional diet were overshadowed by the pride the participants and community felt in demonstrating a culturally relevant intervention. Subsequently, several diet programs utilizing traditional Hawaiian foods have been undertaken by community-based health agencies within the Native Hawaiian communities on other islands.

The Moloka`i Diet Study compared the dietary impact of the contemporary “Western” diet and the traditional Native Hawaiian diet or “pre-Captain Cook” diet on serum lipid levels of 10 Native Hawaiians. It demonstrated the blood lipid-lowering properties of an isocaloric diet using traditional Hawaiian foods. The effects of the traditional Native Hawaiian diet (high in fiber and 10-20 percent total fat content) were dramatic and replicable with subsequent traditional diet programs. Consistent and significant reductions in blood lipids were observed among participants during the 21-day traditional diet phase. When participants ate a contemporary “Western” diet, comprised of 30-40 percent total fat content and low in dietary fiber, the opposite occurred. Equally important to the diet itself was the use of congregate dining to foster peer support and to provide education on the cultural meaning and significance of foods in the traditional Hawaiian diet, the nutritional value of each food, and education from Native Hawaiian professionals on healthy lifestyle practices. It combined group dining and education with medical monitoring and supervision. Cultural sessions utilizing Native Hawaiian health resources within a cultural context as well as group support were vital components to the program.

Native Hawaiian Health Care Improvement Act of 1988

Congress passed the Native Hawaiian Health Care Improvement Act of 1988 (P.L. 100-579) to address the findings of the E Ola Mau Health Study. The E Ola Mau Health Study was the first comprehensive health assessment of Hawaiians in Hawai`i and found that Hawaiians have some of the poorest health status indicators of any group in the United States. The act provided funding for Papa Ola Lōkahi which was charged with developing an appropriate and culturally acceptable health service delivery system for Hawaiians in urban and rural communities. To fulfill this mandate, Papa Ola Lōkahi established a network of Native Hawaiian Health Care Systems (NHHCS) to serve as bridges linking the Native Hawaiian community with existing health care facilities already in place particularly with the community health centers. Na Pu`uwai is one of the five NHHCS. Na Pu`uwai serves the people of Lana`i and Moloka`i.

Na Pu`uwai Cardiovascular Risk Clinics (1991)

The Cardiovascular Risk Clinics (CRCs) were established to address the lack of intervention and followup services to “high risk” individuals identified in the Na Pu`uwai Heart Study. The program is in its seventh year and continues to be instrumental in identifying Native Hawaiians at high risk for CVD.

Clinic services include: height/weight measurements, blood pressure monitoring, waist/hip measurements, urine testing for glucose, fasting blood chemistry including cholesterol, triglycerides and glycohemoglobin, and nutrition assessment counseling. The 2-hour educational session includes information on healthy lifestyle practices and incorporates traditional healing practices. The CRC concludes with an exit interview with a physician or a nurse, who reviews the patient’s questionnaire on CVD risk factors and sets a future appointment with the client to review lab results and establishes a health care service plan.

STRATEGY DEVELOPMENT SESSIONS: COMMUNITY IN ACTION

To address the cardiovascular health of Native Hawaiians, the NHLBI, in collaboration with MGH, conducted an assessment workshop to consider how to more strategically link health education and clinical services for Native Hawaiians.

Spotlight on Workshop Partners

The Queen's Health System (QHS) is a nonprofit corporation, established in 1985 to bring expanded health care capabilities to the people of Hawai`i and the Pacific Basin. It is Hawai`i's largest family of health care-related companies, ranking 10th in size among Hawai`i corporations. (www.queens.org)

Concurrent small group discussions were held to provide participants with an opportunity to give feedback and share information. Groups were designed to accommodate three categories of discussants:

1. Native Hawaiian and non-Hawaiian physicians
2. Community participants, lay health workers, and consumers
3. Other health care professionals

Each group was given a set of questions to facilitate discussion about opportunities and barriers to cardiovascular health, partnership opportunities between physicians and community members, and tools needed to promote heart health. Recommendations were made based on these group discussions. These group questions were:

Group 1: Native Hawaiian and non-Hawaiian Physicians

- ❑ How can physicians become more proactive at their community level to implement a program like the CRC?
- ❑ Partnership with patients—what are the barriers/concerns for optimal care for your patients?
- ❑ What are the tools needed to get the job done?
- ❑ What is the role and purpose of a Native Hawaiian Physician Network?

Group 2: Community Participants, Lay Health Workers, and Consumers

- ❑ What are the challenges and opportunities about the CRC model?
- ❑ What is the community's role?
- ❑ What are the training opportunities?
- ❑ What materials or tools are needed to help you do your job better?

Group 3: Other Health Care Professionals

- ❑ What are the issues and barriers related to patient/family education?
- ❑ What are some tools needed to better educate the patient/family about heart health?
- ❑ What are the strategies that they can implement from the model to better reach the patient and family?

- ❑ What are compliance issues and concerns?

COMMUNITY RECOMMENDATIONS

These summary recommendations are a composite of the three discussion groups. They fall into two categories: community mobilization and community-based outreach strategies.

A. Community Mobilization Strategies

- ❑ Strengthen *kauka* (physicians) presence and leadership by speaking with one voice, advocating for Native Hawaiian health, mentoring future health professionals, networking, and sharing resources and knowledge with the community.
- ❑ Advocate for policies that promote Native Hawaiian health (e.g., insurance coverage for children and the elderly, immunizations within schools, heart-healthy nutrition programs in schools, affordable exercise facilities). Collaborate with physicians to affect policy change.
- ❑ Develop and utilize standardized data systems among NHHCS to facilitate rigorous community-based research. Collect reliable ethnic-specific data to enable researchers, physicians, and lay health workers to provide optimal care for patients.
- ❑ Develop partnerships with the NHHCS, public health officials, local community organizations, and Hawaiian associations. Partner with doctors to bring effective community-based services to families.
- ❑ Incorporate cardiovascular health in disease management initiatives at the state and local levels. Enhance existing infrastructures to provide comprehensive health services for patients. Engage Native Hawaiian physicians in implementing CRCs in Native Hawaiian communities.
- ❑ Identify local health and community resources for families (e.g., traditional healers, physicians, walking clubs, support groups). Identify funding sources to initiate and sustain community programs.

B. Community Outreach Strategies

- ❑ Use mass media to increase CVD awareness in the Native Hawaiian community. Use local newspapers, radio, television, and community channels to

disseminate culturally appropriate heart health messages to the Native Hawaiian community.

- ❑ Identify incentives to engage in heart healthy behaviors particularly for high-risk individuals (e.g., transportation services). Provide motivational messages to sustain lifelong commitment to heart health.
- ❑ Utilize approaches that empower the *ohana* (family). Provide prevention and intervention services that focus on the entire family. Address the need to transform knowledge into education for families and community members.
- ❑ Use a lifespan educational approach to advance Native Hawaiian health (e.g. children, youth, adults, elderly). Develop tools (e.g., self-help guides, health videos, family-centered nutrition, and physical activity guide) to educate community members about heart health.
- ❑ Collaborate with schools to educate children about heart health. Start promoting cardiovascular health at the preschool level. Partner with school nutritionists to provide heart healthy meals for children.
- ❑ Develop school-based heart curriculum with interactive features and focus on family and culturally appropriate techniques (e.g., genealogies, talk stories, multigenerational groups).
- ❑ Create partnership opportunities for doctors, lay health workers, and community members to improve Native Hawaiian health (e.g., develop health education materials using simple language, resource centers or libraries, role playing, and mentoring).
- ❑ Provide training opportunities for doctors to communicate and interpret clinical results in layman's terms. Provide training for nutritional aids on the benefits of Native Hawaiian diet, how to read food labels, and other skills that promote healthy eating habits.
- ❑ Use technological advances in communications to improve Native Hawaiian health (e.g., telemedicine, home monitoring devices, virtual community). Use Web-based technology to facilitate electronic exchange of medical knowledge and traditional healing practices.

CONCLUSION

The overwhelming response of the community and the Native Hawaiian physicians regarding cardiovascular health in Native Hawaiians has become the driving force behind a statewide effort to include the input of Native Hawaiian communities on all islands. Native Hawaiian Heart Health Initiative Workshops have been conducted on the islands comprising the State of Hawai`i to solicit broad-based community input prior to implementation of community intervention projects. The collective thoughts and recommendations from the island communities will provide the underpinnings for a comprehensive heart health initiative for Native Hawaiians.

Spotlight on Workshop Partners

Papa Ola Lōkahi was established through the Native Hawaiian Health Care Act of 1988. Papa Ola Lōkahi is a consortium of public agencies and Native Hawaiian organizations convened for the single purpose of improving the health and well-being of Native Hawaiians.

`Ahahui O Na Kauka (Association of Native Hawaiian Physicians) is a nonprofit educational, scientific, and charitable organization focused on Native Hawaiian health care. Its membership is composed exclusively of Native Hawaiian physicians. The mission of `Ahahui O Na Kauka is to improve and provide superior health care services to all Native Hawaiians.

www.kauka.org

DECEMBER 4, 1998

- 7:00–7:30 a.m.** Welcome and Introductions
- Purpose of Workshop
- Orientation to Moloka`i

DECEMBER 5, 1998

- 7:45–8:30 a.m.** Welcome
- 8:30–12:00 p.m.** Exploring the Moloka`i Model for Heart Health
- Overview of the Burden of Cardiovascular Disease in Native Hawaiians
- Key Messages: Channels of Communication—What Works? What Doesn't?
- ❑ Interventions: What Works?
 - ❑ Behavioral/Community
 - ❑ Ho`oke `Ai Moloka`i Diet Study
 - ❑ Medical and Surgical
- 12:00–1:30** Lunch and Presentation on Developing a Prevention and Control Research Agenda
- 1:30–3:00** **Small Group Sessions**
- Group 1: Native Hawaiian and non-Hawaiian Physicians**
- ❑ How can physicians become more proactive at their community level to implement a program like the CRC?
 - ❑ Partnership with patients—what are the barriers/concerns for optimal care for your patients?
 - ❑ What are the tools needed to get the job done?
 - ❑ What is the role and purpose of a Native Hawaiian Physician Network?

DECEMBER 5, 1998 (CONTINUED)

Group 2: Community Participants, Lay Health Workers, and Consumers

- ❑ What are the challenges and opportunities about the CRC model?
- ❑ What is the community's role?
- ❑ What are the training opportunities?
- ❑ What materials or tools are needed to help do your job better?

Group 3: Other Healthcare Professionals

- ❑ What are the issues and barriers related to patient/family education?
- ❑ What are some tools needed to better educate the patient/family about heart health?
- ❑ What are the strategies that they can implement from the model to better reach the patient and family?
- ❑ What are compliance issues and concerns?

3:00–3:30

Break

3:30–4:15

Group Reports

4:15–5:30

Summary: What's next? How can NHLBI help alleviate the burden of heart disease among Native Hawaiians?

5:30–6:30

Dinner

6:30–8:00

Native Hawaiian Nutrition

DECEMBER 6, 1998

8:30–10:00

a.m.

Vision for a Concerted Heart Health Initiative for Native Hawaiians

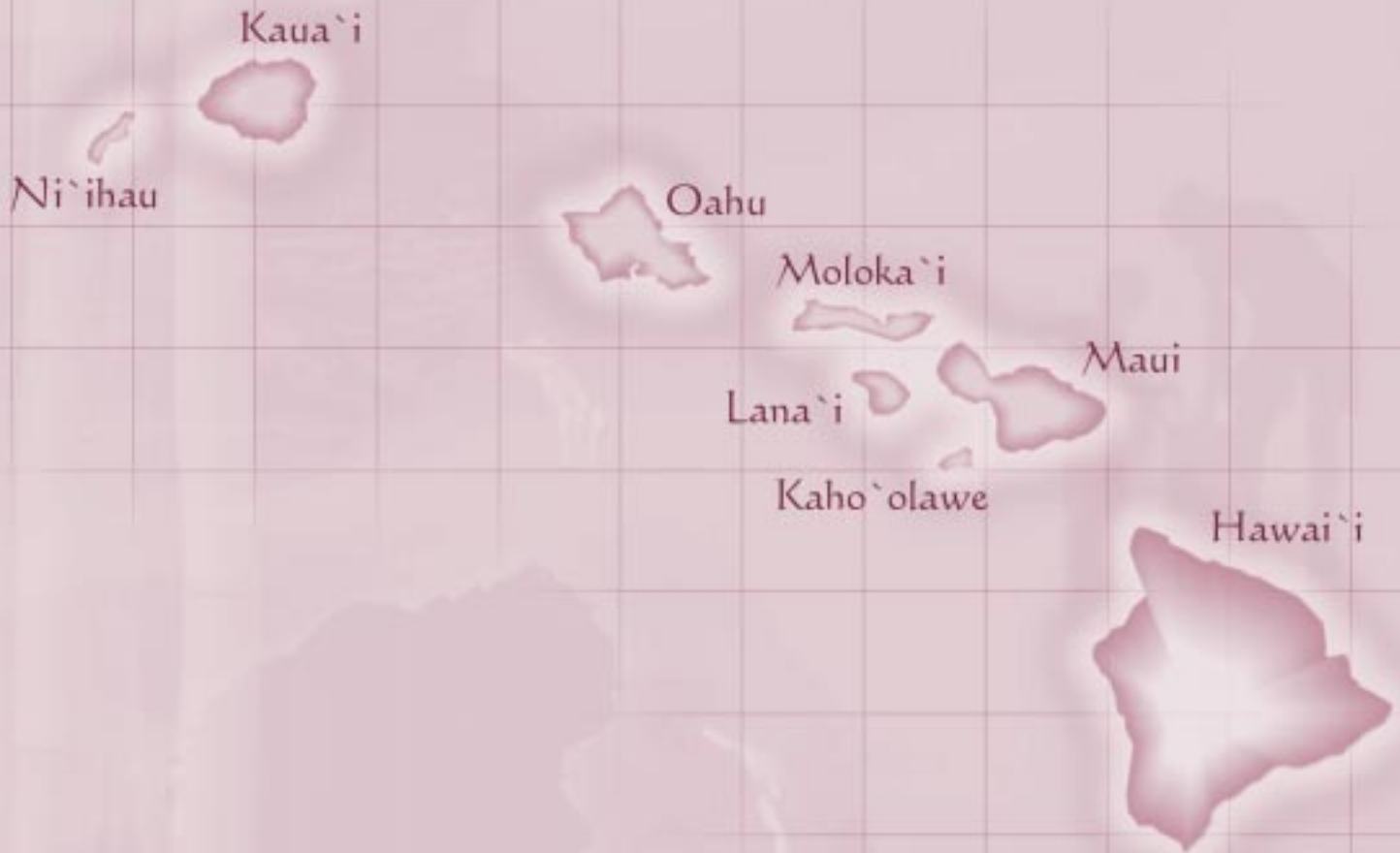
10:00–2:30

p.m.

Geopolitical Health Tour of Moloka`i and Adjournment

He anapa ana na kauila iluna a hoea a ola l ka moku

The lightning flashes brightly above. It arrives with life to the body.
Chanted at the meeting by Kamana `opono Crabbe



Ke ku no ia o ke kumu kauila o Pu`ukapele, a`ohe makani nana l kulai

Amid all adversity the kauila tree of Pu`ukapele stands tall and withstands all.
Chanted at the meeting by Kamana `opono Crabbe

NATIONAL AAPI CARDIOVASCULAR STRATEGY WORKSHOP SUMMARY

May 8–9, 1999

San Francisco, California

BACKGROUND

The NHLBI, in collaboration with the APIAHF, conducted the National AAPI Cardiovascular Strategy Workshop on May 8-9, 1999 in San Francisco. This workshop brought together over 60 AAPI health professionals and community leaders. The purpose of the workshop was to assess CVD risk factors, identify partners for dissemination, and discuss opportunities for and challenges to developing outreach activities. In preparation for the workshop, APIAHF collaborated with AAPI researchers and CBOs to conduct a literature review of epidemiological research studies, key informant interviews with AAPI CBOs and ethnographic interviews on food habits and physical exercise. The findings culminated in the National AAPI Cardiovascular Health Action Plan to address priority issues identified by workshop participants to improve the cardiovascular health of AAPI communities and to further the Nation's goal of eliminating racial and ethnic disparities in health to improve the overall health of the American people. The detailed findings of the key informant and ethnographic interviews are presented in the appendix of this document.

ASIAN AMERICAN AND PACIFIC ISLANDER POPULATION PROFILE

AAPIs are the fastest growing ethnic/racial group nationwide. On July 1, 1998, AAPIs represented approximately 3.9 percent or 10.4 million of the U.S. population and its associated Pacific Island Jurisdictions as compared to only .4 percent of the Nation's population in 1960. From 1980 to 1990, the U.S. AAPI population increased over 95 percent as compared to the 51.5 percent increase in the Hispanic population, 27.7 percent in the Native American population, 13.2 percent increase in the African American population and 4.2 percent

Spotlight on Workshop Partners

The APIAHF is a national advocacy organization dedicated to promoting policy, program and research efforts for the improvement of the health status of all AAPIs. APIAHF conducts policy analysis, research, information dissemination, and community capacity building activities to assure that the health and welfare needs of AAPIs throughout the United States are addressed. APIAHF is based in San Francisco, California, with a branch office in Washington D.C. (www.apiahf.org)

increase in the non-Hispanic white population in the same time period. Between July 1, 1990 and 1998, AAPIs again had a higher rate of population growth than any other race in the Nation—37 percent. The United States Census Bureau projects that the growth of the AAPI population will reach 34.4 million by the year 2050, representing almost 10 percent of all Americans. Immigration to the United States and resettlement of refugees from Southeast Asia in the mid-1970's account for much of the population growth (86 percent). However, several Asian groups (such as the Chinese and Japanese) have been in the United States for generations, relatively few Pacific Islanders are foreign-born, and Native Hawaiians are the indigenous people of the State of Hawai'i who settled there more than 2,000 years ago (U.S. Census Bureau, 1995).

The AAPI population is extremely heterogeneous with a high proportion of immigrants and refugees. The Asian and Pacific Islander single racial classification consists of approximately 30 Asian and 25 Pacific Island nations with distinct languages, culture, history of immigration, and community norms, relative to health and well-being. Some of the ethnic subgroups included in the category Pacific Islander includes: Chamorro (Guam), Chuukese, Fijian, Hawaiian, Kosraean (Federated States of Micronesia), Mariana Islanders (Commonwealth of Northern Mariana Islands), Melanesian, Palauan (Republic of Palau), Papese, Pohnpeian, Samoan (American and Western Samoa), and Tongan. Some of the ethnic subgroups included in the category Asian includes: Afghani, Asian Indian, Bangladeshi, Burmese, Cambodian, Chinese, Filipino, Hmong, Indonesian, Iwo-Jiman, Japanese, Korean, Laotian, Malaysian, Mien, Nepali, Okinawin, Pakistani, Sikkim, Sri Lankan, Thai, and Vietnamese.

Nearly 40 percent of the Nation's AAPI population lives in California, followed by New York (9.3 percent), Hawai'i (8.3 percent), Texas (4.7 percent), New Jersey (3.9 percent), Illinois (3.8 percent), and Washington (3.0 percent). According to the March 1994 Current Population Survey, AAPIs were more likely than non-Hispanic whites to reside in metropolitan areas (95 percent vs. 75 percent). Although over 50 percent of all AAPIs live in the Western United States, the AAPI population has increased significantly in other regions: by 139 percent in the South and Northeast and by 97 percent in the Midwest (Takeuchi and Young, 1994).

These distinct ethnic subgroups not only reflect cultural and linguistic differences but also socioeconomic, educational, and generational differences that influence the decisionmaking skills and social support necessary for sustained reduction of cardiovascular-associated diseases. Historically, AAPIs have been labeled as the "healthy minority," in part, as a result of grouping all AAPI subgroups into one homogenous category. Contrary to this stereotype, AAPIs show bipolar patterns in socioeconomic and health status (Lin-Fu, 1988).

"Socioeconomic conditions, especially poverty, adversely influence many health outcomes, including almost all of the leading causes of death."

San Francisco, DHHS, 1998

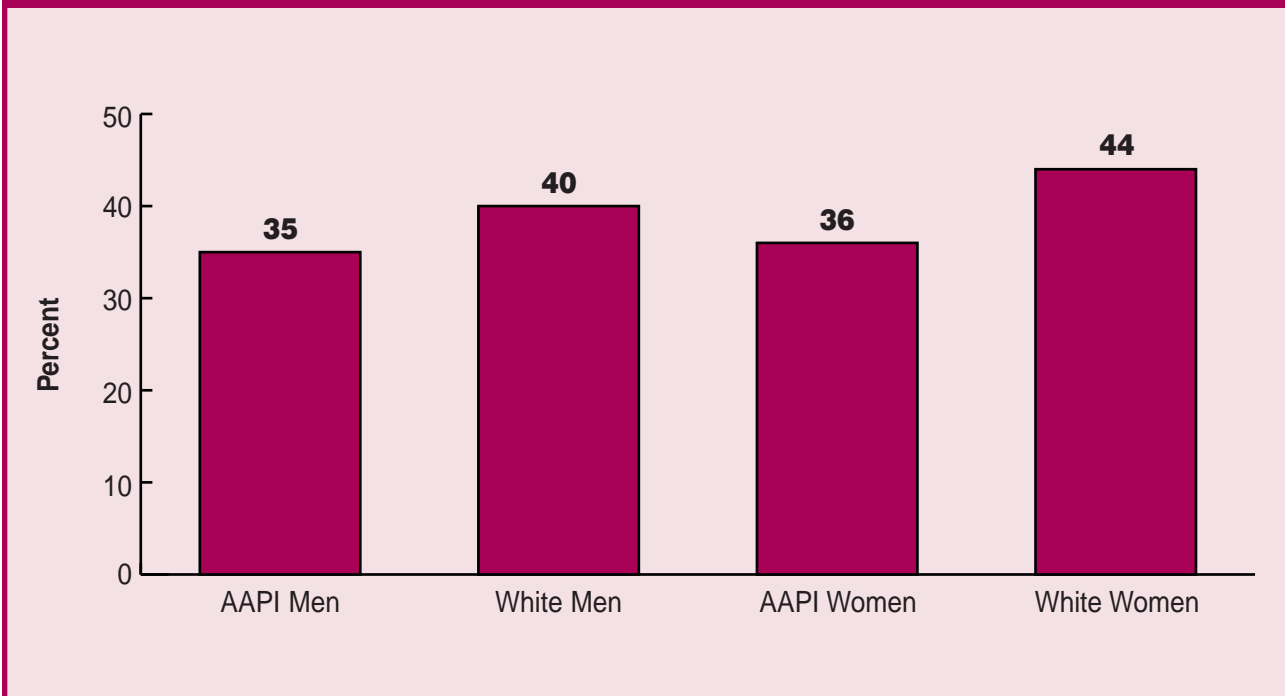
ASIAN AMERICAN AND PACIFIC ISLANDER CARDIOVASCULAR HEALTH STATUS: WHAT DO THE DATA TELL US?

CVD is the leading cause of death and disability for Americans, accounting for approximately 960,000 deaths in 1995 alone. According to the U.S. DHHS, CVD kills nearly as many Americans as all other diseases combined. Estimated costs associated with CVD, both direct medical costs and indirect costs (lost productivity from morbidity and early mortality), are nearly \$260 billion annually (NHLBI, 1997).

Disparities in cardiovascular health still persist among AAPIs as well as with other minority groups. For the majority of AAPI populations, CVD continues to be the leading cause of death. For example, in the State of Hawai'i, Native Hawaiian mortality due to heart disease is 66 percent higher than the total state average (Johnson et al., 1996). Largely an immigrant population, AAPIs are particularly disadvantaged in benefiting from scientific and medical advancements in cardiovascular research. Despite increased awareness and a desire to seek CVD prevention and intervention services, the majority of AAPIs are precluded from doing so because of limitations to health services access including cultural, linguistic, and economic barriers.

Based on the 1998 American Heart Association's Statistical Update, CVD as a percent of total deaths for male AAPIs (35.4 percent) is second to that of white males (39.9 percent). For female AAPIs, the CVD mortality percentage ranked third (36.1 percent) following African American females (41.6 percent) and white females (44.9 percent) (Figure 1).

FIGURE 1. CVD AS A PERCENTAGE OF TOTAL DEATHS



Source: American Heart Association, Statistical Update, 1998.

Literature Review of Epidemiological Research Studies

A thorough literature review of epidemiological studies was conducted to ascertain the state of knowledge regarding the impact of CVD upon AAPIs. The findings presented here are based on the review of more than 40 AAPI CVD epidemiological articles published in the last 10 years. The review was limited to published articles reporting data from adult populations in the United States and did not include review articles, conference proceedings, abstracts, unpublished reports, editorials, opinion letters, or commentaries. Priority was given to identifying articles that would provide information by AAPI ethnic subgroup, CVD morbidity and mortality, prevalence of established major risk factors, knowledge of awareness of risk factors, and studies addressing modification of lifestyle behavior.

CVD Data on Asian Americans and Pacific Islanders

The available data reveals that there is a high prevalence of high blood pressure (hypertension) in Filipinos, Japanese, and Southeast Asian populations; high prevalence of obesity and diabetes among Pacific Islanders; and high incidences of

stroke among South Asian populations. In addition, there is a high prevalence of smoking among Southeast Asian and Korean men. Low levels of cardiovascular awareness, treatment, and control among AAPIs were cited in this review suggesting the need for culturally and linguistically appropriate prevention and intervention services accessible to the target AAPI ethnic subpopulations.

Before plans for cardiovascular risk reduction can be fully formulated, studies of CVD risk factors by AAPI ethnic subgroups must be undertaken. Simply applying “established mainstream” prevention methods may have limited benefit because so many other environmental factors have not been considered including socioeconomic status, AAPI ethnic language needs, education level, and social and cultural norms. In order to reduce the burden of CVD mortality and morbidity among AAPI communities, healthy heart promotion and intervention programs will need to be culturally competent in their design and practice. In addition, it will be necessary to assure that basic research, clinical and psychosocial studies, epidemiological surveys, professional training, and public policies are available to support improvements in AAPI cardiovascular health.

Data Limitations

To date, an accurate profile on the current CVD health status of AAPIs and its subpopulations is unclear due to:

- ❑ Unavailable disaggregated data for AAPI subgroups because U.S. surveys, census data, and other national databases do not include detailed descriptions of race/ethnicity. Health disparities among AAPI subpopulations are masked when aggregated data are presented;
- ❑ Relatively small sample sizes of AAPIs within many national data systems (e.g. those based on the National Health and Nutrition Examination Survey (NHANES) or the National Health Interview Survey (NHIS). With few exceptions, the ethnic-specific data, when available, are derived from pilot studies with small numbers in each ethnic subgroup, resulting in an inability to make reliable estimates for the subgroups. The literature reviewed had considerable variation in the AAPI sample size; ranges were as small as five to as large as 10,000 AAPI persons (Bates et al., 1989; Klatsky et al., 1991);
- ❑ Lack of systematic data collection among AAPIs and differences in the way researchers report data. Valid comparisons of results between different studies are difficult;
- ❑ Lack of longitudinal studies to determine CVD risk and other isolated factors that may exist between and within AAPI ethnic subgroup populations (e.g., AAPI-immigrant versus AAPI-American born);
- ❑ Lack of adequate and up-to-date population-based data on CVD health status including CVD risk profiles for AAPI subgroups. With the exception of early epidemiological studies conducted in Hawai'i, California and American Samoa, most of the studies are cross-sectional focusing on one or two CVD risk factors and conducted in few AAPI subgroup populations. While few studies on South Asians and Southeast Asians were conducted in the 1990s, data for Chinese, Filipino, Japanese, and Samoans were mainly from data sources prior to 1980. In addition, most of the available data have been gathered with questionnaires without concurrent biomedical measurements; and

- ❑ Potential bias in the sampling methods applied to selection of participants. Study participants were often self-referred and were recruited from health clinics (i.e., only 32 percent of clinic clients agreed to participate in the New York City Chinatown Health Center study, raising the issue of generalizability in this study).

Research reveals high rates of:

- Hypertension in Filipinos, Japanese, and Southeast Asians;
- Obesity and diabetes among Pacific Islanders;
- Stroke among South Asians; and
- Smoking among Korean and Southeast Asian men.

CVD Mortality

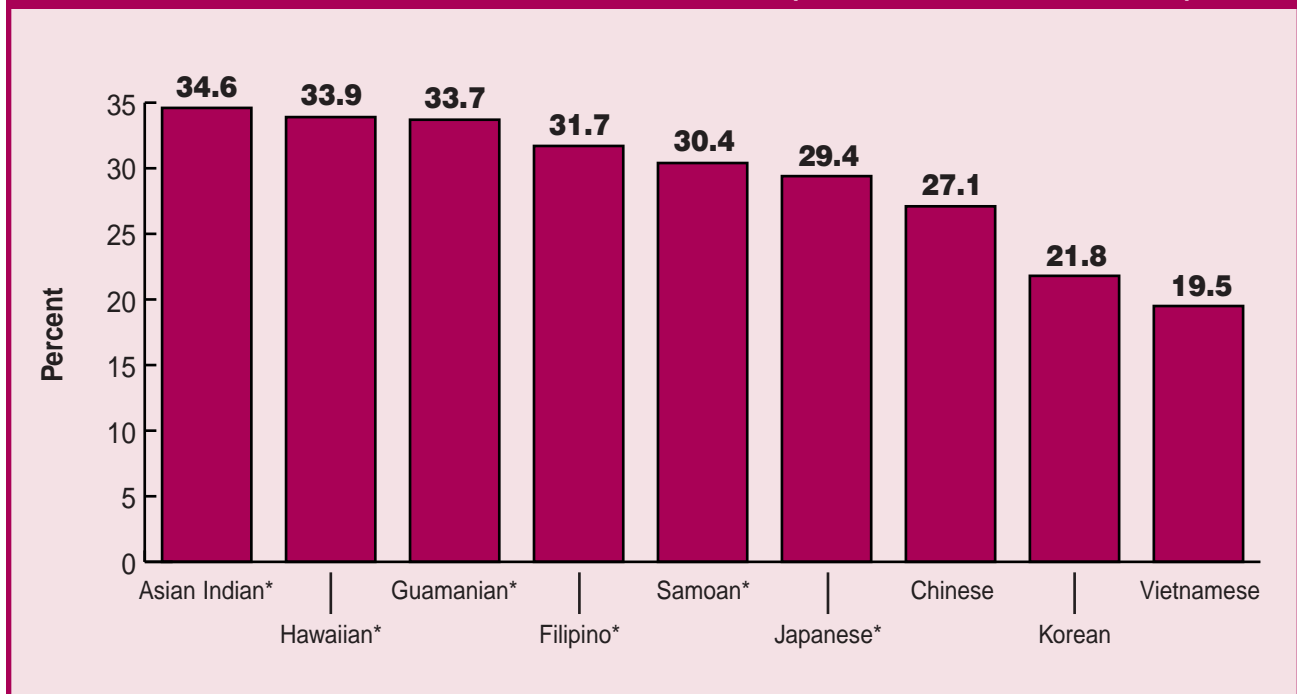
Heart disease and cancer are either the leading or second leading cause of death for each of the AAPI subgroups (Figure 2). Stroke is the third leading cause of death for Chinese, Japanese, Hawaiians, and Filipinos. For the period of 1990-95, stroke was the second leading cause of death for Filipino females in San Francisco, California (SF DHHS, 1998). For Asian Indians, Hawaiians, Guamanians, Filipinos, Samoans, Japanese, Chinese, and Koreans heart disease claimed over 22 percent of all deaths (National Center for Health Statistics, 1994). Alarming to note is that for both Hawaiians and Samoan groups, heart disease remains the leading cause of death beginning at the age of 25 and continues throughout their lifetime. In the State of Hawai'i, Native Hawaiian mortality due to heart disease is significantly higher than the total state, 66 percent above the state average (Johnson et al., 1996). Similar to all racial groups, heart disease is the leading cause of death in the age group 65 years and older.

However, it is important to caution the validity of available mortality data. While all-cause death rates are reported to be lowest among AAPIs (350.5 per 100,000) from the National Center for Health Statistics (NCHS, 1991), ethnic-specific samples showed tremendous variation among AAPI subgroups (Hoyert and Kung, 1997). Moreover, the finding of only 82 percent concordance rate between race on death certificates and a population data source for the AAPI populations (Sorlie et al., 1992) led some authors to conclude that the net effect of misclassification is an underestimation of deaths and death rates for AAPI populations (Yu and Liu, 1992; Uehara et al., 1994).

In American Samoa, CVD and diabetes-related mortality were determined from death records as part of the Pennsylvania University's Samoan Migration Project. Age-adjusted mortality rates of CVD and diabetes-related mortality in the period 1971-74 were reported higher than the period 1963-66. Although the presence of other CVD risk factors (e.g. tobacco, cholesterol) were not considered, CVD mortality was associated with baseline blood pressure and obesity. Higher mortality rates were also found in the modernized areas compared to traditional areas. The CVD

death rate was also found to be associated with the physical activity level. Among sedentary men, the CVD death rate was reported to be 43 percent compared to 29 percent for those in more active occupation. In the San Francisco Samoan Study, higher incidences of premature (< 50 years) CVD mortality were reported in comparison with Samoans in Hawai'i and Samoa. Higher CVD mortality rates for immigrant Samoans were associated with excessive weight gain, elevated blood pressure and high plasma blood glucose levels among the San Francisco Samoans (data collection period: 1966-78). Several papers from the Honolulu Heart Program reported CVD mortality among Japanese men. One paper compared coronary heart disease (CHD) incidence and mortality rates of the study population to the overall state rates. The state records showed a decline in CHD mortality between 1968 and 1978, while there was no evidence of a similar decline in the men in the Honolulu Heart Program. The relationship between glucose intolerance, diabetes, and sudden death was explored in another study. Almost 50 percent of these deaths were due to heart disease, stroke, or aneurysm. Men who were glucose intolerant or diabetic were found to be at significantly higher risk for sudden death.

FIGURE 2. HEART DISEASE AS CAUSE OF DEATH (PERCENTAGE OF ALL DEATHS)



Source: National Vital Statistics System, CDC, NCHS, 1994.

* Heart disease is the leading cause of death.

CVD Morbidity

There is a paucity of data on CVD morbidity patterns in AAPI and its subgroups. According to the 1993 California hospital discharge survey, psychoses, heart failure, and stroke were the three most common hospital discharge diagnoses unrelated to childbirth for AAPIs. Asian Indians have been reported to have one of the highest rates of coronary artery disease (CAD) of any ethnic group studied. This high risk has been reported for Asian Indians living in the United States and in other countries. In a longitudinal study among health plan members in California, the risk of hospitalization for CAD among Asian Indians was more than three times (relative risk of 3.7) that for whites in analyses that controlled for covariates including age, body mass index, total serum cholesterol, and blood glucose among others. The risk was more than six times greater for Asian Indians compared to Chinese in the same study (Klatsky, 1994).

CVD Risk Factors by AAPI Subgroup

Five risk factors are designated *established* because substantial amounts of data from many disciplines have demonstrated their significant role in the development of CVD. The following summary highlights these risk factors by AAPI ethnic subgroup from the articles reviewed: high blood cholesterol, high blood pressure or hypertension, diabetes, physical inactivity/nutrition, and tobacco use/exposure.

1. High Blood Cholesterol

According to the National Cholesterol Education Program (NCEP), average cholesterol levels have decreased from 220 mg/dL in 1961-62 to 203 mg/dL (NHANES III). For adults a normal blood cholesterol is 200 mg/dL; borderline is 200-239 mg/dL; and 240 mg/dL or above is considered high. Based on the 1998 Heart and Stroke Statistical Update, an estimated 96,800,000 American adults (51 percent) have blood cholesterol levels of 200 mg/dL or higher. According to the same 1998 update, a study of high blood cholesterol was examined for AAPIs in the aggregate which reported 27.4 percent of AAPI men and 25.8 percent of AAPI women age 18 and older have high blood cholesterol.

Chinese

Among 194 self-referred clinic patients at the New York City Chinatown Health Center self-reported rates for CVD were: 23 percent hypertension, 5 percent CHD, 4 percent stroke or peripheral vascular disease, and 4 percent diabetes (Pinnelas et al., 1992). Foreign-born Asians (presumed to be primarily Chinese based on place of birth) averaging 15 years in the United States had the same distribution of desirable (40 percent), borderline-high (37 percent), and high levels of blood cholesterol (23 percent) as the NHANESII study group. Although no difference in cholesterol levels for women and men were found before age 45, higher levels of cholesterol in women after age 45 were seen compared to the men in the study.

Southeast Asian

One hundred and fifty-four Southeast Asian refugees in a primary care clinic in Seattle, Washington were screened according to the NCEP's guidelines (Dodson et al., 1995). A high prevalence of smoking (27 percent) was reported. Hypertension was the most common CVD risk factor (26 percent). Fourteen percent of the Southeast Asian subjects required a therapeutic intervention for hypercholesterolemia. The authors conclude that CVD risk factors are common in Southeast Asian refugees among primary care clinic patients. In a 1991 study of a behavioral risk factor survey of Vietnamese in California, the estimated prevalence of hypercholesterolemia for men was 38 percent and for women 32 percent (Centers for Disease Control and Prevention, 1992).

Blood cholesterol screening is beneficial in personalizing the importance of keeping blood cholesterol levels normal. To date, overall AAPI blood cholesterol measurement is poor. Based on Centers for Disease Control and Prevention (CDC) reports, in 1992, a significant proportion of Vietnamese men (56 percent) and women (55 percent) had never checked their cholesterol level compared with 41 percent of men and 35 percent of women in the mainstream.

2. High Blood Pressure

High blood pressure (hypertension) is defined as a systolic blood pressure equal to or more than 140 mm Hg or the diastolic blood pressure equal

to or more than 90 mm Hg or on antihypertensive medication. Hypertension is easily detected and usually controllable. As one of the pioneers of cardiovascular epidemiology, R. Stamler has stated, "Rise of blood pressure with age, which can move people from 'normal' to 'high' levels of blood pressure, is not an inevitable human condition, and prevention of that rise could eliminate epidemic hypertension, which is a major disease in industrialized countries as well as in many developing countries." It should be noted that high blood pressure is the leading cause of stroke, kidney disease, and cardiac disease. Based on decades of research, five major exposures have influenced the onset of high blood pressure in our society: high salt intake, low potassium intake, high ratio of dietary sodium to potassium, overweight, and high alcohol intake (Marmot et al., 1992). One in four adults has high blood pressure (NHLBI, 1996). Compared to white women and men, respectively, age-adjusted prevalence of hypertension for AAPI women is 8.35 percent versus 10.96 percent and for AAPI men 9.67 percent versus 10.32 percent. The majority of hypertension studies among AAPIs have been derived from studies conducted in Hawai'i, California, and New York.

Chinese

In the California Hypertension Survey of 1979 (Stavig et al., 1984, 1988), Chinese had relatively low prevalence rates of hypertension. However, among those who were hypertensive, only 46 percent compared to 56 percent overall, were aware that they had high blood pressure. The data showed that Chinese had a lack of understanding about the consequences and nature of hypertension; only half responded correctly that high blood pressure leads to "serious" illnesses (79 percent overall), and only 15 percent knew that the symptoms of high blood pressure are "never felt" (31 percent overall). In another study of cardiovascular risk factors among Chinese, 346 elderly (age 60 and above) Chinese immigrants in Boston were reported to have a high prevalence rate of hypertension, 29.7 percent for men and 33.5 percent for women (Choi, 1990).

Filipino

Relatively high rates of hypertension prevalence have been reported for Filipino Americans. In the

California Hypertension Survey of 1979 (Stavig et al., 1984, 1988), overall prevalence of hypertension was highest for blacks (33.8 percent), followed by Filipinos (26.6 percent). Higher rates of uncontrolled hypertension for Filipinos were consistent by gender and age. Among men ages 18-49, Filipinos had the highest rate (29.5 percent), followed by other AAPIs (28.5 percent) and blacks (25.4 percent); for men over age 50, the rate for Filipinos (50.8 percent) was comparable to that for blacks (52.9 percent), and the rates for Filipinos, Chinese (45.0 percent), and other AAPIs (45.2 percent) were all higher than the rate for whites (38.5 percent). Among women ages 18-49, rates for Chinese (6.4 percent) and Filipinos (6.5 percent) were slightly higher than that for whites (4.8 percent); for women over age 50, the rate for Filipinos (61.3 percent) was 1.7 times the rate for whites and 1.4 times the rate for blacks. Filipinos had significantly higher adjusted mean systolic and diastolic blood pressure compared to other Asian ethnic groups in a study among health plan members in Northern California. A higher rate for hypertension in Filipinos compared to Chinese remained in these analyses that controlled for age, relative body weight, marital status, education, and alcohol intake.

The California Hypertension Survey addressed awareness and rate of control of hypertension. The rate of uncontrolled hypertension for Filipinos was almost as high as the well-documented high rate for blacks. Although Filipinos who were hypertensive were more likely to be aware and to be treated compared to other AAPI groups, their control rate was poor (8 percent). All AAPI groups (Chinese, Japanese, Filipino, other AAPIs) had extremely low control rates (4 percent for other AAPIs, 13 percent for Chinese). Among Filipinos taking anti-hypertensive medicine, only 16 percent were controlled compared to 40 percent of the population overall.

Japanese

Data from the Honolulu Heart Program were combined with other data from Japan and the San Francisco Bay area for a study called "Ni-Hon-San" with subsamples of Japanese men living in three regions. The article reviewed for this summary was a study of hypertension in the three subsamples. The authors reported that the proportion

of obese men was highest in California, lowest in Japan. The authors found that age, obesity, alcohol intake, and a parental history of hypertension were the most consistent correlates of blood pressure in Japanese men. The level of acculturation as measured by five items (reads in Japanese, educated in Japan, ethnicity of friends, frequency of Japanese celebration) was not associated with hypertension. According to NHLBI's Honolulu Heart Study (Phase 1: 1991-93), 73 percent of Japanese American men ages 71-93 had high blood pressure.

Another study reported on blood pressure among second- and third-generation Japanese Americans (men and women ages 34-75) living in King County, Washington. Overall, 41.5 percent of men and 33.8 percent of women were hypertensive. Among participants, 78 percent of men and 70 percent of women were aware of their hypertension. Among those who were hypertensive, 62 percent of men and 50 percent of women were taking anti-hypertensive medication, and of those treated, 44 percent of men and 39 percent of women had their hypertension controlled. In the California Hypertension Survey of 1979, prevalence of hypertension among Japanese was 14.1 percent (Stavig et al., 1984, 1988). Among the hypertensive, 57 percent were aware, 27 percent were being treated with antihypertensive medication, and 30 percent were treated and controlled. The composition of the Japanese by generation included in the survey is not known.

Pacific Islander

In the comparison study between San Francisco Samoans with populations in Western Samoa and American Samoa, weight in the San Francisco Samoan population was reported to be significantly greater in either the native population in Samoa or the migrant population in Hawai'i (Pawson et al., 1982). Fifty-five percent of the men and 46 percent of the women exceeded the 95th percentile for weight. Mean blood pressure was higher among migrant men. Samoan men living in California exhibited higher overall rates of hypertension than those in Hawai'i. Eighteen percent of the men and 9 percent of the women with a fasting blood sample were found to have abnormal plasma glucose levels. The exposure to modernization with exposure to a "Western" diet and lifestyle

were suggested to be the cause for increased rates of hypertension and abnormal blood glucose among Samoans living in San Francisco. Similarly, a community-based study describing the dietary intake of American and Western Samoans reported substantial differences in nutrient intakes (Galanis et al., 1999). Intakes of cholesterol and sodium were higher among American Samoans regardless of age, gender, education, occupation, and material lifestyle. This study illustrates that the food choices of certain ethnic groups may be profoundly affected by the process of modernization within a country and by migration to a more economically developed locale.

Native Hawaiian

The data available from the population-based Moloka'i Heart Survey indicate that Native Hawaiians may be at higher risk of premature CHD and stroke because of obesity, hypertension and hypercholesterolemia, smoking, and diabetes mellitus (Curb et al., 1996). The prevalence of hypertension was reported to be 6 percent of men and 8 percent of women ages 20-24, 37 percent of men and 41 percent of women ages 45-54. At ages 55-59, the prevalence of hypertension for men was 31 percent and for women, 33 percent. Although they appear to be aware of hypertension (80 percent of men and 86 percent of women), control is poor (20 percent of men and 39.3 percent of women).

Southeast Asian

The ethnicities represented in the Southeast Asian subgroup are primarily Cambodian, Hmong, Laotian, and Vietnamese. Based on the limited data concerning the levels of knowledge about CVD and its risk factors, it appears that newly arrived immigrants such as the Southeast Asian subgroups are unaware of lifestyle changes that can prevent or control many of the risk factors for CVD. For example, Southeast Asians were found to have lower treatment rates and knowledge levels concerning hypertension compared with hypertensive subjects of other race groups (Stavig et al., 1984, 1988). While 17 percent of Southeast Asian refugees in one sample were found to be hypertensive, only 2 percent were on hypertensive medication. In particular, Cambodians and Vietnamese were reported to have the lowest hypertension awareness rates, drug treatment levels, and control

rates among all ethnic subgroups in California (Stavig et al., 1984). Based on a heart health study conducted in Ohio, the study revealed that Cambodian, Laotian, and Vietnamese immigrants had very poor knowledge of cardiovascular health: 94 percent had no knowledge of CVD and 85 percent had no knowledge of prevention (Chen et al., 1991).

In another study comparing CVD risk factors of newly arrived nonrefugee Hmong in Fresno, California to Hmong who lived in Thailand, the consequences of migration and its impact on nutrition were examined. The researchers found that hypertension was one of the most commonly defined risk factors among the Hmong immigrants. The Hmong immigrants had a significant increase in both fat and salt compared to their comparison group in Thailand (Kurstadter et al., 1997).

3. Diabetes

High blood sugar level is the metabolic disorder named diabetes mellitus. In 1995, diabetes killed 59,254 Americans. The greatest burden of deaths was among females (55.9 percent of total deaths from diabetes). For males, a significant portion of deaths was due to diabetes, 44.1 percent. Based on the NCHS (1986-1990), AAPIs showed a prevalence of diabetes of 3.4 percent for AAPI men and 2.4 percent for AAPI women. In comparison to whites, the diabetes prevalence in AAPI men was higher than white men (2.5 percent) and equal to white women (2.4 percent).

Japanese

Two articles from the Seattle Japanese Diabetes Study (Fujimoto et al., 1996) were reviewed. In 1983, using a random sampling approach to achieve a representative sample of the Japanese male population, 229 second-generation Japanese American (Nisei) men living in King County, Washington, were recruited for this study. Previous literature, not reviewed here, has consistently reported a higher prevalence of diabetes and glucose intolerance among Japanese Americans than among the white population in the United States and the native population of Japan. In the Seattle area study, the authors found that one-third had diabetes, and over 20 percent had impaired glucose tolerance. Prior to the study, only 13 percent reported a previous diagnosis of diabetes, suggest-

ing a very high proportion of undiagnosed diabetes. A second study investigated the role of diet in this sample. The authors found that the Nisei men did not have the traditional low-protein, low-fat, high-complex-carbohydrate diet that their parents had in Japan, but rather diets more resembling other U.S. men, relatively high in fat and protein.

Among elderly Japanese men ages 71-93 in the NHLBI study (1991-93), 17 percent of the Japanese American men had diabetes. Of the population studied, 19 percent had unrecognized diabetes, and 32 percent had impaired glucose tolerance.

Native Hawaiian

Pacific Islanders and Hawaiians have high incidence of diabetes. One study on the Island of Moloka'i found that the prevalence of diabetes had significantly increased above 40 years of age. The increase in diabetes prevalence for the 40-49 age band and the 50-59 age band were 15 percent and 20 percent respectively (Aluli, 1991). Other Hawai'i state data suggest that Native Hawaiians are twice as likely to be diagnosed with diabetes than whites (Hawai'i Diabetes Control Program).

4. Physical Inactivity/Nutrition

Three risk behaviors in particular—lack of physical activity, poor nutrition, and tobacco use/exposure—are major contributors to both CVD and cancer. Based on the 1996 Surgeon General's Report on Physical Activity and Health, physical activity reduces the risk of premature death in general, CHD, hypertension, colon cancer, and diabetes in particular. The CDC 1994 Behavioral Risk Factor Surveillance Survey (BRFSS) reported that 60 percent or more of adults did not achieve the recommended amount of physical activity, and in half of the Nation 73 percent or more of adults had poor physical activity. In the United States, approximately 250,000 deaths (12 percent of total deaths) annually are attributed to a lack of regular physical activity (American Heart Association, 1998).

Japanese

The Honolulu Heart Program is the most comprehensive study of an AAPI group and CVD. The study began in 1965, when 8,006 men 45-68 years old of Japanese ancestry living in Oahu were

recruited and given a baseline examination. For this review, articles that dealt with the CVD risk factors of interest or CVD morbidity or mortality were selected. Two articles investigated physical activity. Investigators reported that physical activity affected risk for CHD and that the effect is mediated through the effect of physical activity on hypertension, body mass index, cholesterol, and diabetes. In a subsequent report, the investigators found that physical activity was inversely and independently associated with cumulative incidence of diabetes. The association was graded and remained after taking into account age, obesity, body fat distribution, systolic blood pressure, triglycerides, glucose, hematocrit, and parental history of diabetes.

Pacific Islander

In a prospective study examining the associations between CVD risk factors (age, blood pressure, body weight, and fatness) and 6-year mortality, data on age, body weight, blood pressure, and skin folds were collected (Crews, 1988). High prevalence of obesity was reported in men (45.7 percent) and in women (66.1 percent). Although neither the body weight nor body mass index were found to be related to total or CVD mortality in men and women; elevated blood pressure was associated with increased total and CVD mortality in both sexes.

A community-based study describing the dietary intake of American Western Samoans reported that intakes of cholesterol and sodium were higher among American Samoans regardless of age, gender, education, occupation, and material lifestyle. This study illustrates that food choices of certain ethnic groups may be profoundly affected by the process of modernization within a country and by migration to a more economically developed locale (Galanis et al., 1999).

Korean

Korean Americans are less likely to exercise at least once in the past month than all Californians (69 percent vs. 79 percent). Acculturation is a significant factor which attributes to the likelihood of being physically active. Korean Americans born in the United States or those who immigrated before 1975 are more likely (80 percent) to have exercised in the past month than those who immigrated

from 1975 to 1984 (66 percent) or those who immigrated from 1985 to 1994 (65 percent) (Wisner, 1994).

Chinese

In a study comparing dietary habits, physical activity, and body size among Chinese in North America (NA) and China (C), significant differences in the percentage of calories from protein (NA 18 percent, C 9 percent), fat (NA 35 percent, C 22 percent), and carbohydrates (NA 48 percent, C 65 percent) were reported (Lee et al., 1994). Although the majority of NA Chinese (90 percent) were born in Asia, the comparison group in China was found to have leaner body mass index and were more physically active than their counterparts in North America. The authors concluded that continuous assimilation into a Western lifestyle with changes in diet, physical activity, and body size explained observed differences in chronic disease rates between the two populations. As emphasized in the Healthy People 2000 work groups recommendations, it is important to understand the cultural context and health needs of different immigrant populations in order to effectively change behavior in health and diet.

Southeast Asian

A study assessed food preferences and food consumption patterns among 60 recently settled Southeast Asian refugee families in the United States with the use of a structured interview method. Although rice remains the staple food in their diet, high status foods, such as steak and soft drinks were highly preferred food items (Story & Harris, 1989). Within 4 years of arrival, 92 percent reported change in diet and 63 percent reported gaining weight on the average of 10 pounds. The study also found that 30 percent of teenagers in the families had major responsibility for meal preparation and 25 percent of the teenagers did most of the food shopping, pointing to the need for inclusion of this group in nutrition education programs.

South Asian

The published studies reviewed here were of Asian Indian Americans only. The South Asian American category includes immigrants and descendants of India, Pakistan, Sri Lanka, and Bangladesh.

Evidence suggests that South Asians have increased risk of heart disease within their country of origin and after migration (Enas et al., 1992). Much of the research on CVD in this ethnic group has been done in samples within the country of origin, primarily India, and in migrant groups to the United Kingdom.

The studies in the U.S. samples draw on the findings from other regions and begin with the premise that the conventional risk factors for heart disease in white and other populations are not the strongest correlates or predictors in Asian Indian populations. That is, high prevalence of heart disease has not been explained by elevated cholesterol levels, hypertension, smoking, or obesity. One study compared Asian Indian immigrants to whites and found that Asian Indians had higher prevalence of myocardial infarction in men only, higher prevalence of non insulin-dependent diabetes, lower prevalence of cigarette smoking, lower prevalence of obesity, lower prevalence of hypertension in men only, lower HDL cholesterol, and lower hypertriglyceridemia. Two other studies of U.S. Asian Indians focused on the possibility of a greater role for other prominent risk variables, such as lipoprotein(a) levels, triglyceride levels, and insulin resistance.

5. Tobacco Use/Exposure

Cigarette smoking is the leading preventable cause of death and disability in the United States, where each year an estimated 420,000 smokers die from cigarette smoking and 50,000 nonsmokers die from exposure to environmental tobacco smoke. Patterns of tobacco use and exposure differ among and within AAPIs. Because of the heterogeneity of AAPIs including lifestyles, cultural beliefs and practices, genetic backgrounds, and environmental exposures, no single factor is the determinant of tobacco use or exposure. By comparison, AAPIs show a lower adult smoking prevalence rate than other race groups: AAPIs (15.3 percent); Hispanic/Latinos (18.9 percent); whites (25.9 percent), African Americans (26.5 percent); and American Indians and Alaskan Natives (39.2 percent) (CDC, 1998). Based on the NHIS from 1978 to 1995, the AAPI overall prevalence of smoking decreased, however, patterns of decline differed between men and women. Throughout the period of the NHIS, the prevalence of smoking among men remained

more than twice that among women; and during the years 1994-95, men were 4.3 times more likely than women to report current smoking. Research conducted by Hammond and Horn (1958) have shown that smokers had a 70 percent greater risk of mortality from CHD than nonsmokers. Because AAPIs are extremely heterogeneous, rigorous surveillance and prevention research is needed to unveil the specific factors that influence tobacco use. To date, only two community-based CVD intervention studies have been reported in AAPI communities even though high rates of CVD morbidity, mortality, and increased prevalence of CVD risk factors among AAPIs have been documented in the past three decades (Jenkins et al., 1995; Chen et al., 1991).

Chinese

In comparison, immigrant AAPIs who are limited English proficient have shown to be more likely smokers than their American-born counterparts. A study in Oakland Chinatown found that 40 percent of Chinese men did not know that smoking could cause heart disease (Chen et al., 1991).

Vietnamese

In a study conducted among Vietnamese in California, it was found that Vietnamese men had a smoking prevalence rate ranging from 35-56 percent, significantly higher than the national average for men (Jenkins et al., 1995).

Southeast Asian

Although rates for smoking in the United States are reported to be lowest among AAPIs (18.2 percent), ethnic-specific samples show that 92 percent of Laotians, 71 percent of Cambodians, and 65 percent of Vietnamese smoke (CDC, 1998).

Korean

There was only one study conducted among Korean Americans regarding heart disease risks and outcomes. However, data relevant to heart disease risks are available from the 1994 Korean American Community Health Survey (KACHS) (Wisner, 1994). A portion of the questions were adapted from the 1993 California Behavioral Risk Factor Survey (BRFS) and the 1992 NHIS Cancer Control Supplement. Some questions were modified to be culturally sensitive. The KACHS

collected heart disease-related data including current tobacco use (39 percent of men, 6 percent of women), physical inactivity (31 percent), as well findings on whether the respondents had ever been told by a doctor or nurse that they had high blood pressure (12 percent), high cholesterol (12 percent), or diabetes (4 percent). A measurement of prevalence of smoking is the number of cigarettes smoked daily. In a study conducted in Alameda County in California, the percentage of Korean men who have ever smoked 100 cigarettes was significantly higher compared to the overall statewide prevalence rate for men only (70 percent vs. 50 percent). Regarding current smokers, Korean men have a significantly higher rate of smokers than the state rate (39 percent vs. 19 percent). Furthermore, Koreans show significantly higher prevalence of current smokers than the Healthy People 2000 Objective (21 percent vs. 15 percent). The level of spoken English has significant impact on the awareness of smoking being a risk factor to heart disease. Eighty-seven percent of Korean Americans who speak English fluently know that smoking is related to heart disease, compared to only 76 percent of those who speak little or no English (Wisner et al., 1994).

FROM RESEARCH TO COMMUNITY ACTION: DEVELOPING STRATEGIES TO PROMOTE HEART HEALTH

The First National AAPI Cardiovascular Health Strategy Workshop's main objective was to utilize available research data and the expertise of AAPI CBOs, health educators, health researchers, and practitioners to identify multidimensional community-based health educational strategies to sustain improvements in cardiovascular health for AAPIs.

To formulate a broad and comprehensive National Cardiovascular Health Action Plan for AAPIs, workshop participants were divided into three priority-setting groups to discuss critical community health needs and opportunities for improving AAPI heart health. The topics for the priority-setting groups were effective community outreach and prevention strategies, the role of community-based health providers in delivering culturally/linguistically appropriate prevention and intervention activities, and opportunities for enhancing

cardiovascular research. The group discussion questions are presented below:

Group 1: Community Outreach and Prevention Strategies

- ❑ Identify strategies (e.g., peer to peer, word of mouth, print, outdoor and electronic media, and others) that have shown to be effective in increasing awareness about health issues in the AAPI community (e.g., adolescent, adult, and elderly).
- ❑ Identify the top three communication strategies (e.g., linking community through active planning, church, school, work, performance/visual arts, cultural events, and etc.) that have shown to be effective in improving health problems in the AAPI community (e.g., ethnic, generation/acclulturation, age, gender, and sexuality, etc.).
- ❑ How can foundations, local, state, and Federal health agencies help CBOs in reaching the AAPI communities (e.g., funding, policy, and research)?
- ❑ How can new communication tools such as the Internet be used to share best practices for outreach or “lessons learned” to build the knowledge of AAPI CBOs to develop programs and write grants?

Group 2: Community-Based Health Providers

- ❑ Identify significant barriers and facilitators to AAPIs in accessing cardiovascular (early detection and intervention) services?
- ❑ What are the essential ingredients to providing linguistically and culturally competent cardiovascular services to AAPI communities?
- ❑ How can community-based service delivery models be organized effectively to address AAPI cardiovascular health needs? What would be an ideal community-based service delivery model(s) for addressing AAPI cardiovascular service needs? What can be done to ensure the development, implementation, and continuity of such models?

Group 3: Opportunities for Enhancing Cardiovascular Research on AAPIs

- ❑ What baseline health data need to be collected, analyzed, and disseminated in order to facilitate improvements in AAPI community-based cardiovascular prevention and intervention programs?
- ❑ Of the five established cardiovascular risk factors, including high blood cholesterol, high blood pressure, tobacco use/exposure, diabetes, and physical inactivity, please rank order each by AAPI ethnic subgroup.
- ❑ What opportunities can be initiated to integrate the cultural context underlying cultural health beliefs, values, and practices in research design and methods?
- ❑ What types of research design and methods are available to improve the understanding of small, under-researched populations (e.g., data linkages across states to support both national and state CVD programs for AAPIs)?

Based on group deliberations, a National AAPI Cardiovascular Health Action Plan was formulated. The Action Plan contains broad recommendations organized in three themes:

1. Community outreach strategies
2. Community mobilization
3. Opportunities for enhancing community-based research

Within each section, specific suggestions are made in areas of public health advocacy, community health services, infrastructure/training, and health communication. These recommendations seek to assist policy makers, public health planners, and researchers to eliminate health disparities and to meet the President's challenge of a) improving the quality of life of AAPIs through increased participation in Federal programs where such persons may be underserved and the collection of data related to AAPIs; b) increasing public-sector, private-sector, and community involvement in improving the health and well-being of AAPIs; and c) fostering research and data on public health as related to AAPI populations (Executive Order 13125, June 1999).

COMMUNITY RECOMMENDATIONS: NATIONAL AAPI CARDIOVASCULAR HEALTH ACTION PLAN

1. Community Outreach Strategies

The workshop participants expressed that the success of the following recommendations requires the involvement of CBOs and the experience of community advocates, leaders, and health educators in developing effective local and national health promotion strategies and models.

Public Health Advocacy

- ❑ Support local, state, and Federal health departments to develop and implement CVD health promotion programs in partnership with local AAPI communities.
- ❑ Collaborate with local, state, and national organizations to support community programs that:
 - a. use innovative and community-designed health promotion strategies for improved cardiovascular health.
 - b. address the community's priorities (i.e., mistrust) and cultural factors (i.e., health beliefs, values, etc.) affecting cardiovascular health.
 - c. develop and use culturally appropriate channels of communication (identified by the community) in the design of community health promotion projects.
 - d. incorporate community capacity building and training components.
- ❑ Incorporate evaluation findings from AAPI community-based service delivery programs to improve and refine programs and to shape policy in areas of resource allocation, bilingual/bicultural provider needs, and comprehensive CVD services.

Community Health Services

- ❑ Identify high-risk behaviors and develop intervention programs for AAPI subgroups needing immediate CVD services (diabetes in Pacific Islanders; stroke in South Asians).

- ❑ Support cultural, linguistic, and age/generation appropriate health promotion outreach strategies which incorporate peer-to-peer education and ethnic-specific media channels:
 - a. Community-At-Large: Involve target community in program planning; incorporate all available media channels using ethnic/age-specific messages; recruit health workers from the community; and address logistical, linguistic, and financial barriers (childcare, transportation, isolation).
 - b. Elderly: Incorporate native language, larger print sizes, and literacy levels in developing written materials; allot extra time for survey completion; conduct outreach at community cultural celebrations; and provide free health screening services.
 - c. Youth: Incorporate Internet/e-mail and sources of entertainment (i.e., music, video, video games); conduct outreach at local places of congregation in health promotion strategies.

Infrastructure/Training

- ❑ Ensure participation of the AAPI community at all levels of community health promotion projects (planning, data collection, consultation through key informant interviews or focus groups, collaboration with AAPI advisory boards, researchers, and community leaders).
- ❑ Promote strong multisectoral community linkages to build relationships and trust and contribute to a broader sense of community integration.
- ❑ Support the development, implementation, and maintenance of ethnic-specific media channels in AAPI communities (i.e., print, radio, television, video).
- ❑ Increase community capacity within the broader scope of sustainability to include leadership development and provider education.
- ❑ Ensure that the community has access to training in technology and the minimum modes of communication necessary to ensure effective participation with collaborative partners and funding sources.

Health Communication

- ❑ Develop a network to inform AAPI communities about developments in CVD research and culturally responsive community strategies (e-mail, fact sheets).
- ❑ Establish communication linkages to inform researchers, health departments, and the private sector about developments in AAPI communities (i.e., findings from community-based research, health conditions needing immediate attention, etc.)
- ❑ Establish a resource clearinghouse of research tools and data on AAPIs and CVD profiles for community, health providers, academia, public health, and private sector.
- ❑ Establish an electronic mailing list to provide a forum for dialogue between CBOs and researchers.
- ❑ Ensure data and research findings are available to policy decisionmakers, Federal/state/local government agencies, health providers, program planners, researchers, community-based groups, and the private sector for timely use and wide-spread dissemination.
- ❑ Support formation of formal national/local intermediary organizations to facilitate access to resources and serve as clearinghouses of information for CBOs.
- ❑ Develop a website that will serve as an online clearinghouse of CVD prevention, early detection, and treatment information hosted by a trusted national CBO.
- ❑ Emphasize participation of key AAPI community members in community forums and public engagements.

2. Community Mobilization

Effective mobilization of people, ideas, and resources is the essence of successful community-based service delivery models to address the cardiovascular service needs of AAPI communities. These recommendations are aimed at linking local, state, and national resources and knowledge to bring heart health to AAPI families.

Public Health Advocacy

- ❑ Encourage collaborative planning and sustainable community driven health promotion strategies specific to the needs of AAPI communities.
- ❑ Ensure community partnerships include stakeholders from the target AAPI community.
- ❑ Develop a 2-3 year strategic planning process to assess sustainability, projected outcomes, and evaluation of community-wide collaborative health promotion projects.

Community Health Services

- ❑ Include bilingual lay community health educators in health promotion strategies in order to create trust and improve communication with target AAPI communities.
- ❑ Conduct focus groups/community assessments that identify the best approaches for adoption of healthy behaviors to the community.
- ❑ Ensure safe, affordable, accessible, acceptable, and convenient services for AAPI populations (e.g., transportation, access to pharmaceuticals via health plan coverage) through collaborations between community-based providers and mainstream health and social service agencies.

Infrastructure/Training

- ❑ Ensure participation of AAPI communities at all levels of community mobilization process (e.g., planning, data collection, consultation through key informant interviews or focus groups, collaboration with AAPI advisory boards, and collaboration between researchers and community leaders).
- ❑ Support multiyear efforts to build partnerships with local, state, national, and academic organizations given that developing these relationships takes time.
- ❑ Support strategies to encourage AAPI organizations and organizational leaders to mentor each other and share evaluation/programmatic strategies.
- ❑ Give specialized training to health care providers for effective prevention/early detection of CVD.

- ❑ Redesign services and health promotion training programs to ensure they are community-sensitive and incorporate community perspectives (e.g., use of trained medical interpreters).

3. Opportunities for Enhancing Community-Based Research

In recognition of the importance of applying knowledge gained from research into practice, workshop participants discussed opportunities for improving the state of cardiovascular community-based research on AAPIs. The recommendations listed below are aimed at strengthening national, state, and local capacity to gather, analyze, and disseminate demographic, epidemiological, and behavioral data to accurately reflect AAPI subgroups by age, sex, geographic and socioeconomic status for research, program planning, and evaluation of multidimensional approaches for improved cardiovascular health.

Public Health Advocacy

- ❑ Establish a task force comprised of AAPI community representatives to advise public health agencies on gaps in AAPI data collection and CVD research activities.
- ❑ Ensure that national and state health and population databases accurately reflect the AAPI population and health profiles.
- ❑ Include AAPIs in Federal CVD research review panels to enhance community capacity to promote health and improve quality of life.

Community Health Services

- ❑ Develop age and culturally-appropriate CVD prevention and intervention research projects based on community-defined priority areas.
- ❑ Support operations research on quality, client sensitivity, utilization, and accessibility of care and technologies, particularly monolingual Asian and Pacific Islander immigrant populations with limited English proficiency.
- ❑ Incorporate traditional health practices (community-defined) as complementary alternatives in CVD improvement efforts.

Infrastructure/Training

- ❑ Ensure participation of AAPI communities at all levels of research (e.g., planning, data collection, key informant interviews, focus groups, and collaboration between researchers and community leaders).
- ❑ Enhance core competencies of CBOs to support and participate in community health research/health promotion partnerships (i.e., community assessments, planning, evaluation).
- ❑ Provide mechanisms for Federal and State Governments, research institutions, private sector, and voluntaries to support community-based research.
- ❑ Require cultural competence training for providers (e.g., AAPI youth, adults, elders, immigrant, and non-immigrant issues)
- ❑ Support AAPI representation and participation in leadership positions and decisionmaking roles in the research arena.
- ❑ Ensure that postdoctoral school curricula and health care training include comprehensive and mandatory courses on cultural competence and minority health issues (e.g., cultural beliefs/norms).
- ❑ Ensure AAPI community leaders are represented on multiethnic decisionmaking bodies to support state/Federal CVD research and community programs.
- ❑ Collaborate with multiple sectors of the AAPI communities to support the infrastructure and prevention intervention of CVD (schools, workplace, faith, social, and health services).
- ❑ Collect baseline qualitative (i.e., ethnographic interviews) and quantitative data for those AAPI subgroups that are not or under represented in research, using community-based research projects.
- ❑ Conduct prevention/intervention research for those groups with sufficient baseline data: stroke in South Asians; hypertension in Filipinos, Southeast Asians, and Chinese; diabetes/obesity in Pacific Islanders.
- ❑ Strengthen community-based research and evaluation efforts to effectively assess the community's health.
- ❑ Encourage the community to take a leadership role in establishing effective methods for standardizing data collection, maintaining community involvement, and evaluating community-based projects.
- ❑ Support local health departments to collect “meaningful” demographic and health data by primary language, country of origin, age, income, education, etc.
- ❑ Support ethnographic studies of specific AAPI subpopulations through effective outreach methods, volunteer support, and community commitment.
- ❑ Support infrastructure development across sectors for action-oriented research on CVD that addresses AAPI community needs including strategies that empower community members to prevent CVD and the benefits to themselves and their families, and on methods of quality care, involving AAPI community constituents in all such research.

CONCLUSION

Despite increased awareness and desire to seek CVD prevention and intervention services, the majority of AAPIs are precluded from doing so because of barrier and limitations attributable to a number of factors including lack of CVD awareness, fear, cultural conflicts, language barriers, availability, accessibility, and income. The epidemiological literature findings show that CVD is a significant health problem for all AAPIs.

As a basis to understanding what environmental influences impact the development of CVD among AAPIs, workshop participants expressed a great need to advocate for an increase in research to consider the links to each ethnic community's cultural context, nutritional influences, physical activity, and socioeconomic status. In addition, the participants urged the continuance of research of the five established CVD risk factors among all AAPI ethnic subpopulations.

Many important questions remain to be answered in addressing the need for improved AAPI cardiovascular health. Thus, to advance the Nation's collective knowledge on AAPI health, local, state, and national efforts that explore opportunities in community-based research must ensue. Examples of critical unanswered questions include:

- How can AAPI ethnic subgroups benefit from and be part of improved access to research design/implementation/evaluation, new discoveries (e.g., pharmaceutical treatments, etc.), and practical application of CVD advances at the community level?
- At the Federal, state, and local public policy level, how can AAPIs actively participate as equal partners in CVD research and service programs, and in epidemiological surveys and data analysis (e.g., disaggregation of AAPI by ethnic subgroups)?

- Given the prevalence of CVD risk factors among select AAPI ethnic subgroups (e.g., South Asians (stroke), Filipinos and Southeast Asians (hypertension), and Pacific Islanders (diabetes and physical inactivity)), what can be done to enable providers to deliver prevention and intervention services needed by AAPI ethnic subgroups particularly by those with severe linguistic and ethnocultural barriers?

Despite these unanswered questions, the workshop participants have provided invaluable information and advice on how to improve cardiovascular health for AAPIs. These community recommendations will serve as a foundation for planning, developing, and implementing a cardiovascular community outreach program for AAPI families across the Nation.

MAY 8, 1999

- 8:00–8:45 a.m.** Welcome and Overview
- 8:45–9:05** National Agenda for Eliminating Health Disparities Among Minorities
- 9:05–9:15** NHLBI Native Hawaiian Workshop Summary
- 9:15–10:15** AAPI Cardiovascular Health Status: What Do the Data Tell Us?
- 10:15–10:30** Break
- 10:30–11:30** AAPI Community-Based Strategies
- 11:30–12:30 p.m.** Ethnographic Interviews: Food Habits and Physical Activities
- 12:30–1:30** Lunch
- 1:30–4:30** **Priority-Setting Groups**

Group 1: Community Outreach and Prevention Strategies

- ❑ Identify strategies (e.g., peer to peer, word of mouth, print, outdoor and electronic media, etc.) that have shown to be effective in increasing awareness about health issues in the AAPI community (e.g., adolescent, adult, and elderly).
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MAY 8, 1999 (CONTINUED)

Group 2: Community-Based Health Providers

- ❑ Identify significant barriers and facilitators to AAPIs in accessing cardiovascular (early detection and intervention) services.
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- ❑ How can community-based service delivery models be organized effectively to address AAPI cardiovascular health needs? What would be an ideal community-based service delivery model(s) for addressing AAPI cardiovascular service needs? What can be done to ensure the development, implementation, and continuity of such models?

Group 3: Opportunities for Enhancing Cardiovascular Research on AAPIs

- ❑ What baseline data need to be collected, analyzed, and disseminated in order to facilitate improvements in AAPI community-based cardiovascular prevention and intervention programs?
- ❑ Of the five established cardiovascular risk factors, including high blood cholesterol, high blood pressure, tobacco/use exposure, diabetes, and physical inactivity, please rank order each by AAPI ethnic subgroup.
- ❑ What opportunities can be initiated to integrate the cultural context underlying cultural health beliefs, values, and practices in research design and methods?
- ❑ What types of research design and methods are available to improve the understanding of small, under-researched populations (e.g., data linkages across states to support both national and state health CVD programs for AAPIs)?

3:00–3:15

Break

4:30–5:00

Closing Remarks for the Day

5:00–6:30

Reception

MAY 9, 1999

9:00–11:00 a.m.

Reports From Priority-Setting Groups

11:00–11:30

Closing Remarks/Adjournment

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APPENDIX A

GATHERING COMMUNITY INPUT—KEY INFORMANT INTERVIEWS

In preparation of the workshop, key informant and ethnographic interviews were conducted. Asian American and Pacific Islander CBOs fill a critical void for AAPI populations in terms of providing a regular and accessible source of health information and resources. Specifically, these CBOs provide access to bicultural and bilingual health providers, proximity to the target community, and an environment that the community trusts.

BACKGROUND

Socioeconomic (i.e., poverty, unemployment, lack of health insurance, education) and cultural factors (i.e., language, cultural beliefs, immigration status) play crucial roles in influencing access to health care among different ethnic groups (Mayeno and Hirota 1994). Given the diversity of ethnic populations that comprise AAPIs, “researchers, policy-makers, case workers, and health workers need to be mindful of differences in languages and cultures reflecting not only more than 30 different sub-groups, but also generational differences” (DHHS, May 1998). Therefore, the need for culturally competent and linguistically appropriate services is a top priority for improving the health of AAPI communities.

To identify elements of successful health promotion/disease prevention outreach strategies, the API-AHF conducted key informant interviews with a cross section of the Nation’s community-based organizations. While it cannot be concluded that the opinions, experiences, and recommendations of the key informants are representative of all CBOs serving AAPI communities, their breadth of experience in improving the health of their communities sheds light on the complexities involved in developing effective health promotion/disease prevention outreach strategies and the myriad of cultural factors which may prevent the AAPI communities from securing improved health outcomes.

“Achieving the President’s goal of “eliminating racial and ethnic disparities in health requires a major national commitment to identify and address the underlying causes of disease and disability in racial and ethnic minority communities. These include poverty, lack of access to quality health services, environmental hazards in homes and neighborhoods, and the need for effective prevention programs tailored to specific community needs”

(U.S. DHHS, 1998).

THE APPROACH

A total of 85 CBOs were invited to participate in phone interviews to identify and discuss community-based outreach strategies which they have found to be effective for health promotion and disease prevention within their respective AAPI communities. They were chosen based on agency longevity, geographic location, and AAPI target group representation. A total of 29 CBOs (35 percent) responded to the invitation. The semistructured interview questionnaire included open-ended questions regarding their target community’s general health concerns, cardiovascular risk factors, effective strategies used to reach their target population with health promotion messages, barriers their target population faces in accessing preventative health services, and strategies they use to address such barriers.

PARTICIPANT PROFILE

These individuals represent CBOs of various geographic areas, with varied access to culturally appropriate communication resources, serving AAPI communities of varied income levels, education, age, and immigration status. They have in common, however, their family-oriented empowerment philosophies for improving the health of their communities.

They are nurses, medical doctors, social workers, and outreach workers representing 13 AAPI ethnic subgroups (Afghan, Cambodian, Chamorro, Chinese, Filipino, Hmong, Japanese, Khmer, Korean, Laotian, Samoan, South Asian and Vietnamese) and 13 states (California, Colorado, Connecticut, Georgia, Illinois, Minnesota, New Jersey, New York, Ohio, Pennsylvania, Texas, Washington, and Washington, D.C.). Among these, California, New York, Texas, New Jersey, Illinois, and Washington D.C. are among the states with the highest AAPI populations (please note that CBOs from the State of Hawai'i, which includes more than 8 percent of the Nation's AAPI population, were not included in this project).

FINDINGS

Almost 30 percent of respondents identified CVD or one of its risk factors as the major health concern of their community:

“Almost 70 percent of Samoans in Seattle have diabetes,” Washington-based health educator.

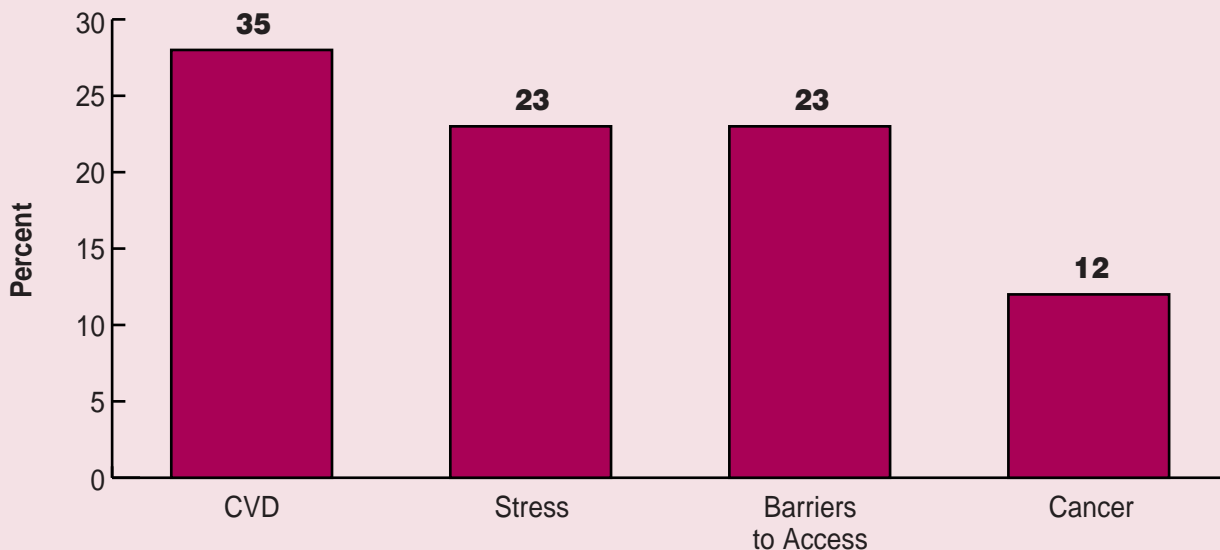
“Hypertension and diabetes are the top health problems of the elderly Asians in San Francisco,” California-based health advocate.

“With Korean, Chinese and Vietnamese youth, smoking is a very serious problem,” Georgia-based health educator.

Almost a quarter identified stress, depression, or anxiety as a major health concern in their community. Respondents working with refugee groups or recently arrived immigrants noted how the stress and anxiety related to transitioning into a new culture are burdens to their communities:

“Anxiety from immigration status and poverty are the main issues affecting our community's health,” New York-based health educator.

TOP COMMUNITY HEALTH CONCERNS



“Almost 70 percent of Samoans in Seattle have diabetes.”

Washington-based health educator

“Stress and depression from unemployment, poor housing, and isolation due to language barriers are seriously affecting the Afghan community’s health,” California-based health educator.

Those working with refugee survivors of war note more severe anxiety-induced health problems, such as premature aging, which adversely affects all other health conditions. For example, a Connecticut-based nurse who works with Cambodian and Khmer survivors of war said that due to traumas associated with war, *“about 75 percent of the Cambodian community is a high risk group suffering from severe anxiety, high blood pressure, and mental health problems.”*

Although the majority of this population has lived in the United States for over 15 years, she notes that *“research on trauma survivors shows that the longer they’re in a country, the more problems they have due to premature aging making them feel like a 65-year-old when they’re only 40.”* This, in turn, increases their anxiety levels because they have more difficulties dealing with their young children and other life stressors.

Almost a quarter (23 percent) identified the myriad of cultural, economical, and logistical barriers

“About 75 percent of the Cambodian community here is at high risk, suffering from severe anxiety, high blood pressure, and mental health problems.”

Connecticut-based community activist

which prevent their communities from accessing preventative health care as the major health concern of their community:

“We’re not used to having open dialogues about health issues,” Samoan community health educator based in Southern California.

“Language is a serious issue for the recent Chinese and Vietnamese immigrants and refugees, and it’s preventing them from using preventative health services,” Texas-based community outreach worker.

Almost half of all respondents identified high blood pressure/hypertension (24 percent) or tobacco use/exposure (24 percent) as the major cardiovascular-related health concerns in their communities:

“New immigrants and the older generation are heavy smokers, and that’s severely affecting their heart,” Texas-based health educator.

“Heart attacks are a serious health problem of the Afghan community, and they’re caused mainly by the community’s high blood pressure and smoking,” California-based community activist.

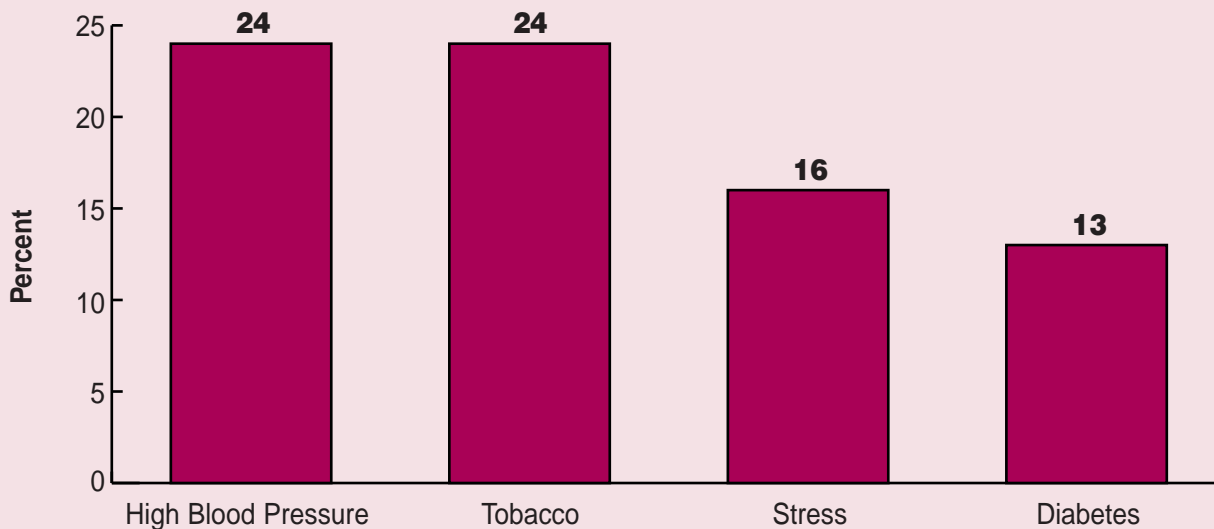
Stress, anxiety, depression, and the psychosomatic illnesses caused by such conditions were identified by 16 percent of respondents as the serious risk factors affecting the cardiovascular health of their communities:

“High blood pressure is the number one risk factor in the Korean community here in Chicago, and I think it’s because they have too much stress in their lives from working too much,” Korean health educator.

“South Asian women in New York are under tremendous stress and suffer from depression because of adjustments to a new life here, immigration problems, and domestic violence. All this stress severely affects their heart conditions,” New York-based health educator.

“There are people who don’t leave the house because their anxiety level is too high,” Connecticut-based health educator.

TOP CARDIOVASCULAR-RELATED HEALTH CONCERNS



Diabetes was identified by 13 percent of respondents (mainly those who serve Southeast Asian, Chinese, Chamorro, Filipino, Japanese, and Samoan populations) as a major cardiovascular-related health concern in their community.

The use of all available multimedia channels of communication was identified by the majority of respondents as a top outreach strategy. They include talk shows and public service announcements on local ethnic radio and television stations, articles and advertisements in local ethnic newspapers, and health education pamphlets or posters used in conjunction with health education classes.

Radio and television talk shows were rated as very effective because they reached a high proportion of the target community and provided a means to ask health-related questions anonymously. However, because of the higher cost of producing television shows, radio was noted as the more feasible alternative. Advertisements and health-related articles in local ethnic newspapers were widely used as effective outreach strategies:

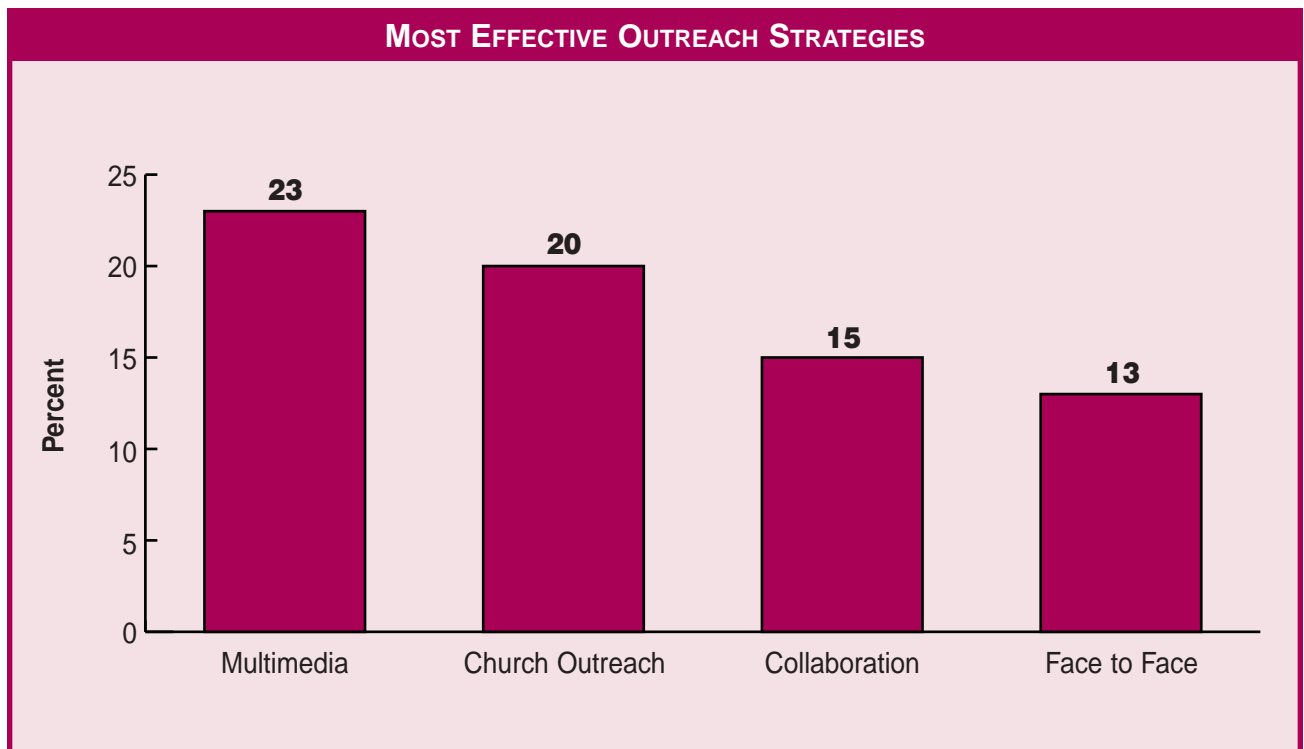
“We send out press releases to Japanese newspapers, radios, and television. Our community is so isolated because of language.”

“Tobacco is a major contributor to the four leading causes of premature death in San Francisco.”

San Francisco Department of Public Health, 1998

“Native Hawaiians are twice as likely to be diagnosed with diabetes than whites.”

Hawai`i Diabetes Control Program



So, this is really the best way we can let them know about preventative health issues,” California-based Japanese health educator.

“Radio and newspapers are our best strategies in making sure our community knows about the importance of preventative health care and our clinic. We have weekly radio health programs in Cantonese. Also, Chinese people read lots of Chinese newspapers,” New York Chinatown health educator.

“Koreans read lots of Korean newspapers and listen a lot to Korean TV news programs, so those are great ways to make sure they hear or read about health issues,” California-based health educator.

The majority stressed the importance of establishing trust with the community as the key to ensuring the success of any health promotion strategy.

The use of health education videos was identified as a potentially effective way of reaching AAPIs either by incorporating them in the beginning of Asian movie videos or using them in conjunction with health education classes. The use of computers and the Internet as a possible means of disseminating culturally and linguistically relevant health education materials was suggested by many respondents, especially those who live in areas with limited AAPI media resources.

Over 30 percent said there are no local ethnic radio or television programs available in their geographic region. These respondents serve the Asian American populations in Colorado, Georgia, Connecticut, New Jersey, Ohio, and Pennsylvania; and Pacific Islander populations in California and Washington:

“The Midwest is an English-only world; we need access to linguistic resources,” Ohio health provider.

“The use of ethnic media channels needs serious exploration. It’s a non-obtrusive way for the community to hear about health,” Ohio-based educator.

Thirty five percent identified outreach to places of congregation (20 percent) and collaboration with community leaders (15 percent) as a top health promotion strategy:

“Hmong people go to their clan leaders first. There are over 18 clan leaders, so we must educate them first,” California-based Hmong health educator.

“There are over 40 Samoan churches in Seattle, and we have to first convince the pastors of the importance of health issues and have them announce our programs at their church. The people really listen to pastors,” Samoan health educator in Washington.

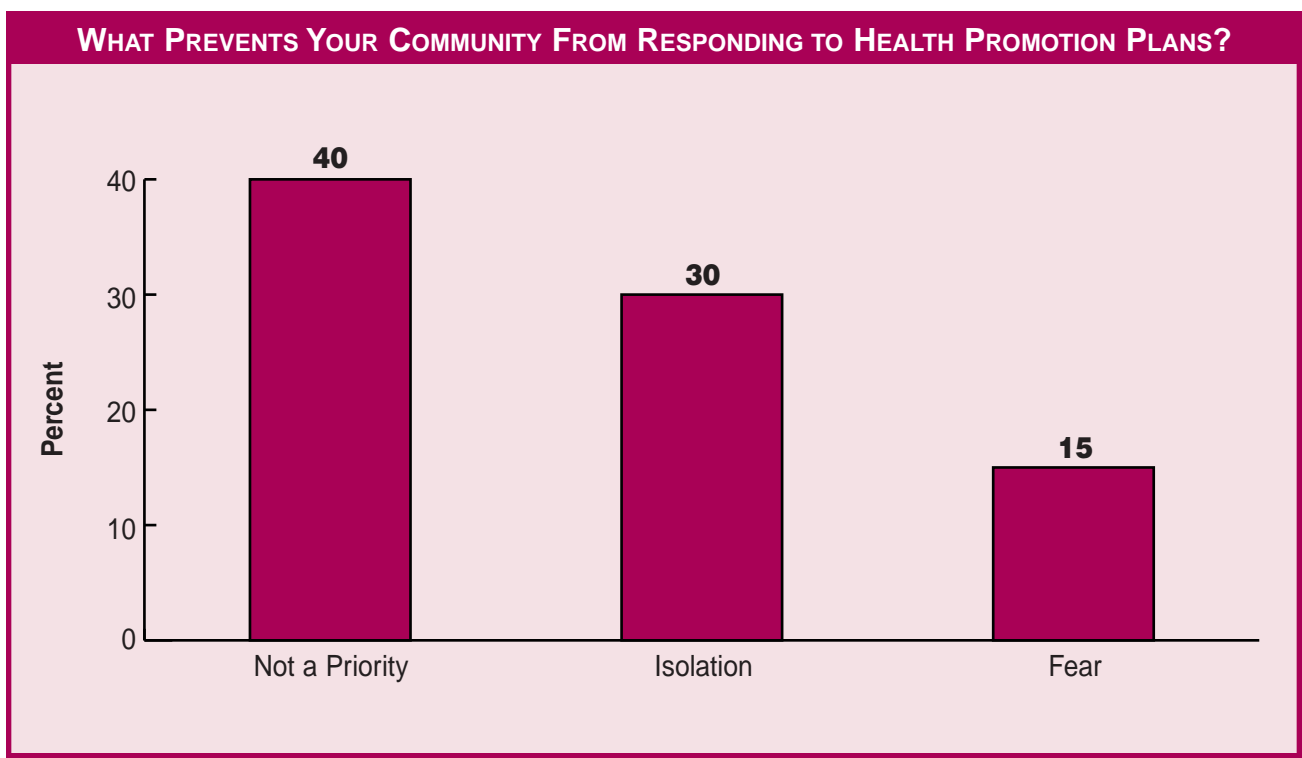
“Our Laotian clients are afraid of leaving their houses. So, we send our outreach workers to their homes to educate them about health issues. They’ll open their homes to us only if they’ve heard of us through word of mouth,” California-based health educator.

Almost 40 percent said preventative health care is not a priority to their community or that their community is busy with many other responsibilities and do not access health services until a serious health condition arises.

“Refugees and recent immigrants are too busy trying to survive daily life to think about preventive health care.”
Texas-based health educator

In educating low income Vietnamese women in California about breast and cervical cancer screening, a health educator noted that the women *“don’t think they’re at risk of any serious problems because they don’t have the symptoms yet.”* A Texas-based health educator said the refugees and recent immigrants *“are too busy trying to survive daily life to think about preventative health care.”*

Almost one-third (30 percent) identified isolation of their community due to language barriers, transportation, or mistrust of other Asian populations as the main barriers to accessing preventative health services:



“Those from traditional backgrounds have a certain pride in not receiving any free services from an outside group, so we have to educate peer educators to tell them to use our services and listen to our health education classes.”

California-based health educator

“The recent immigrants are really suspicious of strangers, and because of historical roots certain Asian communities don’t even trust other Asians,” Texas-based health educator.

Fear or superstition toward Western-style preventative/screening health services was reported by 15 percent of the respondents:

“Many of the Asians we work with don’t trust Western-style medicine or Western health providers,” Pennsylvania-based health educator.

“Many don’t think about getting sick because they believe talking about it is bad luck,” Ohio-based health educator.

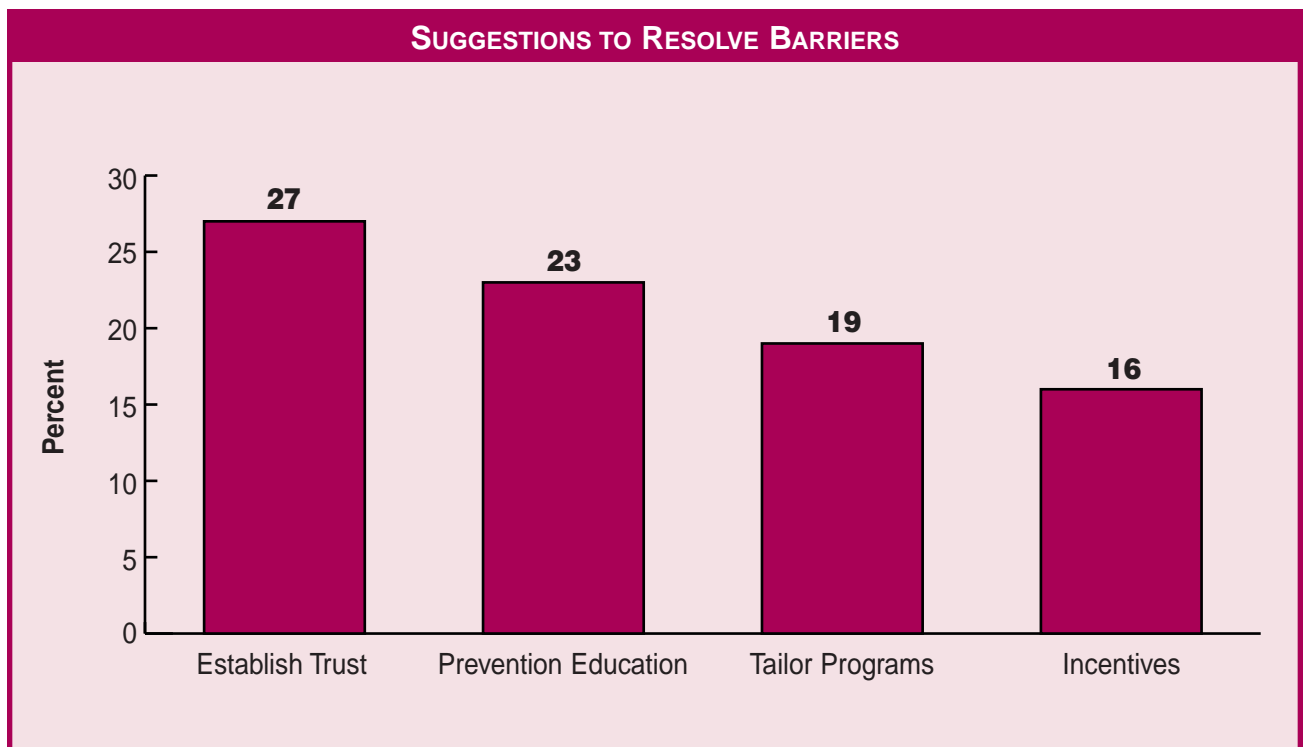
Almost 10 percent suggested feelings of shame or denial of health problem as the barrier which keeps their community from accessing preventative health services:

“The Samoans are very private people, so they’re ashamed to admit their health problems,” Washington-based Samoan health educator.

The theme of establishing trust with the community was voiced by most respondents as the way to remove barriers to health care access through community involvement in program planning:

“The community must really feel like they own the program, so we get them involved in the planning and advertising,” New Jersey-based health educator.

Almost 20 percent said tailoring health education programs to include topics of interest to the community is essential in removing barriers to preventative health care access:



“The concept of preventive care as defined in Western medicine, which usually includes a physical exam in the absence of symptoms, often does not fit many AAPI’s understanding of health and their explanatory models of illness.”

Addressing Cardiovascular Health in Asian Americans and Pacific Islanders: A Background Report, NIH Publication No. 00-3647

“We try to contextualize health issues into major community concerns like immigration issues,” New York-based South Asian health educator.

Almost a quarter of respondents (23 percent) identified education of family members and the community about the benefits of preventative/screening

services as important in removing barriers to access:

“Sometimes they’re so afraid of screening services that we have to reassure them that it’s not painful and it’s free—it’s best done through word of mouth from people who trust and know us,” California-based Japanese health educator.

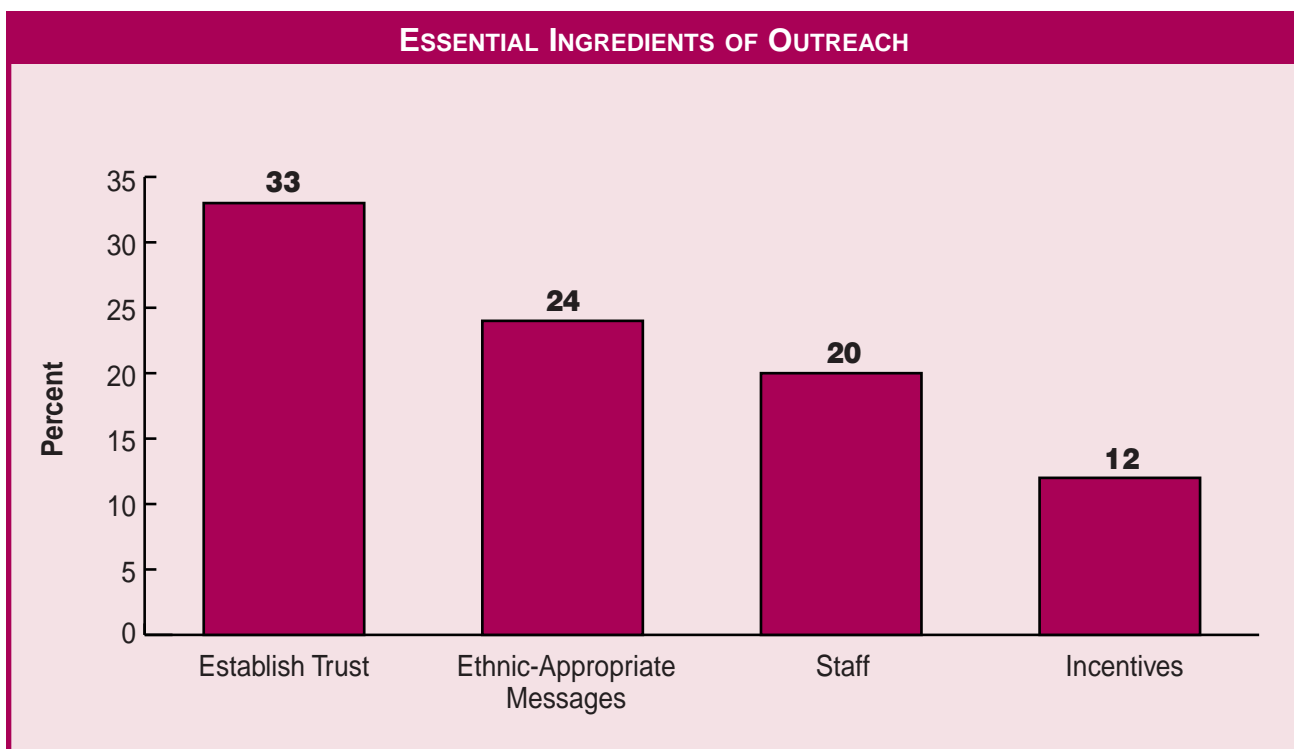
“Talk shows on the radio or local television with experts is a good way to make them take preventative health care more seriously,” California-based health educator.

Providing interpreters and incentives (food, money, transportation, entertainment, etc.) was identified by 16 percent of respondents as key to improving access to preventative health services:

“Providing some sort of an immediate reward usually gets them to attend health education classes,” Ohio-based health educator.

About one-third identified the establishment of trust with the community as the key to ensuring a successful outreach program:

“You must be known as a reputable resource in the community if you want them to listen



to you. You get that by maintaining confidentiality and respect,” Ohio-based health educator.

“Trust—it’s the only way they’ll listen to our education programs. You must prove you’re not fake,” Pennsylvania-based health educator.

Almost a quarter (24 percent) identified the use of ethnic and linguistically specific messages and targeted media as essential in ensuring the success of any outreach strategies:

“Our health education material has to be in their language and at their own literacy level,” New York-based health educator.

“Newspapers and TV are very good, but you must know which groups read what newspapers—so you do targeted media,” California, health educator working with elderly.

Twenty percent said recruitment of staff members with whom the community can relate to (linguistically and in terms of shared historical

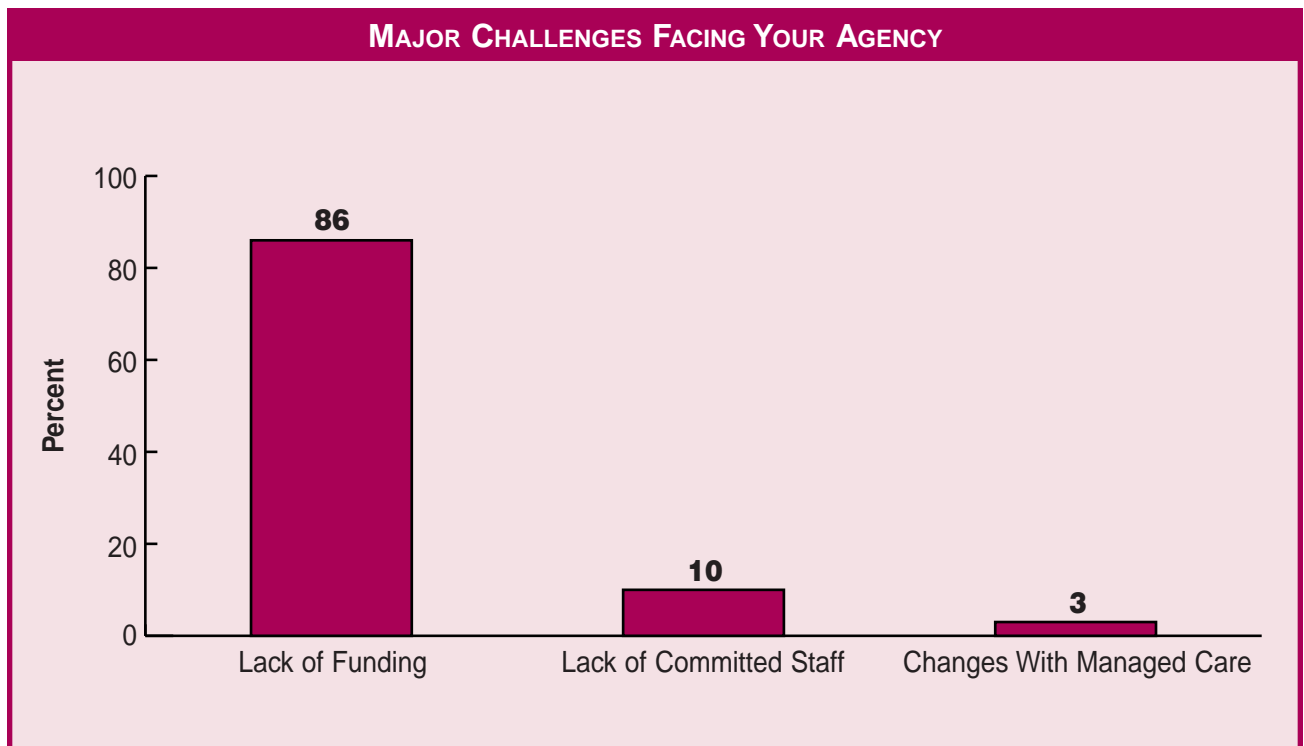
backgrounds) is a key factor in the success of their outreach programs because it instills trust between the community and the CBO:

“Language is not enough. Nationality is not enough. The health educators must sympathize with the plight of refugees. That’s so important in making a successful program,” Georgia, health educator and community activist.

“Having staff members who the community can identify with is crucial if we want our education programs to work,” Colorado, health educator.

Almost all of the respondents (86 percent) reported that lack of continuous funding was a major challenge facing their agency as they plan for their future programs:

“There are serious cuts in Minnesota’s social programs budgets. So, it’s always a struggle to get stable funding and help our community,” Minnesota-based health educator.



“Our funding sources are not secure or continuous. That’s our biggest problem,”
California-based Filipino health educator.

“In the Midwest, there’s a lack of stable funding streams due to the invisibility of the AAPIs and lack of committed and competent AAPI staff,” Ohio-based health educator and community activist.

“Our grants only cover half of our budget, and they’re not continuous. It’s always a problem to make sure we have the money to cover our expenses,” New York-based health educator.

Others identified lack of committed qualified staff, lack of free screening services, changes with managed care, and lack of child care in their community as major challenges:

“We need qualified staff, but we can’t get qualified workers if we can’t pay them!”
Colorado-based Southeast Asian health educator and social worker.

“With the changes in managed care, we don’t know what the role of small CBOs would be,” New York-based South Asian health educator.

“We need child care and senior care in our community, but we need the money to support these services,” California-based Hmong health educator.

CONCLUDING REMARKS

These interviews, though not comprehensive, reveal the respondents’ expert knowledge of their community’s health-related behaviors, cultural norms, and the resources available to improve their health. As such, the inclusion of community-based organizations in national health promotion/disease prevention planning efforts is critical in understanding the intricacies involved in improving the health behaviors and health care access of AAPI communities.

APPENDIX B

GATHERING COMMUNITY INPUT—ETHNOGRAPHIC INTERVIEWS: FOOD HABITS AND PHYSICAL EXERCISE

Ethnographic interviews (EIs) were conducted to provide a better understanding of how cultural and environmental factors influence cardiovascular attitudes and behaviors. The results of the EI are presented below. These descriptive data provide useful ideas on how to tailor heart health activities for AAPIs.

BACKGROUND

The EIs were conducted jointly by San Jose State University, Social Science Department, and the APIAHF. The need for the ethnographic study arose out of several concerns. First, there are very few “cross ethnic” cardiovascular risks or incidence studies of AAPI. Most studies examine one AAPI group, and the vast majority of studies, to date, focused on Japanese Americans only. Second, of the studies examined, virtually all were epidemiological in nature investigating incidence of CVD or related risk health conditions. Third, there are few AAPI studies on cardiovascular risk in the areas of nutrition, physical activity, tobacco/alcohol use, and cultural attitudes regarding health care seeking. Again, among the studies that do exist, most are single AAPI ethnic group focused and address only one or two of the cardiovascular risk areas. Given the paucity of data, it was decided that a pan-AAPI ethnographic pilot research project would provide insight on how culture and environment influence behaviors and attitudes of AAPI relative to cardiovascular risk activities.

THE APPROACH

An ethnographic approach was chosen to develop a more qualitative and indepth understanding of respondents behaviors and attitudes. This ethnographic study provides useful qualitative data and formal analysis for CBOs based on actual behaviors and attitudes relative to cardiovascular health

and prevention programming ideas. Moreover, the ethnographic study aims to provide quantitative researchers empirically warranted direction and hypotheses for large sample studies.

This study explored six topic areas:

1. Recreational and Physical Activities
2. Eating Behaviors and Nutrition
3. Tobacco and Alcohol Use and Exposure
4. Health History
5. Personal and Demographic Information
6. Health Education and Attitudes

Unstructured interview questions were used to provide the interviewer with a guide and coding form to lead the respondent through a guided discussion on the various topics/facets of food habits, health, and physical activity. Three-point Likert scale questions assessed cognitive attitudinal areas of health education.

The 63 participants represent the Chamorro, Chinese, Filipino, Japanese, Korean, and Vietnamese subgroups and reside in 19 cities in Northern and Southern California. The majority (85 percent) are U.S. citizens, (65 percent) are foreign born and about 92 percent have lived in the United States for 8 or more years. They ranged in ages from 17-85 years. They were chosen on a nonrandomized snowball sampling methodology stratified for Asian Pacific Islander ethnicity, age, gender, and generation in the United States.

Due to study limitations (including, small sample size, no pilot testing, limited time frame for indepth analysis of qualitative and quantitative data, limited funding), generalizations cannot be made. However, the preliminary findings presented here suggest certain ethnic differences and similarities among AAPI populations in relation to CVD and its related behavioral risk factors.

FINDINGS

The study findings suggest that further exploration of the differences among AAPI subgroups is warranted. While some overarching themes of behavioral characteristics are similar among all AAPI subpopulations, the differences appear to be the key in understanding cardiovascular risk factors and ethnic community specific health outreach strategies. For example, understanding that AAPIs tend to view physical activity as an opportunity for social interaction gives us programmatic suggestions. Additionally, recognition of the differences between men and women with regard to the perceived benefits of physical activity is instructive. Outreach and recruitment of women should stress the emotional benefits of physical activities, while men will respond better to physical benefit messages.

Data on eating behaviors tell us that AAPIs persist in eating their ethnic foods. Even Japanese Americans who demonstrated the highest non-Asian food consumption continue to eat Asian foods at equal rates to non-Asian foods. Thus, an important question to consider is, how can Asian foods be prepared in a more cardiovascular friendly manner? The finding on red meat consumption was also informative. Though red meat does not comprise overwhelming amounts of the protein intake of AAPI, when red meat is consumed it is more likely to be nonlean meat and prepared outside the home. This suggests that AAPIs go out to eat red meat rather than prepare it at home. The EIs suggest that the red meats come from fast food sources. What can be done to combat the attractiveness of convenience and low cost associated with fast food chains such as McDonalds and Burger King?

Tobacco and alcohol play important roles in cardiovascular health. Secondhand smoke exposure rates of the respondents are a concern. The surprise here was that foreign-born and U.S.-born AAPIs were both heavily exposed. Why? What role does smoking in the country of origin play in

increased risk, especially for immigrants? What does smoking symbolize for the respondents? Is smoking perceived as a health risk? Unfortunately, the results of this investigation do not permit the provision of answers to these questions at this time. However, the answers are vital for effective prevention and cessation programs.

The ethnographic study has opened the door to giving program planners limited empirical support for our “common knowledge.” This study confirms that aggregated nationwide data on AAPIs do not fit specific segments of the AAPI community, and pronouncements of “no risk” for AAPIs leave segments, such as the Chamorro population, at risk. The preliminary analysis suggests that in addition to documenting the rates of CVD and risk factors among AAPIs, there is a need to gain a better understanding of “meaning” associated with perceptions of health and healthy behaviors.

For example:

- ❑ What do physical activities mean to AAPIs and what role does it play in their social and family lives?
- ❑ What do AAPI foods signify to AAPIs and how would changing ingredients affect its acceptance and value?
- ❑ What do non-AAPI foods mean to AAPIs? Are the increased consumption of non-AAPI foods seen as desirable and a symbol of “fitting-in”?
- ❑ What does smoking symbolize? Is smoking seen as a threat to one’s family as well as to oneself?
- ❑ What does body image mean to AAPIs? Is it similar across groups? Is it okay to be “chubby”? Is being large a symbol of “wealth” or status?
- ❑ What is wellness and health? And conversely, what “causes” illness?

Certainly, there is much to be done...

ACKNOWLEDGEMENTS

Several individuals and organizations are acknowledged for their work and dedication to improving the health of AAPIs. Their guidance and community insights contributed to the success of these workshops.

NATIVE HAWAIIAN HEART HEALTH INITIATIVE WORKSHOP

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FIRST NATIONAL ASIAN AMERICAN AND PACIFIC ISLANDER CARDIOVASCULAR HEALTH STRATEGY WORKSHOP

Special thanks to the following individuals for their invaluable expertise in developing this document and support of this project. Betty Hong and Noushin Bayat are recognized for their work on capturing the “voice” of the community in preparing this report.

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