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Population Characteristics and Health Care Needs of Asian Pacific Americans

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Synopsis

Asian Pacific Americans are one of the smallest but fastest growing minority groups in the United States. Between 1970 and 1980, this population increased 142 percent, from 1.5 million to 3.7 million. This dramatic growth is due largely to a change in U.S. immigration policies in the mid-1960s and the continuous influx of refugees from Southeast Asia since 1975. Despite such sharp increase, Asian Pacific Americans remain one of the most poorly understood minorities, and their health care needs have received relatively little attention. Health policy makers, planners, and service providers need to have a better understanding of the population characteristics of Asian Pacific Americans in order to address their needs properly.

Asian Pacific Americans are largely recent immigrants and refugees. They are extremely heterogeneous and bipolar in socioeconomic status and health indices. Because of their small numbers until the last two decades, many health workers have had little exposure to this minority, their culture, and health problems. Health workers need to be sensitive to the ethnocultural barriers that confront recent arrivals; be aware of the genetic disorders, infectious diseases, and mental health problems common in this population; and realize that anatomical and physiological differences may require attention in certain surgical procedures and medical management. Neglecting the health care needs of Asian Pacific Americans is not simply a violation of the principle of equality for all, but also an imprudent act that increases the mortalities and morbidities and health care costs of the nation.

ASIAN PACIFIC AMERICANS represent one of the smallest but fastest growing minority groups in the United States. In the decade between the 1970 and 1980 censuses, this population increased 142 percent, from 1,538,721 to 3,726,440 persons. This dramatic gain compares with an increase of 11

percent for the total U.S. population, 17 percent for blacks, 61 percent for Hispanics, and 72 percent for American Indians, Eskimos, and Aleuts (*1*). The Population Reference Bureau estimated that between the 1980 census and September 1985 the Asian American population (not including Pacific Islander Americans) increased by 1.6 million—an annual growth rate of more than 7 percent. By the year 2000, Asian Pacific Americans may well exceed 10 million (*2*).

The remarkable growth of this minority in the last 20 years is mainly due to a change in U.S. immigration policies toward this group in the mid-1960s and the continued influx of Southeast Asian refugees since 1975. Altered definition of Asians to include new groups in the 1980 census also contributed to the gain. Between 1931 and 1960, only 5 percent of the legal immigrants admitted to the United States were from Asia. By 1970–79, the fraction had risen to 34 percent, and between 1980 and 1984, persons from Asia accounted for 48 percent, or nearly half, of all legal immigrants. (*2*). It should be noted that refugees whose immigration status has changed to that of permanent residents contributed to the number enumerated as legal immigrants. Over more than a decade, a sizable refugee population from Southeast Asia has resettled in the United States. As of April 1987, 823,000 Southeast Asian refugees had entered the United States, according to L. W. Gordon, Office of Refugee Resettlement, Washington, DC (personal communication, June 1987). In fiscal year 1987, an estimated 40,000 were expected to enter, and the flow is likely to continue for some time. Moreover, chain migration of relatives of these refugees has already begun (*3*).

Despite such rapid and continuous population growth, the special health problems and health care needs of Asian Pacific Americans have received relatively little attention. This is perhaps because Asian Pacific Americans remain one of the most poorly understood populations in the United States, and they continue to be stereotyped as a uniquely successful minority without many problems or needs. Some knowledge of the population characteristics of Asian Pacific Americans is essential to a better understanding of their health care needs. This paper is not a comprehensive review of the literature on the subject; rather it examines some population characteristics of Asian Pacific Americans that have special health implications and reviews the minority's health care needs that require careful consideration by health care policy makers, planners, and service providers.

'Despite such rapid and continuous population growth, the special health problems and health care needs of Asian Pacific Americans have received relatively little attention.'

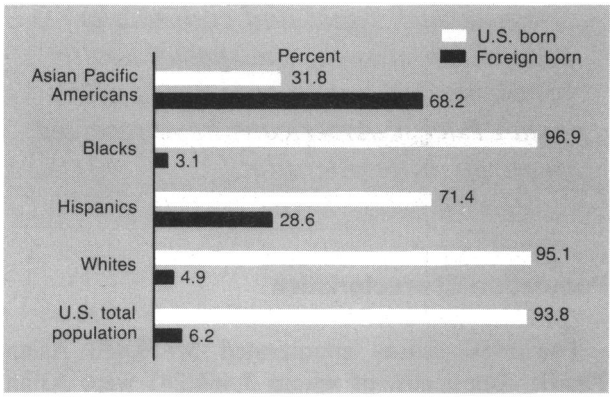
Population Characteristics

The 1980 census enumerated 3,726,440 Asian Pacific Americans, of whom 3,466,241 were Asian Americans (93 percent) and 259,566 were Pacific Islander Americans (7 percent). Six major subgroups accounted for more than 95 percent of the Asian Americans: Chinese (23.4 percent), Filipino (22.6 percent), Japanese (20.7 percent), Asian Indians (11.2 percent), Korean (10.3 percent), and Vietnamese (7.1 percent). It was estimated that by 1985, Chinese and Filipino Amercans had each passed the 1 million mark. Among Pacific Islander Americans, Polynesians accounted for 84.9 percent and Micronesians for 13.7 percent of the population. Hawaiians were the largest subgroup, accounting for 66.4 percent of Pacific Islander Americans (*2,4*).

The health problems and health care needs of Asian Pacific Americans are intimately related to many unusual population characteristics that are poorly understood.

Disproportionate numbers of recent immigrants and refugees. Asian Pacific Americans are the only minority group in the United States that is largely made up of immigrants who have arrived in the last 20 years or so. In the 1980 census, almost three-quarters (73.3 percent) of Asian Americans (68.2 percent of Asian Pacific Americans) were foreign-born, and 43 percent of the six major subgroups indicated that they had entered the United States since 1970. In these subgroups, immigrants ranged from a low of 28.4 percent among Japanese Americans to a high of 90.5 percent among persons of Vietnamese origin. In five of the six major subgroups, immigrants made up more than 60 percent of the population (*2,4,5*). By contrast, only 6.2 percent of the total U.S. population in 1980 was foreign-born (*5*). Among ethnic minorities, Hispanics also include a sizable foreign-born population. In 1980, 28.6 percent of the Hispanics were born outside of the United States (*5*) (fig. 1).

Figure 1. Nativity of U.S. populations by race-ethnicity, 1980



SOURCE: U.S. Bureau of the Census *(5)*.

Aside from immigrants who voluntarily leave their native countries, a significant proportion of Asian Pacific Americans today is made up of refugees who were forced to flee their countries under dire circumstances. Today, approximately one out of every six to seven Asian Pacific Americans is a recent refugee from Southeast Asia who often is in poverty, poor physical health, and very poor mental health because of the harrowing experience of war and escape *(6)*. Among recent immigrants and refugees, ethnocultural barriers, including language problems, are serious deterrents to adequate use of health care. A considerable number of the foreign-born population are elderly persons who immigrated later in life *(2)*. For this group, acculturation is particularly difficult. As a result, social isolation and depression are frequent problems. Suicide is not uncommonly used as a solution by the elderly and by other poorly acculturated immigrants *(6)*.

Extreme heterogeneity. Although Asian Pacific Americans are presented as a group in the census and generally considered so by health care policy makers and providers, they are in fact extremely heterogeneous both within and among the subpopulations. But the diversity in language, culture, history, and religion as well as in the demographic characteristics and degree of acculturation of this population is poorly understood and appreciated. Many assume that all Asian Pacific Americans came out of the same "oriental mold" and that all refugees are alike. Yet there are marked differences in lifestyle and socioeconomic status and knowledge, practices, and attitude toward health and health care between U.S.-born Asian Pacific Americans and those who have arrived in the last few years, many of whom do not speak English *(7,8)*.

Among Southeast Asian refugees, the first wave who came from Vietnam in 1975 is markedly different from the second wave who began arriving in 1979. With some exceptions, the latter group tends to be less educated and less familiar with Western culture and institutions; this group also tends to be in poorer health. Nor are all second wave refugees alike. The Hmong and Mien, who are tribal people from the hills of Laos, and who had depended on shamans for healing in their homeland, are distinctly different from others in the same wave. For these rural people, acculturation is much more difficult than for many others; for them and their health care providers, ethnocultural barriers to health care are especially serious problems *(7–9)*.

Health workers need to bear in mind the extreme heterogeneity of the Asian Pacific Americans, particularly in providing health education and counseling services. Health educational materials written in Korean, for example, are quite useless for persons from Cambodia. For many recent refugees who are illiterate even in their own languages, audiovisual educational materials are more useful than printed materials. Likewise, the approach to counseling should carefully consider the heterogeneity of the population. For example, counseling a third generation U.S.-born Asian Pacific American is very different from counseling a newly arrived immigrant, even though both may be ethnic Chinese.

Bipolar socioeconomic status and health indices. Asian Pacific Americans are often erroneously perceived as the model minority who have all succeeded in the majority society through hard work and self-reliance. As such, they are thought to have little need for special consideration and programs that are accorded to other minorities. Such stereotypes based on data collected from subgroups at one end of the spectrum have masked the misery of those at the other end who are truly in need, but poorly visible and barely audible in a society that views them as "all" highly successful. What is little known and often overlooked is that this highly diversified group of minorities is characterized by a bipolar pattern in many socioeconomic indices, and not surprisingly, in some health indices as well *(7,8)*. This bipolar pattern is closely linked to the intrinsic heterogeneity of the group not only in terms of ethnicity, but also in terms of nativity (U.S.- or foreign-born),

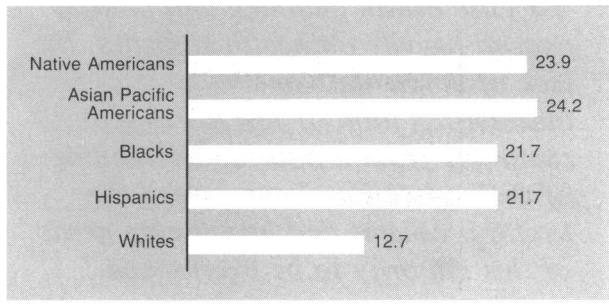
duration of residence in the United States, and degree of acculturation.

In 1979, while an impressive 7.5 percent of Asian Pacific American households had an annual income of at least $50,000, a greater percentage (11.9 percent) had an income of less than $5,000, 24.4 percent had an income of less than $10,000, and 10.7 percent of the families lived below the poverty level. Furthermore, among families living in poverty, Asian Pacific Americans had the highest mean income deficit (the difference between the total family income and the respective poverty threshhold) of any racial-ethnic group. The deficit of $3,961 for Asian Pacific American families compares with $2,851 for the white, $3,408 for the Hispanic, $3,434 for the black, and $3,465 for the Native American families (*5*). It is also little known that, among unrelated persons 15 years and older, in the 1980 census, Asian Pacific Americans had the highest percentage (24.2 percent) who lived in extreme poverty, having incomes of less than $2,000. This rate is almost twice that among whites (12.7 percent) and higher than that for all the other minorities. The percentages in other minorities are 21.7 percent for blacks, 21.7 percent for Hispanics, and 23.9 percent for Native Americans (fig. 2). Among this subgroup of Asian Pacific Americans, 30.5 percent lived below the poverty level, although 5 percent had incomes above $25,000.

A similar bipolar pattern existed in education and occupation. This pattern is especially obvious for women. In 1980, among women 25 years of age or older, Asian Pacific Americans had the highest percentage of persons who had completed 4 or more years of college (14.5 percent), but the proportion who had less than 5 years of elementary school education (7.47 percent) was three times the rate for their white counterparts (2.5 percent) and higher than the rate for black women (6.8 percent). In terms of 1980 employment among persons 16 years of age or older, 28.8 percent of Asian Pacific Americans were in managerial and professional specialties positions, as compared with 23.9 percent of whites. However, a sizable percentage of Asian Pacific Americans (15.6 percent) were in service occupations that include many poorly paid jobs such as food and cleaning services and household work. Comparable figures for persons of other racial and ethnic groups in service occupations are 11.6 percent for whites, 23.1 percent for blacks, 16.3 percent for Hispanics, and 18.1 percent for Native Americans (*5*).

As a group, Asian Pacific Americans are considered to have a better health status than whites (*10*). But health status in fact differs widely in this population, and both mortality and morbidity rates often vary considerably among different ethnic groups and between the foreign-born and U.S.-born (*10*). A bipolar pattern in health indices among Asian Pacific Americans is exemplified by the average annual age-adjusted mortality rates of breast cancer for subgroups examined recently by the Secretary's Task Force on Black and Minority Health, U.S. Department of Health and Human Services. Of all groups examined, (non-Hispanic whites, blacks, Chinese, Japanese, Filipinos, Hawaiians, and Native Americans), Hawaiians had the highest rate of breast cancer (33.0 per 100,000 population), and Filipinos had the lowest (8.0). These rates compare with 26.6 in non-Hispanic whites and 26.3 percent in blacks (*10*). For Hawaiians, the average annual age-adjusted overall cancer mortality rate (200.5) approximates that of blacks (208.5) and is significantly higher than the 163.6 rate for whites (*10*).

Figure 2. Percentage of unrelated persons at least 15 years old with incomes below $2,000, 1979



SOURCE: U.S. Bureau of the Census (*5*).

The general assumption about the good health status of Asian Pacific Americans as a group (*10*) tends to mask the serious health problems and needs of some subgroups, such as the Southeast Asian refugees and other recent immigrants.

Fitzpatrick and coauthors reported in 1987 that among 80 Southeast Asian refugee teenagers, 52 percent had positive PPD (tuberculin) skin tests, 39 percent lacked immunizations, 35 percent had positive stool specimens for parasites, 14 percent had positive tests for hepatitis B surface antigen (HBsAg), 8 percent were chronic carriers of hepatitis B (as determined by the presence of HBeAg and/or HBcAg), 10 percent were anemic, and 19 percent had hemoglobinopathies (*11*). The study also showed that 14 percent were below the fifth percentile for height and weight, 12 percent had goiter, 12 percent had skin disorders, 5 percent

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had visual defects, 5 percent had hearing loss, and 4 percent had idiopathic scoliosis.

Although a positive tuberculin test does not indicate active disease, the age-specific incidence rate of bacteriologically confirmed tuberculosis in Southeast Asian refugees has been reported to be 14–70 times higher than that for the U.S. population as a whole (*12*). Likewise, a positive screening test for hepatitis B does not imply active hepatitis. However, chronic carriers not only are a source of infection but are themselves at high risk of developing cirrhosis and hepatoma. Perinatal transmission by carrier mothers to their infants is a particularly serious problem because about 90 percent of infants infected perinatally will become chronic carriers (*13,14*).

Health policy makers and planners need to be aware of the extreme heterogeneity and the bipolar pattern in socioeconomic and health status of Asian Pacific Americans, and take due caution in interpreting mean, median, and average figures for this population. They also should carefully examine the sources from which data are derived, since information based on two or three subgroups, particularly on those who are U.S.-born or who have become acculturated, are not generally applicable to the rest of the population.

Negligible numbers until recent years. In 1960, Asian Pacific Americans accounted for only 0.4 percent of the U.S. population (*1*). Their negligible numbers until the last 15 years are responsible, at least in part, for a generally poor understanding and acceptance of this minority group as Americans. Beyond the differential treatment not uncommonly encountered by all minorities, Asian Pacific Americans face the added problem of being perceived as foreigners. Many in the society do not distinguish between tourists and visitors from Asia and Asian Pacific Americans for whom the United States is their permanent home. U.S.-born Asian Pacific Americans are frequently complimented, rather insultingly, on how well they speak English and questioned on when they plan to return to their home country. Such outright rejection is not just psychologically traumatic, but it is a serious threat to equal treatment and access to opportunities in American society, including those in health services and resources. Furthermore, unfamiliarity of health care providers with this minority group and its cultures means that they cannot offer culturally sensitive services. Unfamiliarity of providers with the common genetic disorders and other health problems of this population further hampers proper diagnosis and treatment (*7,14*).

The small numbers of Asian Pacific Americans until the last decade and a half have presented yet another very serious problem. National and more limited surveys generally do not identify this minority separately because their numbers are too small to provide statistically valid samples for analysis. Instead, Asian Pacific Americans are usually submerged in the category of "others," a group that is generally given no attention in data analysis. As a result, the health care problems and needs of this rapidly growing population are seldom recognized because there are virtually no "national" statistics and few other data to document their existence. Because health planning and policies depend heavily on health statistics, the lack of ample data and misinterpretation of few existing ones, stemming from a poor understanding of the population, have caused the health problems and health care needs of this minority to be overlooked (*7*). Even when national surveys include this population as a separate group, the extremely uneven geographic distribution of Asian Pacific Americans in the United States and their comparatively small numbers make data collected in such surveys extremely difficult to interpret.

Another problem perhaps related to their negligible numbers until recent years and to the general unfamiliarity of the public with Asian Pacific Americans as a minority is the misclassification of race on death certificates. This seemingly minor error in recordkeeping has serious implications—underestimation of the mortality rate of this population.

A study of California data revealed that Japanese infant mortality was 22 percent higher after adjustment for classification errors; Chinese infant mortality rate was likewise misleadingly low due to misclassification (*15*). A study by the National Center for Health Statistics on the comparability

of racial data on death certificates and matching census records found that although agreement was very high for whites (99.8 percent) and blacks (98.2 percent), it was quite poor for Filipinos (72.6 percent) and Native Americans (79.2 percent), and less than satisfactory for Chinese (90.3 percent). The study concluded that "Observed death rates for the Indians, Chinese and Filipinos were much lower than death rates would have been if only census information had been used" (*16*). Such errors in vital statistics contribute further to a general misunderstanding of the true health status of Asian Pacific Americans.

Special Health Problems and Needs

To address the health care needs of the Asian Pacific Americans properly, health policy makers, planners, and service providers must not only understand their population characteristics, but take note of specific areas that require attention. Descriptions of these areas follow.

Genetic disorders, other diseases, and mental health. A high index of suspicion is crucial in making a correct diagnosis, yet many health care providers may not be familiar with health problems that are common in this population. For example, most health workers are familiar with the racial predilection of certain genetic disorders such as cystic fibrosis in whites, sickle cell anemia in blacks, Cooley's anemia or beta thalassemia in Greeks and Italians, and Tay Sach's disease in the Jewish population, but not many are aware of the high prevalence of alpha and beta thalassemia and hemoglobin E carrier state in Asian Pacific Americans. To compound the problem, beta thalassemia is thought by some to be a genetic disorder confined largely to persons of Mediterranean origin, and hemoglobin E is rare in the general U.S. population. Although alpha thalassemia carrier state is common among blacks and persons of Mediterranean descent, clinical disease from this genetic disorder is extremely rare in these non-Asian populations.

Population studies in Southeast Asia and southern China have found a high carrier frequency of thalassemia and hemoglobin E (*17–19*). In the United States, one study found a carrier frequency of 9 percent for alpha thalassemia and 4.8 percent for beta thalassemia among Chinese Americans in Boston (*20*). Among Southeast Asian Americans in Oakland, CA, one study found 8 percent of persons from Vietnam and 3 percent of those from Cambodia and Laos to have the beta thalassemia trait; 36 percent of refugees from Cambodia and 28 percent of those from Laos were carriers of the hemoglobin E trait (*18*).

Despite such high carrier frequency, until recent years few patients with Cooley's anemia had been encountered in Asian Pacific Americans. This is largely because few if any patients who are beta thalassemia homozygotes or who have thalassemia hemoglobin E disease could have survived as refugees. However, in the last few years, several medical centers serving sizable Asian Pacific American populations have encountered both transfusion-dependent beta thalassemia children and hydrops fetalis with maternal complications (pre-eclampsia and placental retention) from alpha thalassemia in this population (*18*). Over 14 months, one institution in New York City encountered five infants with hydrops fetalis, caused by homozygous alpha thalassemia, that were born to Southeast Asian American women (*21*). Health care providers need to bear in mind the high frequency of these genetic traits in Asian Pacific Americans and recognize that microcytosis in this population, especially in persons of Southeast Asian origin, is most commonly related to the thalassemia and hemoglobin E traits and less frequently due to iron deficiency (*22,23*). For those who fail to realize the high prevalence of these genetic blood disorders in this population, the correct diagnosis of the carrier state may be missed altogether. Incorrect diagnosis not only results in failure to provide genetic counseling and related services to carriers but may also lead to inappropriate treatment of carriers with iron for the microcytic anemia. Such improper treatment can result in iron overload and intoxication (*17,19,22*). Ordering inappropriate diagnostic tests also causes unnecessary inconveniences to patients and increased health expenditures (*14*).

Other genetic disorders common in this population include glucose-6-phosphate dehydrogenase (G-6-PD) deficiency and lactose intolerance. G-6-PD deficiency affects about 10 percent of American blacks, but is rare in whites except those of Mediterranean origin (*17*). Among Asians, one survey of cord blood samples in Chinese newborns found 4.4 percent of male and 0.35 percent of female infants to have G-6-PD deficiency (*24*). Another study found 5.2 percent of 966 male Southeast Asian refugees entering the United States to have this disorder (*25*). Recognition of G-6-PD deficiency is important to avoid severe hemolysis following exposure to certain medica-

tions. In newborns, hyperbilirubinemia from such hemolysis can cause kernicterus if not properly managed. Lactose intolerance, which is common in blacks, occurs with extremely high frequency in some subgroups of Asian Pacific Americans. A study of adults in Pakistan identified the condition in 60 percent of the subjects surveyed (*26*). In China, one survey found this disorder in 76–92 percent of the adult population (*27*). Health workers providing nutritional counseling need to be aware of the high prevalence of this genetic disorder in Asian Pacific Americans as well as a common dislike for dairy products among new immigrants.

Health workers also need to be acquainted with certain infectious diseases that are uncommon in the general U.S. population but quite common in this minority. For example, chronic carrier state for hepatitis B, now considered an important risk factor leading to primary hepatoma and cirrhosis, is common among Asian Pacific Americans. A study in New York, San Francisco, and Los Angeles found 8.6 percent of women of Asian descent, including 2.4 percent of those who were U.S.-born, to be HBsAg-positive (*28*). The Public Health Service's Immunization Advisory Committee recommended in 1984 that pregnant women of Asian and Pacific Islander origin, whether U.S.- or foreign-born, be screened during pregnancy for this infection so that infants of carrier mothers can be immunized (*29*). Perinatal transmission plays a key role in producing chronic carriers because infants so infected are at extremely high risk of becoming carriers (*28*), yet it is unclear whether health care providers who see an occasional patient of such ethnic background are aware of the problem, and in fact, follow this important recommendation. Other infections, such as parasitism and tuberculosis, are common in both Southeast Asian refugees and recent immigrants (*11,12*). It should also be noted that a substantial proportion of these tuberculous patients are infected with organisms that are resistant to isoniazid or streptomycin or both (*12,30*). Occasionally, diseases that are now rarely seen in the United States such as congenital malaria, cholera, and paragonimiasis are encountered in the immigrant population (*31–34*).

Aside from these genetic disorders and infectious diseases, Asian Pacific Americans also have a high frequency of certain cancers. The overall incidence of cancer among Hawaiians is extremely high, and cancers of the breast, ovaries, and stomach are particularly common (*10*). Among Chinese Americans, nasopharyngeal cancer, which is uncommon in the general U.S. population, has a disturbingly high incidence (*35*). In Japanese Americans, both stomach cancer and rectal cancer occur with a high frequency (*10*).

In addition to physical health problems, the magnitude and gravity of mental health problems in Asian Pacific Americans, particularly among refugees and recent immigrants, also deserve careful attention. One study using the culturally sensitive Vietnamese Depression Scale found depression in 52 percent of the Vietnamese patients seeking help in a primary care clinic. Of these patients, 56 percent were misdiagnosed by their primary care physicians (*36*). Proper health care of refugees cannot be provided without a sensitivity to the trauma of war, forced separation from family, and resettlement, and an awareness of the delayed response to such experiences that is often manifested as physical complaints without identifiable medical causes (*6*). Health care providers unfamiliar with the frequency of somatization in this population may order many diagnostic tests needlessly and waste considerable time and resources before making a correct diagnosis (*36*). Aside from Southeast Asian refugees, depression and suicide are also common among the Asian Pacific American elderly (*6,10*).

Severe ethnocultural barriers to health care. Because a very high percentage of Asian Pacific Americans are recent immigrants, and sizable numbers are elderly who immigrated later in life, ethnocultural barriers, including language difficulty, are extremely common and serious. It is beyond the scope of this paper to discuss the complex subject of ethnocultural barriers comprehensively, but a few salient points will be briefly presented.

Health care providers should be particularly alert in dealing with minorities, recent immigrants, and persons who are poorly acculturated. Providers should be familiar with the culturally bound beliefs and concepts concerning health and health care and be aware of the folk practices and remedies commonly used. Health care providers' knowledge of and sensitivity to the patients' culture not only will assist them in making a correct diagnosis but can greatly enhance cooperation and compliance (*9,37,38*). For example, awareness that some Chinese folk remedies used by both Chinese Americans and Southeast Asian refugees have toxic lead and arsenic content is important in making a correct diagnosis in such

poisonings (*39–41*). Misdiagnosis of child abuse can be avoided if health care providers know that lesions similar to cigarette burns can result from moxibustion, and bruises can result from dermabrasive procedures commonly used by Asian Americans, particularly those from Southeast Asia (*42*).

Genetic counselors should consider the religious and cultural beliefs and attitudes in this population toward the unborn child and toward kinship, among other things. For some new immigrants and refugees, deference to those in authority, such as health care providers, means that nondirective genetic counseling may be somewhat confusing because they expect precise and definitive recommendations from persons in authority. Providers of family planning services need to be sensitive to cultural inhibitions common in new immigrants against discussing sex and childbearing openly and to the traditional value placed on a large family.

The role of family members in making decisions should also be considered (*9,37*). Persons involved in obstetrical care should understand the reluctance of some new immigrants, who are used to home deliveries, to give birth in hospitals or undergo anesthesia, and be sensitive to their fear of invasive procedures such as pelvic examination, cesarean section, and episiotomy (*7,9,14,37,38*). Moreover, their perception of perinatal needs and care may not coincide with that of the service providers or the health care system (*43*). To provide appropriate nutritional guidance, counselors need to know the types of food their patients usually eat, because counseling given in terms of diets familiar to the patients is more likely to be effective. They should also be aware of practices that may be a source of problems such as the common consumption of highly salted food in Asian diets and the frequent use of coconut products (which have a very high saturated fat content) in many Southeast Asian cuisines. Bearing in mind the common dislike for dairy products of many new immigrants from Asia, counselors can offer alternative sources of protein and calcium acceptable to the patients.

Health educators and other health care providers must not only be aware of the diversity in language and culture of Asian Pacific Americans, but also be familiar with their concept of health and diseases. Educators and providers need to know the important role that clan or community leaders play in reaching some refugees and keep in mind that in the poorly acculturated population, there is generally little understanding of both preventive health care and the health care system itself. Many recent immigrants depend heavily on folk remedies before they seek outside medical help. Persons from Cambodia and Laos often prefer shamans to Western physicians. Respect for those in authority in the Asian culture sometimes causes reluctance to question physicians and other health workers about the prescribed therapy. Often patients may offer a polite smile and nod without really understanding the instructions given (*9,37,38*). A poor understanding of the instructions or the reasons for treatment frequently leads to poor compliance.

'Aside from these genetic disorders and infectious diseases, Asian Pacific Americans also have a high frequency of certain cancers. The overall incidence of cancer among Hawaiians is extremely high, and cancers of the breast, ovaries, and stomach are particularly common.'

Special anatomical and physiological characteristics. To provide proper health care, certain distinctive anatomical and physiological characteristics of this population also need to be carefully considered. For example, lens implantation in cataract surgery may pose special problems in many patients because a combination of shallow orbit, tight eyelids, and narrow fissure causes the vitreous to bulge after cataract extraction, obliterating the anterior and posterior chambers and making it virtually impossible to insert the lens. Awareness of this serious potential problem is crucial, because preoperative medication to lower intraocular pressure and modification of the surgical procedure can circumvent these difficulties (*44,45*).

Even in prescribing medications, physicians should be mindful of the lighter body weight common among Asian Pacific American immigrants and refugees to avoid an overdose. Beyond the simple problem of relating dosage to body weight, some studies have suggested a physiological difference in the response to medication. A recent study found that the effective weight-standardized neuroleptic dose for Asian American patients is significantly lower than that for their white counterparts. The maximum and stabilized

doses of chlorpromazine after weight standardization were 1,066 milligrams (mg) and 827 mg per day, respectively, for Asian Americans and 2,205 mg and 1,568 mg for white patients. Likewise, the weight-standardized dose associated with the first appearance of extrapyramidal symptoms was much lower for Asian Americans (708 mg) than for whites (1,044 mg) (*46*).

Conclusion

Asian Pacific Americans remain one of the most poorly understood minorities in the United States. As such, their health problems and health care needs have not been adequately recognized or addressed. Yet Asian Pacific Americans are one of the fastest growing minorities, and their rapid expansion in the last two decades is likely to continue and even accelerate. Health policy makers and planners need to have a better understanding of this minority and its unique population characteristics without which their health care needs cannot be addressed appropriately.

Failure to consider the many health care needs of this population and to anticipate these needs is not simply a moral or legal issue of unjust treatment of a minority. It is also an imprudent practice that will certainly increase both the nation's mortalities, morbidities, and health care costs by ignoring the preventable nature of many serious health problems that have both a human and fiscal cost.

Health care providers serving Asian Pacific Americans need to familiarize themselves with special health problems of that population and with the ethnocultural barriers that deter proper use and delivery of health services. Most importantly, society must learn to accept this relatively new population on the American horizon the way it has accepted people from other parts of the world and acknowledge that the problems and needs of a minority are, in fact, the problems and needs of the nation.

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