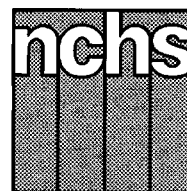


# Advance Data



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## Health Status of Asian Americans: United States, 1992–94

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### Abstract

*Objectives*—This report compares the health status of selected Asian national origin groups.

*Methods*—1992–94 National Health Interview Survey (NHIS) data were analyzed for six Asian national origin groups (Chinese, Filipino, Asian Indian, Japanese, Vietnamese, and Korean), the Asian and Pacific Islander (API) population as a whole, and the non-Hispanic white population. Unadjusted and age-adjusted estimates and standard errors of health indicators and sociodemographic characteristics were generated. A broad range of health issues was studied including respondent-assessed health status, activity limitation, physician contacts, restricted activity days, hospital episodes, smoking status, and knowledge of acquired immunodeficiency syndrome (AIDS).

*Results*—A greater age-adjusted percent of Vietnamese (17.2 percent) and Korean (12.8 percent) persons had fair or poor respondent-assessed health status than persons of Chinese, Filipino, and Japanese descent (6.1–7.4 percent). A lower age-adjusted percent of Chinese persons (6.5 percent) experienced activity limitation compared with Filipino, Japanese, and Vietnamese persons (9.4–13.2 percent). Japanese persons (4.9 contacts) had a greater average annual number of physician contacts than Chinese persons (3.1 contacts) after age adjusting the data. When the data were age adjusted, a higher percent of Korean adults (22.5 percent) were current smokers than Chinese (10.0 percent) and Asian Indian adults (8.7 percent). A higher age-adjusted percent of Vietnamese (21.2 percent) and Asian Indian (18.0 percent) adults reported knowing nothing about AIDS compared with Japanese adults (5.1 percent). A greater proportion of Vietnamese adults (91.6 percent) had not been tested for the AIDS virus infection compared with Chinese, Filipino, Asian Indian, and Japanese adults (72.6–78.5 percent) after age adjusting the data.

*Conclusions*—Differences in health emerge when data on the API population are analyzed by national origin group. Estimates of health presented for the API population as a whole mask differences among subgroups.

**Keywords:** Ethnic groups • National Health Interview Survey • smoking • AIDS testing

### Introduction

The Asian and Pacific Islander population is growing rapidly. Over the last 2 decades, the number of Asian and Pacific Islanders (API's) in the United States doubled from 1.5 million people in 1970 to 3.7 million people in 1980 to 7.3 million people in 1990 (1). The U.S. Bureau of the Census projects that the API population will double again by 2009 (2). In 1997, API's represented an estimated 3.7 percent of the total U.S. population and are expected to reach 10.7 percent (41 million) of the population by 2050 (2,3).

The API population consists of diverse subgroups with distinct cultures, languages, and historical developments. According to the 1990 Census, the API population in the United States includes persons with origins from at least 29 Asian countries and 20 identified Pacific Island cultures from the Far East, Southeast Asia, the Indian subcontinent, and the Pacific Islands (4). This report focuses on national origin groups of the Asian American population (i.e., persons of Asian descent living in the United States).



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The migration of people from Asia and the Pacific Islands to the United States occurred in waves, often driven by the political and economic situations both in this country and abroad. Large numbers of Chinese persons immigrated in 1849 with the California Gold Rush, followed by members of other Asian subgroups, such as Filipino, Japanese, and Korean persons, who immigrated in significant numbers in the late 1800's and early 1900's (5). The most recent waves of Chinese, Filipino, and Korean immigrants began in 1965 with passage of the amendments to the Immigration and Nationality Act that eased immigration restrictions. This legislation resulted in an increase of the volume of immigrants, especially those from Asian and Latin American countries. Peoples of smaller Asian national origin groups, such as the Hmong, Vietnamese, Cambodian, and Laotian did not live in the United States in significant numbers until 1975 when refugees left their countries of origin due to political turmoil.

These waves of migration have resulted in the API national origin groups having differing population sizes and proportions of foreign-born persons. In 1990, 95 percent of the API population was of Asian descent and 5 percent was of Pacific Island descent (4). The largest proportions of the Asian American population were accounted for by earlier immigrating groups such as the Chinese (24 percent), Filipino (20 percent), and Japanese (12 percent) populations while newer immigrant groups such as the Laotian, Cambodian, Thai, and Hmong populations each accounted for 1–2 percent of the Asian American population (1). Some Asian national origin groups have multiple generations of families residing in the United States and a considerable proportion of persons born in this country, whereas other groups consist of primarily recent immigrants and refugees and thus are relatively new to the United States. According to the 1990 Census, 66 percent of the Asian American population is foreign born (1). The proportion of foreign born ranged from a low of 32 percent among those of

Japanese descent to a high of 80 percent among those of Vietnamese descent.

The differences in migration histories among Asian national origin groups, such as varying nativity, years in the United States, and circumstances under which people left their countries of origin, have resulted in a diverse range of acculturation levels. For example, the 1990 Census asked persons 5 years old and over who reported that they spoke a language other than English at home to indicate their ability to speak English. Among Asian American persons, 40 percent reported that they do not speak English “very well” and 25 percent were in linguistically isolated households (i.e., households in which no one 14 years old or over speaks only English and no one who speaks another language speaks English “very well”) (4). The proportions among the Asian national origin groups of persons 5 years and over who do not speak English “very well” ranged from 23 percent of Asian Indian persons to 61 percent of Vietnamese persons and 76 percent of Hmong persons. The distribution pattern for linguistically isolated households was similar.

Migration history and acculturation factors have been associated with sociodemographic characteristics such as age, geographic location, and socioeconomic status. Sociodemographic characteristics affect health by influencing factors such as health behaviors, access to care, knowledge of or attitudes toward health, stress, and availability of social supports. Research consistently finds a significant relationship between health indicators and sociodemographic characteristics such as age, sex, race, immigration status, geographic location, and socioeconomic status (SES). For example, persons of higher SES, indicated by income, education, or occupational status, tend to live longer and have lower morbidity rates than those of lower SES (6). Data from the 1990 Census indicate the Asian American population has a higher educational attainment compared with other racial or ethnic groups in the United States (4,7). However, the educational attainment varied widely

across the different Asian national origin groups. In 1990, 88 percent of adults of Japanese descent had graduated from high school compared with only 61 percent of Vietnamese adults and 31 percent of Hmong adults (4).

Data from the 1990 Census also indicate the Asian American population has a higher median household income compared with the national median (4). However, the Asian American population has a lower per capita income compared with the national per capita income. Moreover, the income levels are not uniform across the various Asian national origin groups. The per capita income of persons of Japanese descent was \$19,000 compared with \$9,000 for persons of Vietnamese descent and \$3,000 for persons of Hmong descent. In summary, studies of the health of Asian Americans should consider the differences in migration histories, indicators of acculturation, and sociodemographic composition of the national origin groups.

With growing representation of API's in our society, the need for national estimates of the health of the constituent subgroups is great, but research to date is lacking. Much of the existing data on API health has been collected on more established national origin groups (e.g., Japanese) and in selected locations (e.g., West coast, clinic populations) and then inappropriately extrapolated to represent the health of all API's in the United States (8). National data collected on the API population also have limitations. National health data on API's are often not presented even when they are collected because the sample sizes are insufficient for meaningful analyses. Furthermore, these data are rarely presented by national origin group, which may conceal differences among subgroups. The paucity of data and inadequacies of existing data on the health of API's limit health policy makers' ability to effectively plan health services delivery and public health programs for this rapidly growing population.

Despite the overall lack of data on the API population, the data collected by federal government agencies have the greatest potential of providing national

estimates on the health status of API's. For example, one study has used NCHS natality data to examine birth characteristics of nine API subgroups living in seven states with the highest API populations (9). Until recently, meaningful estimates on the health status of API national origin groups from the National Health Interview Survey (NHIS) could not be calculated because the information collected on race was not of sufficient detail. In 1992, NHIS introduced a new race code structure that broadened the Asian or Pacific Islander category into Chinese, Filipino, Hawaiian, Korean, Vietnamese, Japanese, Asian Indian, Samoan, Guamanian, and other API. With this expanded race code, national studies on the health status of API's can include subgroup detail for approximately 90 percent of the API population (4). The population size and percent distribution of API's by national origin group from the 1992–94 NHIS are shown in [table 1](#). This report is the first comprehensive summary of population-based national estimates of the health status of selected Asian American national origin groups.

## Methods

Data from the 1992–94 National Health Interview Survey (NHIS) were used to describe the health of selected Asian American national origin groups. Each year, the NHIS collects demographic and health data on a nationally representative sample of the civilian noninstitutionalized household population residing in the United States. Through 1996, the NHIS consisted of two parts: (a) a basic health and demographic (core) questionnaire that remained the same from year to year and was completed for each household member, and (b) special topic (supplement) questionnaires that varied from year to year and were completed for a sample of the interviewed individuals. These data are used to produce national estimates of household and individual characteristics, disease incidence and prevalence, general health status measures, and health services utilization.

**Table 1. Number and percent distribution of Asian and Pacific Islander population by national origin: National Health Interview Survey, average annual 1992–94**

National origin	Number in thousands	Percent distribution
All API <sup>1</sup>	8,475	100.0
Chinese	1,809	21.3
Filipino	1,717	20.3
Asian Indian	1,017	12.0
Japanese	1,007	11.9
Vietnamese	961	11.3
Korean	784	9.3
Hawaiian	163	1.9
Samoan	85	1.0
Guamanian	47	0.6
Other API <sup>1</sup>	885	10.4

<sup>1</sup>API is Asian or Pacific Islander.

NOTE: Figures may not add to 100 because of rounding.

This report presents pooled data from the 1992–94 NHIS basic questionnaire and special topic questionnaires that included items on AIDS knowledge and testing and cigarette smoking. Analyses were performed on these data using Survey Data Analysis (SUDAAN) (10) software to manage the complex, multistage survey design. Estimates and standard errors of health indicators are presented for six Asian national origin groups, the Asian and Pacific Islander (API) population as a whole, and the non-Hispanic white population. Data are not presented for the Hawaiian, Guamanian, or Samoan populations due to insufficient sample sizes; these groups are included in the total API group.

Crude and age-adjusted estimates of health indicators are presented in this report. Crude or unadjusted estimates describe the actual level of the health indicators for each group and are useful for assessing the total burden of illness. However, because health indicators tend to be strongly affected by age, age-adjusted estimates are more useful for comparing the health status of groups because they take into account differing age distributions. Because the age distribution differed among the Asian national origin groups, age-adjusted estimates are presented in this report to enable comparisons between groups. Estimates were age adjusted by the direct method using the 1990 Census as the standard population. The age groups used in the age standardization were under 5 years, 5–17 years, 18–24 years,

25–44 years, 45–64 years, 65–74 years, and 75 years and over. The percent distribution of Asian national origin groups by age and other sociodemographic variables are shown in [table 2](#).

Statistical tests performed were two-tailed tests with no adjustments for multiple comparisons. Because no adjustments were made for multiple comparisons, a *t*-test with a critical value of 2.66 (0.01 level) was used to test comparisons among the Asian national origin groups. Differences between the API population and the non-Hispanic white population are not discussed in this report; the data on the non-Hispanic white population are provided as a frame of reference for interpreting the Asian national origin group data. In this report, terms relating to differences such as “higher” and “less” imply a statistically significant difference. Terms such as “similar” or “no difference” mean that no statistically significant difference exists between the estimates being compared.

## Results

### Sociodemographic Characteristics

[Table 2](#) presents the data on the sociodemographic characteristics of the Asian national origin groups, the Asian and Pacific Islander (API) population as a whole, and the non-Hispanic white population in the 1992–94 National Health Interview Survey (NHIS). The relationship between sociodemographic

**Table 2. Number of Asian and Pacific Islander and non-Hispanic white people and percent distribution with standard error by selected demographic characteristics, according to Asian and Pacific Islander and non-Hispanic white populations: United States, average annual 1992–94**

Selected demographic characteristic	Chinese	Filipino	Asian Indian	Japanese	Vietnamese	Korean	Other API <sup>1</sup>	All API <sup>1</sup>	Non-Hispanic white
Number in thousands									
All persons . . . . .	1,809	1,717	1,017	1,007	961	784	1,180	8,475	184,309
Percent distribution and standard error									
Total . . . . .	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)
Sex									
Male . . . . .	50.1 (0.87)	45.4 (0.84)	53.9 (1.00)	45.1 (1.08)	50.7 (1.10)	45.0 (1.34)	49.0 (1.20)	48.5 (0.46)	48.9 (0.09)
Female . . . . .	49.9 (0.87)	54.6 (0.84)	46.1 (1.00)	54.9 (1.08)	49.3 (1.10)	55.0 (1.34)	51.0 (1.20)	51.5 (0.46)	51.1 (0.09)
Age									
Under 18 years . . . . .	21.2 (1.10)	28.2 (0.81)	29.3 (1.23)	17.3 (1.53)	33.6 (2.39)	27.8 (1.58)	37.1 (2.25)	27.4 (1.05)	23.7 (0.18)
Under 5 years . . . . .	7.3 (0.63)	7.8 (0.71)	8.3 (0.86)	5.5 (0.71)	8.4 (1.01)	8.0 (1.01)	11.4 (1.08)	8.1 (0.30)	6.7 (0.08)
5–17 years . . . . .	13.9 (0.87)	20.4 (0.86)	21.0 (1.33)	11.8 (1.17)	25.2 (2.24)	19.9 (1.47)	25.7 (1.94)	19.3 (0.89)	17.0 (0.15)
18–64 years . . . . .	72.2 (1.08)	64.6 (0.94)	68.7 (1.27)	68.0 (1.56)	64.1 (2.23)	67.8 (1.61)	59.6 (1.83)	66.7 (0.77)	62.2 (0.20)
18–24 years . . . . .	14.0 (1.23)	9.9 (0.67)	11.9 (1.10)	10.7 (1.00)	15.9 (1.28)	14.7 (1.59)	13.8 (1.63)	12.8 (0.63)	8.7 (0.17)
25–44 years . . . . .	40.0 (1.26)	36.0 (1.23)	41.7 (1.51)	31.6 (2.43)	35.3 (1.52)	35.9 (1.61)	33.1 (1.91)	36.5 (0.93)	32.3 (0.16)
45–64 years . . . . .	18.2 (1.07)	18.7 (0.85)	15.2 (0.96)	25.8 (1.07)	12.9 (1.06)	17.1 (1.67)	12.7 (1.24)	17.4 (0.65)	21.1 (0.16)
65 years and over . . . . .	6.6 (0.51)	7.2 (0.80)	2.0 (0.35)	14.6 (2.56)	2.3 (0.50)	4.4 (1.06)	3.3 (0.81)	6.0 (0.76)	14.2 (0.21)
65–74 years . . . . .	4.5 (0.37)	4.8 (0.55)	1.3 (0.33)	9.8 (1.28)	1.7 (0.44)	3.2 (0.90)	2.6 (0.57)	4.1 (0.50)	8.3 (0.12)
75 years and over . . . . .	2.1 (0.33)	2.4 (0.51)	*0.6 (0.24)	4.8 (1.38)	*0.6 (0.20)	1.1 (0.32)	*0.7 (0.30)	1.9 (0.30)	5.9 (0.11)
Education <sup>2</sup>									
Less than high school graduate . . . . .	19.1 (1.35)	11.0 (1.29)	11.0 (1.39)	9.3 (2.36)	29.0 (2.14)	12.7 (1.94)	30.4 (3.12)	16.7 (0.70)	16.7 (0.29)
High school graduate . . . . .	23.5 (1.58)	19.6 (1.66)	16.9 (1.54)	31.9 (1.63)	30.5 (2.37)	29.7 (3.16)	31.1 (2.84)	25.1 (1.40)	38.4 (0.26)
Some college . . . . .	13.9 (0.91)	22.4 (1.46)	13.3 (1.37)	25.1 (1.78)	19.4 (1.91)	17.1 (1.76)	19.9 (1.89)	18.7 (0.80)	20.7 (0.20)
College graduate or more . . . . .	43.5 (1.85)	47.1 (2.21)	58.8 (2.38)	33.7 (4.17)	21.1 (3.02)	40.6 (2.97)	18.6 (2.54)	39.5 (2.02)	24.1 (0.33)
Employment status <sup>3</sup>									
Currently employed . . . . .	64.5 (1.50)	74.1 (1.59)	69.4 (1.54)	62.6 (2.28)	60.3 (2.58)	62.0 (2.12)	62.5 (3.20)	65.8 (0.88)	65.2 (0.28)
Currently unemployed . . . . .	2.9 (0.45)	2.9 (0.50)	2.9 (0.72)	1.6 (0.37)	3.3 (0.77)	2.7 (0.61)	4.7 (0.95)	3.0 (0.25)	2.9 (0.07)
Not in labor force . . . . .	32.6 (1.42)	22.9 (1.49)	27.7 (1.55)	35.9 (2.20)	36.3 (2.79)	35.3 (2.07)	32.9 (2.76)	31.2 (0.79)	31.9 (0.28)
Family income									
Less than \$20,000 . . . . .	26.6 (2.63)	15.5 (1.35)	24.1 (2.12)	14.2 (2.17)	44.5 (3.94)	26.9 (2.54)	39.9 (4.16)	26.5 (1.47)	24.2 (0.36)
\$20,000–34,999 . . . . .	16.9 (1.48)	17.7 (1.90)	17.5 (1.71)	14.3 (1.92)	15.8 (2.32)	21.7 (2.52)	20.4 (2.52)	17.6 (0.99)	21.7 (0.25)
\$35,000 and over . . . . .	43.5 (2.09)	55.2 (2.25)	47.9 (2.17)	56.6 (2.01)	26.5 (2.96)	37.5 (2.60)	28.8 (3.91)	43.4 (1.31)	43.0 (0.49)
Unknown . . . . .	13.1 (1.76)	11.6 (1.80)	10.4 (1.77)	14.9 (2.19)	13.2 (2.53)	13.9 (2.06)	10.8 (1.70)	12.5 (0.98)	11.1 (0.36)
Poverty status <sup>4</sup>									
At or above poverty . . . . .	80.3 (1.78)	87.7 (1.58)	80.9 (1.89)	86.5 (1.33)	55.1 (3.73)	79.9 (2.16)	60.9 (4.22)	77.0 (1.15)	85.3 (0.33)
Below poverty . . . . .	11.2 (1.54)	6.2 (1.11)	11.1 (1.59)	5.3 (1.38)	27.9 (3.69)	9.0 (1.59)	30.0 (3.73)	13.8 (1.23)	7.6 (0.24)
Unknown . . . . .	8.5 (1.25)	6.2 (1.21)	8.0 (1.38)	8.3 (1.54)	17.0 (2.48)	11.1 (1.54)	9.1 (1.86)	9.2 (0.66)	7.2 (0.26)
Family size									
1–3 members . . . . .	46.9 (2.68)	32.8 (2.07)	37.9 (2.52)	63.3 (2.07)	30.2 (3.16)	47.8 (2.42)	33.8 (2.53)	41.3 (1.54)	60.0 (0.34)
4–5 members . . . . .	40.0 (2.64)	41.0 (2.61)	49.3 (2.73)	32.4 (2.16)	36.9 (3.13)	46.7 (2.38)	35.6 (2.55)	40.1 (1.35)	34.1 (0.26)
6 or more members . . . . .	13.0 (2.22)	26.2 (3.34)	12.8 (2.27)	*4.3 (1.33)	32.9 (4.19)	5.5 (1.45)	30.6 (3.69)	18.6 (1.62)	5.8 (0.20)
Geographic region									
Northeast . . . . .	26.8 (2.93)	7.9 (1.73)	31.8 (4.09)	*8.0 (3.34)	11.6 (2.81)	21.6 (3.25)	11.6 (2.19)	17.0 (1.83)	20.9 (0.52)
Midwest . . . . .	9.1 (1.79)	8.4 (1.57)	18.5 (2.41)	*6.0 (2.40)	7.2 (1.57)	19.5 (3.19)	18.4 (4.58)	11.8 (1.43)	28.1 (0.71)
South . . . . .	12.5 (1.83)	13.3 (2.64)	21.1 (2.47)	*6.1 (2.27)	22.8 (3.84)	19.5 (3.07)	14.5 (2.77)	15.0 (1.65)	31.4 (0.70)
West . . . . .	51.5 (4.06)	70.4 (3.44)	28.6 (3.71)	79.9 (7.23)	58.5 (5.11)	39.3 (4.75)	55.5 (6.86)	56.2 (3.93)	19.6 (0.68)
Place of residence									
MSA, central city <sup>5</sup> . . . . .	51.6 (2.68)	44.8 (3.85)	42.0 (3.45)	42.8 (4.01)	52.7 (5.14)	36.7 (3.55)	50.0 (4.61)	46.5 (1.87)	23.0 (0.84)
MSA, not central city <sup>5</sup> . . . . .	45.4 (2.72)	50.0 (3.84)	52.3 (3.37)	52.3 (3.26)	44.4 (5.07)	57.4 (3.45)	45.6 (4.72)	49.0 (1.93)	51.6 (1.02)
Non-MSA <sup>5</sup> . . . . .	*3.1 (0.98)	*5.2 (2.33)	5.6 (1.42)	*4.9 (1.98)	*2.9 (0.96)	5.8 (1.48)	4.3 (1.23)	4.4 (0.82)	25.4 (0.93)

**Table 2. Number of Asian and Pacific Islander and non-Hispanic white people and percent distribution with standard error by selected demographic characteristics, according to Asian and Pacific Islander and non-Hispanic white populations: United States, average annual 1992–94—Con.**

Selected demographic characteristic	Chinese	Filipino	Asian Indian	Japanese	Vietnamese	Korean	Other API <sup>1</sup>	All API <sup>1</sup>	Non-Hispanic white
Percent distribution and standard error									
Nativity <sup>3</sup>									
U.S. born . . . . .	17.3 (1.94)	14.4 (2.39)	4.2 (0.80)	63.1 (9.34)	2.1 (0.51)	9.0 (1.97)	28.6 (6.59)	20.4 (4.95)	95.6 (0.11)
Foreign born . . . . .	82.7 (1.94)	85.6 (2.39)	95.8 (0.80)	36.9 (9.34)	97.9 (0.51)	91.0 (1.97)	71.4 (6.59)	79.6 (4.95)	4.4 (0.11)
Years in United States <sup>6</sup>									
Less than 1 year . . . . .	3.5 (0.57)	3.0 (0.71)	6.5 (1.15)	9.8 (1.74)	3.6 (1.04)	6.2 (1.09)	3.9 (1.13)	4.6 (0.36)	2.6 (0.25)
1 to less than 5 years . . . . .	22.7 (1.70)	16.2 (1.81)	22.5 (2.09)	20.7 (3.26)	25.4 (2.35)	15.7 (2.70)	14.7 (2.53)	19.9 (1.12)	9.6 (0.52)
5 to less than 10 years . . . . .	20.5 (2.17)	20.0 (1.49)	23.9 (2.06)	6.8 (1.85)	18.2 (2.20)	20.4 (2.62)	19.4 (2.35)	19.6 (0.94)	8.2 (0.44)
10 to less than 15 years . . . . .	25.6 (1.87)	20.7 (1.28)	17.3 (1.87)	10.2 (2.31)	30.1 (2.39)	17.7 (2.05)	29.1 (2.87)	22.5 (0.82)	8.8 (0.37)
15 years or more . . . . .	27.6 (1.75)	40.2 (2.08)	29.7 (2.59)	52.5 (5.23)	22.6 (2.35)	40.0 (2.92)	33.0 (3.13)	33.5 (1.25)	70.8 (0.82)

\* Figure does not meet standard of reliability or precision.

. . . Category not applicable.

<sup>1</sup>API is Asian or Pacific Islander.

<sup>2</sup>For persons 25 years of age and over.

<sup>3</sup>For persons 18 years of age and over.

<sup>4</sup>Poverty status is based on family size, number of children under 18 years of age, and family income.

<sup>5</sup>MSA is metropolitan statistical area.

<sup>6</sup>For foreign born persons 18 years of age and over.

NOTE: Figures may not add to 100 because of rounding.

characteristics and health indicators were not analyzed, except for age adjusting the data. However, the sociodemographic data are presented to demonstrate the diversity among the Asian national origin groups to lend some context for viewing the API health data.

**Age**—The Japanese population had an older age distribution than the other Asian national origin groups. In the 1992–94 NHIS, a greater percent of persons of Japanese descent (14.6 percent) were 65 years of age or over compared with the other Asian national origin groups, which ranged from 2.0–7.2 percent. A lesser percent of Japanese persons (17.3 percent) were under 18 years of age compared with 27.8–33.6 percent of persons of the Filipino, Asian Indian, Vietnamese, and Korean national origin groups.

**Education**—Some Asian national origin groups in the 1992–94 NHIS had lower levels of education. A greater proportion of adults of Chinese (19.1 percent) and Vietnamese (29.0 percent) descent had less than a high school education than adults of the other Asian national origin groups, which ranged from 9.3–12.7 percent. A higher percent of adults of Asian Indian descent (58.8 percent) had at least a college degree compared with 21.1–

47.1 percent of adults among the other Asian national origin groups. In contrast, approximately 20 percent of Vietnamese adults had at least a college degree compared with more than 40 percent of adults of Chinese, Filipino, Asian Indian, and Korean descent.

**Employment Status**—A greater proportion of Filipino adults (74.1 percent) were currently employed compared with adults of Chinese, Japanese, Vietnamese, and Korean descent (60.3–64.5 percent).

**Income and Poverty Status**—The percent distribution of income and poverty status varied among the Asian national origin groups. Fourteen percent of Japanese persons and 15.5 percent of Filipino persons had a family income of less than \$20,000. This was a smaller proportion than the proportions among the other Asian national origin groups, which ranged from 24.1–44.5 percent. Furthermore, a lesser percent of Japanese persons (5.3 percent) were below the poverty level compared with 11.1–27.9 percent of persons of Chinese, Asian Indian, and Vietnamese descent. Conversely, a greater proportion of persons of Vietnamese descent had a family income of less than \$20,000 and were at or below the poverty level than persons of the other Asian national

origin groups. It is important to note that higher family income may reflect a greater number of working adults in larger families, but might not translate into a higher per capita income. However, poverty status takes into account family size as well as the number of children under 18 years of age and family income.

**Family Size**—In the NHIS, a family is defined as kinfolk residing in the sample household. Some Asian national origin groups in the 1992–94 NHIS tended to have large families. Compared with persons of the other Asian national origin groups in the 1992–94 NHIS, a greater proportion of Filipino (26.2 percent) and Vietnamese (32.9 percent) persons had a family size of six or more members whereas a lesser proportion of Korean persons did (5.5 percent).

**Geographic Region**—As a whole, Asian Americans tended to live in the West region of the United States. However, closer examination of the 1992–94 NHIS data showed Filipino and Japanese populations were the most concentrated in the West region whereas Asian Indian and Korean populations were more evenly distributed among other regions. More than 70 percent of Filipino and Japanese persons lived in the West region of the United States

**Table 3. Age-adjusted percent distribution with standard error of people by selected health characteristics, according to Asian and Pacific Islander and non-Hispanic white populations: United States, average annual 1992–94**

Selected health characteristic	Chinese	Filipino	Asian Indian	Japanese	Vietnamese	Korean	Other API <sup>1</sup>	All API <sup>1</sup>	Non-Hispanic white
Age-adjusted percent distribution and standard error									
Total . . . . .	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)
Health status									
Excellent . . . . .	32.7 (1.54)	36.5 (1.59)	41.1 (2.10)	44.0 (2.09)	22.7 (2.82)	34.6 (2.43)	29.7 (2.14)	34.5 (1.08)	40.7 (0.34)
Very good . . . . .	31.7 (1.71)	32.2 (1.90)	27.7 (1.90)	27.7 (2.89)	25.1 (2.36)	28.2 (2.26)	27.9 (2.27)	29.7 (0.99)	29.4 (0.24)
Good . . . . .	28.2 (1.60)	23.9 (1.43)	22.4 (1.81)	22.2 (1.74)	34.9 (2.81)	24.4 (1.86)	29.7 (1.60)	26.6 (0.79)	21.1 (0.19)
Fair or Poor . . . . .	7.4 (0.73)	7.4 (0.88)	8.9 (1.46)	6.1 (0.66)	17.2 (1.71)	12.8 (1.45)	12.7 (1.56)	9.2 (0.46)	8.9 (0.13)
Activity limitation status									
Not limited or unknown . . . . .	93.5 (0.64)	90.4 (0.91)	92.4 (1.31)	90.6 (0.70)	86.8 (1.80)	91.9 (1.04)	87.3 (1.64)	90.7 (0.39)	84.9 (0.16)
Limited . . . . .	6.5 (0.64)	9.6 (0.91)	7.6 (1.31)	9.4 (0.70)	13.2 (1.80)	8.1 (1.04)	12.7 (1.64)	9.3 (0.39)	15.1 (0.16)
Limited in major activity . . . . .	3.9 (0.54)	6.3 (0.65)	5.7 (1.12)	6.6 (0.50)	7.3 (1.05)	6.1 (0.82)	9.5 (1.49)	6.1 (0.35)	10.0 (0.13)
Unable to perform major activity . . . . .	1.5 (0.33)	2.7 (0.42)	3.2 (0.75)	3.4 (0.39)	4.6 (0.91)	2.8 (0.63)	5.5 (1.29)	3.1 (0.21)	4.1 (0.07)
Limited in kind or amount of major activity . . . . .	2.4 (0.41)	3.6 (0.57)	*2.5 (0.79)	3.2 (0.42)	*2.7 (0.90)	3.3 (0.61)	4.0 (0.83)	3.1 (0.25)	6.0 (0.09)
Limited, but not in major activity . . . . .	2.7 (0.52)	3.3 (0.53)	*1.9 (0.59)	2.8 (0.40)	*5.9 (1.83)	2.0 (0.46)	3.2 (0.68)	3.2 (0.18)	5.0 (0.08)
Interval since last physician contact									
Less than 1 year . . . . .	69.7 (1.36)	76.2 (1.79)	75.2 (1.84)	76.7 (2.52)	76.7 (2.00)	69.6 (2.05)	71.8 (2.26)	73.4 (1.10)	79.6 (0.17)
1 to less than 2 years . . . . .	11.9 (0.88)	10.3 (1.15)	10.0 (1.22)	9.7 (0.80)	8.4 (1.00)	10.0 (1.05)	11.4 (1.28)	10.5 (0.52)	9.4 (0.10)
2 to less than 5 years . . . . .	13.1 (0.89)	10.2 (0.85)	11.3 (1.31)	8.7 (1.53)	10.5 (1.06)	12.0 (1.03)	11.0 (1.23)	11.2 (0.59)	8.0 (0.10)
5 years or more . . . . .	5.3 (0.67)	3.3 (0.43)	3.6 (0.63)	4.8 (1.26)	4.4 (0.77)	8.4 (1.51)	5.8 (0.89)	4.9 (0.33)	3.0 (0.05)

\* Figure does not meet standard of reliability or precision.

. . . Category not applicable.

<sup>1</sup>API is Asian or Pacific Islander.

NOTE: Figures may not add to 100 because of rounding.

while less than 40 percent of Asian Indian and Korean persons lived there. Approximately 20–30 percent of Asian Indian and Korean persons lived in each of the other three geographic regions—Northeast, Midwest, and South.

*Nativity and Years in the United States*—Except for the Japanese group, the majority of persons of each of the Asian national origin groups were not born in the 50 states or the District of Columbia. More than 95 percent of persons of Asian Indian and Vietnamese descent were foreign born. This was greater than the proportions of foreign-born persons of Chinese, Filipino, and Japanese descent, which ranged from 36.9–85.6 percent. Among the foreign-born Asian American population, a greater proportion of persons (more than 40 percent) of Filipino, Japanese, and Korean descent had been in the United States for 15 years or more and a lesser proportion (less than 30 percent) of Chinese, Asian Indian, and Vietnamese persons had been in this country for 15 years or more.

### Health Status Indicators

*Respondent-Assessed Health Status*—Respondents to the NHIS are asked to rate their own health and the health of other family members living in the same household as excellent, very good, good, fair, or poor. The data on the respondent-assessed health status of the Asian national origin groups, the API population as a whole, and the non-Hispanic white population in the 1992–94 NHIS are shown in tables 3 and 4. After age adjusting the data, 17.2 percent of Vietnamese persons and 12.8 percent of Korean persons had “fair” or “poor” health. These proportions were greater than the age-adjusted proportions among persons of Chinese, Filipino, and Japanese descent, which ranged from 6.1–7.4 percent. The age-adjusted proportion of persons of Vietnamese descent whose health was assessed as “fair” or “poor” was greater than the age-adjusted proportion of Asian Indian persons (8.9 percent) as well.

*Activity Limitation Status*—The 1992–94 NHIS data on the activity limitation status of the Asian national origin groups, the API population as a whole, and the non-Hispanic white population are presented in tables 3 and 4. The age-adjusted percent of Chinese persons (6.5 percent) with an activity limitation was less than the age-adjusted percents among Filipino, Japanese, and Vietnamese persons, which ranged from 9.4–13.2 percent.

*Interval Since Last Physician Contact*—The interval since the last physician contact is ascertained by asking persons interviewed for the NHIS about how long it has been since they last saw or talked to a medical doctor or assistant. The 1992–94 data on the interval since the last physician contact among the Asian national origin groups, the API population as a whole, and the non-Hispanic white population in the NHIS are shown in tables 3 and 4. A lower age-adjusted percent of Chinese persons (69.7 percent) had seen or

**Table 4. Number of Asian and Pacific Islander and non-Hispanic white people and percent distribution with standard error of people by selected health characteristics, according to Asian and Pacific Islander and non-Hispanic white populations: United States, average annual 1992–94**

Selected health characteristic	Chinese	Filipino	Asian Indian	Japanese	Vietnamese	Korean	Other API <sup>1</sup>	All API <sup>1</sup>	Non-Hispanic white
Number in thousands									
All persons . . . . .	1,809	1,717	1,017	1,007	961	784	1,180	8,475	184,309
Percent distribution and standard error									
Total . . . . .	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)
Health status									
Excellent . . . . .	33.3 (1.59)	38.4 (1.82)	45.9 (2.30)	40.6 (1.62)	26.1 (3.08)	37.4 (2.61)	34.2 (2.26)	36.4 (1.00)	39.6 (0.34)
Very good . . . . .	32.4 (1.70)	32.7 (1.94)	28.7 (1.99)	28.8 (2.70)	27.3 (2.66)	29.9 (2.25)	28.6 (2.40)	30.3 (1.05)	29.2 (0.23)
Good . . . . .	27.4 (1.67)	22.5 (1.53)	20.8 (1.56)	24.1 (2.13)	32.9 (3.18)	23.3 (1.87)	28.1 (1.68)	25.6 (0.85)	21.6 (0.19)
Fair or Poor . . . . .	6.9 (0.71)	6.4 (0.84)	4.6 (0.85)	6.5 (0.57)	13.7 (1.41)	9.4 (1.12)	9.1 (1.03)	7.8 (0.38)	9.5 (0.14)
Activity limitation status									
Not limited or unknown . . . . .	94.7 (0.54)	92.1 (0.78)	94.7 (0.75)	89.7 (0.72)	91.7 (0.93)	93.3 (0.76)	90.0 (1.16)	92.5 (0.34)	84.1 (0.18)
Limited . . . . .	5.3 (0.54)	7.9 (0.78)	5.3 (0.75)	10.3 (0.72)	8.3 (0.93)	6.7 (0.76)	10.0 (1.16)	7.5 (0.34)	15.9 (0.18)
Limited in major activity . . . . .	3.2 (0.48)	5.2 (0.58)	3.7 (0.62)	7.3 (0.60)	5.1 (0.77)	4.8 (0.63)	7.1 (1.00)	5.1 (0.30)	10.6 (0.14)
Unable to perform major activity . . . . .	1.3 (0.30)	2.1 (0.31)	1.7 (0.33)	4.0 (0.51)	3.2 (0.66)	2.1 (0.39)	4.0 (0.81)	2.5 (0.16)	4.4 (0.08)
Limited in kind or amount of major activity . . . . .	1.9 (0.36)	3.1 (0.48)	2.0 (0.51)	3.3 (0.39)	1.9 (0.48)	2.7 (0.49)	3.1 (0.55)	2.5 (0.20)	6.2 (0.09)
Limited, but not in major activity . . . . .	2.1 (0.39)	2.6 (0.41)	1.6 (0.35)	3.1 (0.36)	3.1 (0.68)	1.9 (0.42)	2.9 (0.53)	2.5 (0.14)	5.3 (0.09)
Interval since last physician contact									
Less than 1 year . . . . .	68.3 (1.41)	75.4 (1.87)	72.8 (1.81)	76.4 (2.65)	73.8 (2.28)	68.3 (2.14)	70.8 (2.12)	72.2 (1.15)	79.7 (0.16)
1 to less than 2 years . . . . .	12.1 (0.88)	10.6 (1.19)	10.8 (1.14)	9.8 (0.82)	9.4 (1.07)	10.8 (1.16)	12.3 (1.21)	11.0 (0.53)	9.3 (0.10)
2 to less than 5 years . . . . .	13.8 (0.93)	10.5 (0.89)	12.4 (1.42)	8.7 (1.41)	12.1 (1.21)	12.9 (1.11)	11.6 (1.23)	11.8 (0.64)	7.9 (0.09)
5 years or more . . . . .	5.8 (0.65)	3.4 (0.45)	4.0 (0.70)	5.2 (1.28)	4.8 (0.86)	8.0 (1.41)	5.3 (0.93)	5.0 (0.33)	3.1 (0.05)

. . . Category not applicable.

<sup>1</sup>API is Asian or Pacific Islander.

NOTE: Figures may not add to 100 because of rounding.

talked to a medical doctor or assistant in the past year compared with 76.2 percent of Filipino persons and 76.7 percent of Vietnamese persons. Approximately 8 percent of Korean persons had an interval of 5 years or more since their last physician contact after age adjusting the data. This was greater than the age-adjusted percents of persons of Filipino (3.3 percent) and Asian Indian (3.6 percent) descent.

**Physician Contacts—Table 5** presents the data on the average annual mean number of physician contacts among the Asian national origin groups, the API population as a whole, and the non-Hispanic white population in the 1992–94 NHIS. When the data were age adjusted, Japanese persons had a greater mean number of physician contacts per year (4.9 contacts) than Chinese persons (3.1 contacts).

**Restricted-Activity Days—Data** on the average annual mean number of restricted activity days among the Asian national origin groups, the API

population as a whole, and the non-Hispanic white population in the 1992–94 NHIS are shown in [table 5](#). There were no significant differences in the age-adjusted average annual number of restricted activity or work or school loss days among the Asian national origin groups. After age adjusting the data, persons of Japanese and Filipino descent had a greater average number of bed disability days per year (5.5 days) than Chinese persons (2.1 days).

**Hospital Episodes—Table 6** presents data on short stay hospital episodes for the Asian national origin groups, the API population as a whole, and the non-Hispanic white population from the 1992–94 NHIS. After age adjusting the data, there were no significant differences in the proportion of persons with at least one short stay hospital episode, excluding deliveries, among the Asian national origin groups.

**Smoking Status—Table 7** shows data on the smoking status of the Asian national origin groups, the API

population as a whole, and the non-Hispanic white population in the 1992–94 NHIS. Because research has found that smoking prevalence among Asian American adults is higher for males than for females (11–13), this report shows smoking status data for Asian American males by national origin group ([table 6](#)). Estimates for females are not shown because most estimates did not meet the standard of precision.

In the 1992–94 NHIS, 22.3 percent of API adult males were current smokers while only 8.2 percent of their female counterparts were current smokers. Across all Asian national origin groups, a higher percent of adult males were current smokers than females. Differences in smoking status among males by national origin group were not tested for statistical significance in this study because of large standard errors. However, the data are shown to present differences among national origin groups that might be



**Table 5. Number of Asian and Pacific Islander and non-Hispanic white people and age-adjusted and unadjusted mean number with standard errors of physician contacts and restricted activity days per year by Asian and Pacific Islander and non-Hispanic white populations: United States, average annual 1992–94**

Selected health indicator	Chinese	Filipino	Asian Indian	Japanese	Vietnamese	Korean	Other API <sup>1</sup>	All API <sup>1</sup>	Non-Hispanic white
Number in thousands									
All persons . . . . .	1,809	1,717	1,017	1,007	961	784	1,180	8,475	184,309
Age-adjusted mean and standard error									
Physician contacts . . . . .	3.1 (0.29)	3.9 (0.29)	*7.3 (3.15)	4.9 (0.40)	3.9 (0.54)	3.8 (0.45)	5.1 (0.65)	4.2 (0.22)	6.3 (0.07)
Restricted activity days . . . . .	8.1 (1.18)	11.7 (1.29)	12.5 (3.17)	11.7 (1.43)	11.0 (2.87)	12.9 (2.54)	14.6 (3.04)	11.4 (0.81)	16.0 (0.27)
Bed disability days . . . . .	2.1 (0.39)	5.5 (1.14)	*4.9 (1.51)	5.5 (0.96)	*5.5 (2.47)	6.9 (1.84)	5.3 (1.38)	4.6 (0.45)	5.9 (0.10)
Work- or school-loss days <sup>2</sup> . . . . .	2.9 (0.72)	4.7 (1.16)	5.0 (0.59)	6.2 (1.35)	*3.0 (1.16)	*3.8 (1.57)	5.0 (0.99)	4.7 (0.64)	5.0 (0.12)
Mean and standard error									
Physician contacts . . . . .	3.1 (0.33)	3.7 (0.28)	3.8 (0.69)	5.1 (0.46)	3.1 (0.34)	3.3 (0.40)	4.5 (0.65)	3.8 (0.18)	6.4 (0.07)
Restricted activity days . . . . .	7.2 (0.96)	10.1 (1.15)	8.2 (1.39)	12.3 (1.72)	9.8 (2.01)	9.7 (1.80)	12.5 (2.41)	9.8 (0.84)	16.6 (0.29)
Bed disability days . . . . .	2.1 (0.41)	4.6 (0.93)	2.6 (0.53)	5.7 (1.06)	*4.3 (1.45)	4.8 (1.12)	5.1 (1.30)	4.0 (0.39)	6.2 (0.11)
Work- or school-loss days <sup>2</sup> . . . . .	2.8 (0.71)	4.4 (0.65)	2.4 (0.64)	6.3 (1.61)	*3.0 (0.93)	*3.9 (1.42)	5.4 (1.04)	4.0 (0.60)	5.0 (0.08)

\* Figure does not meet standard of reliability or precision.

<sup>1</sup>API is Asian or Pacific Islander.<sup>2</sup>Sum of school-loss days for children 5–17 years of age and work-loss days for currently employed persons 18 years of age and over.**Table 6. Number of people, hospital stays, and days of hospitalization (excluding deliveries) by Asian and Pacific Islander and non-Hispanic white populations and age-adjusted and unadjusted percent distributions with standard errors by number of short-stay hospital stays (excluding deliveries), according to Asian and Pacific Islander and non-Hispanic white populations: United States, average annual 1992–94**

Hospital stay <sup>1</sup>	Chinese	Filipino	Asian Indian	Japanese	Vietnamese	Korean	Other API <sup>2</sup>	All API <sup>2</sup>	Non-Hispanic white
Number in thousands									
All persons . . . . .	1,809	1,717	1,017	1,007	961	784	1,180	8,475	184,309
Number of hospital stays . . . . .	47	59	31	61	38	25	46	305	16,782
Number of days of hospitalization . . . . .	198	272	159	498	148	146	350	1,742	101,526
Age-adjusted percent distribution and standard error									
Total . . . . .	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)
No hospital stays . . . . .	97.3 (0.39)	96.7 (0.33)	96.5 (1.07)	96.0 (0.47)	96.6 (0.68)	96.9 (0.57)	95.8 (0.77)	96.5 (0.21)	93.6 (0.06)
1 or more hospital stays . . . . .	2.7 (0.39)	3.3 (0.33)	*3.5 (1.07)	4.0 (0.47)	3.4 (0.68)	3.1 (0.57)	4.2 (0.77)	3.5 (0.21)	6.7 (0.08)
Percent distribution and standard error									
Total . . . . .	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)
No hospital stays . . . . .	97.7 (0.30)	97.3 (0.30)	97.3 (0.53)	95.7 (0.51)	97.3 (0.40)	97.2 (0.56)	96.7 (0.50)	97.1 (0.17)	93.3 (0.07)
1 or more hospital stays . . . . .	2.3 (0.30)	2.7 (0.30)	2.7 (0.53)	4.3 (0.51)	2.7 (0.40)	2.8 (0.56)	3.3 (0.50)	2.9 (0.17)	6.7 (0.07)

\* Figure does not meet standard of reliability or precision.

. . . Category not applicable.

<sup>1</sup>Hospital stay is any continuous period of stay of 1 night or more in a hospital as an inpatient, except the period of stay of a well newborn infant.<sup>2</sup>API is Asian or Pacific Islander.

NOTE: Figures may not add to 100 because of rounding.

statistically significant with more stable estimates. The percent of adult males who are current smokers was greater among Filipino (27 percent), Japanese (26 percent), and Korean (23 percent) adult males than Chinese (16 percent) adult males.

After adjusting for age, the proportion of Asian Indian adults who had never smoked (85.8 percent) was greater than that of Chinese, Filipino, Japanese, and Korean adults who had

never smoked (56.6–73.3 percent). A higher percent of adults of Chinese descent had never smoked than Korean adults after age adjusting the data.

When the data were age adjusted, a higher percent of adults of Korean descent (22.5 percent) were current smokers than Chinese (10.0 percent) or Asian Indian (8.7 percent) adults.

*AIDS Knowledge and Testing*—The 1992–94 data on acquired immunodeficiency syndrome (AIDS)

knowledge among the Asian national origin groups, the API population as a whole, and the non-Hispanic white population in the NHIS are presented in [table 8](#). When the data were age adjusted, 18.0 percent of Asian Indian adults said they know “nothing” about AIDS. This was greater than the age-adjusted proportions among Chinese (8.9 percent) and Japanese (5.1 percent) adults. The proportion of Vietnamese adults (21.2 percent) who said they



**Table 7. Number of Asian and Pacific Islander and non-Hispanic white adults and age-adjusted and unadjusted percent distributions with standard errors of adults and percent distribution with standard errors of adult males by smoking status, according to Asian and Pacific Islanders and non-Hispanic white populations: United States, average annual 1992–94**

Smoking status	Chinese	Filipino	Asian Indian	Japanese	Vietnamese	Korean	Other API <sup>1</sup>	All API <sup>1</sup>	Non-Hispanic white
Number in thousands									
All persons . . . . .	1,259	1,234	628	804	523	538	650	5,636	141,586
Age-adjusted percent distribution and standard error									
Total . . . . .	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)
Never smoked . . . . .	73.3 (2.52)	65.4 (2.20)	85.8 (3.35)	59.1 (5.06)	70.1 (5.12)	56.6 (3.81)	71.7 (3.56)	68.4 (1.99)	47.5 (0.34)
Current smoker . . . . .	10.0 (2.54)	17.4 (2.42)	8.7 (2.46)	19.4 (4.21)	13.2 (3.73)	22.5 (3.07)	17.4 (2.74)	14.7 (1.41)	26.8 (0.32)
Former smoker . . . . .	16.7 (3.76)	17.1 (2.65)	*5.5 (1.86)	21.6 (2.74)	*16.7 (5.07)	20.9 (2.56)	10.9 (3.08)	16.9 (1.41)	25.7 (0.25)
Percent distribution and standard error									
Total . . . . .	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)
Never smoked . . . . .	76.9 (2.17)	66.4 (2.77)	86.0 (3.18)	57.8 (6.33)	73.2 (4.06)	64.7 (4.46)	67.1 (4.14)	70.3 (2.34)	46.9 (0.35)
Current smoker . . . . .	9.7 (2.30)	18.5 (2.71)	8.9 (2.50)	19.6 (3.61)	12.8 (3.35)	17.4 (3.57)	20.3 (3.47)	15.2 (1.46)	26.3 (0.32)
Former smoker . . . . .	13.4 (2.86)	15.1 (2.52)	*5.2 (1.57)	22.6 (3.41)	14.0 (4.09)	17.9 (3.30)	12.7 (3.53)	14.6 (1.42)	26.8 (0.29)
Male									
Total . . . . .	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)
Never smoked . . . . .	65.9 (4.27)	50.3 (4.98)	79.0 (4.62)	*34.7 (12.55)	51.2 (7.56)	53.8 (6.36)	52.3 (5.64)	56.4 (3.44)	40.1 (0.51)
Current smoker . . . . .	15.5 (3.86)	26.5 (4.64)	*12.6 (4.04)	26.0 (5.31)	*25.6 (7.69)	23.2 (5.75)	31.9 (5.29)	22.3 (2.32)	27.8 (0.42)
Former smoker . . . . .	18.6 (5.16)	23.2 (4.12)	8.4 (2.43)	39.3 (9.64)	*23.2 (7.04)	23.1 (4.71)	15.8 (4.63)	21.3 (2.40)	32.1 (0.39)

\* Figure does not meet standard of reliability or precision.

. . . . . Category not applicable.

<sup>1</sup>API is Asian or Pacific Islander.

know “nothing” about AIDS was also greater than the proportion of Japanese adults after age adjusting.

Table 8 also shows the data on the percent of adults of the Asian national origin groups, the API population as a whole, and the non-Hispanic white population in the 1992–94 NHIS who had been tested for human immunodeficiency virus (HIV). Adults who answered the 1992–94 NHIS supplement on AIDS were asked if they had had their blood tested for the AIDS virus infection. They were asked to exclude tests done as part of blood donations. When the data were age adjusted, 8.4 percent of Vietnamese adults stated they had been tested for the AIDS virus compared with 21.5–27.4 percent of adults of Chinese, Filipino, Asian Indian, and Japanese descent.

## Discussion

This study pooled 3 years of health data from the National Health Interview Survey (NHIS) making it possible to examine the national health status of selected Asian national origin groups. The results of this study indicate that examining the health status of the API

population as a whole does not accurately portray the health status of the diverse national origin groups encompassed by this category.

Differences were found in several health characteristics among the Asian national origin groups. Some of the variation in health status indicators among these groups may be associated with the heterogeneity of their demographic characteristics. Because age tends to strongly affect health status, age-adjusted estimates are presented in this report. However, controlling for other sociodemographic factors was beyond the scope of this report. It should also be pointed out that other factors not examined in this report, such as health insurance coverage, access to care, and language competencies, have also been associated with differences in health outcomes.

Previous studies have used mortality data to indicate health status. However, mortality data on API's have notable limitations. Race misclassifications on death certificates have been found to occur at a greater rate for persons who were not white or black. This may lead to underestimation of mortality rates for API's (14–16).

Methodological limitations of the data should also be considered when interpreting these results. The NHIS is designed to collect data through in-person interviews conducted in English. This impacts the API population in particular because a significant proportion does not speak English very well and those who do not speak English very well are more likely to be of lower socioeconomic status as well as in poorer health. If no respondent in the household speaks English, the interviewers attempt to complete the interview by either translating the survey themselves or using someone to translate. From 1992–94, 95 percent of interviews (92 percent among the API population) were conducted in English. From 1995–96, language problems accounted for less than 1 percent of reasons for not conducting interviews. Although most of the interviews were conducted in English and few interviews were lost because of language problems, biases resulting from even a limited amount of nonresponse as well as the use of interpreters must be considered. Furthermore, because these are self-reported or respondent-assessed health

**Table 8. Number of Asian and Pacific Islander and non-Hispanic white adults and age-adjusted and unadjusted percent distributions with standard errors of adults by acquired immunodeficiency syndrome knowledge and testing, according to Asian and Pacific Islander and non-Hispanic populations: United States, average annual 1992–94**

AIDS knowledge or testing <sup>1</sup>	Chinese	Filipino	Asian Indian	Japanese	Vietnamese	Korean	Other API <sup>2</sup>	All API <sup>2</sup>	Non-Hispanic white
Number in thousands									
All persons . . . . .	1,395	1,244	751	766	508	486	729	5,880	142,384
Age-adjusted percent distribution and standard error									
Total . . . . .	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)
Reported AIDS knowledge <sup>1</sup>									
A lot . . . . .	22.2 (2.33)	32.1 (2.77)	30.0 (3.48)	22.8 (2.67)	21.9 (3.72)	24.2 (3.26)	28.8 (4.62)	26.3 (1.15)	32.0 (0.35)
Some . . . . .	43.8 (2.98)	38.8 (2.74)	34.5 (3.45)	49.7 (3.13)	30.2 (5.04)	39.2 (3.66)	27.7 (2.89)	39.2 (1.37)	46.9 (0.32)
A little . . . . .	25.2 (3.18)	22.5 (2.50)	17.6 (2.44)	22.3 (2.70)	26.7 (3.83)	24.8 (3.01)	29.5 (4.29)	25.0 (1.60)	16.3 (0.33)
Nothing . . . . .	8.9 (1.95)	*6.5 (1.96)	18.0 (1.82)	5.1 (0.91)	21.2 (4.31)	11.8 (2.59)	*13.9 (4.19)	9.6 (1.19)	4.8 (0.13)
Ever had blood tested for the AIDS virus infection (excluding blood donations) <sup>1</sup>									
Yes . . . . .	26.5 (3.78)	27.4 (2.63)	24.4 (3.19)	21.5 (2.17)	8.4 (2.14)	18.0 (4.04)	23.2 (3.42)	23.5 (1.29)	20.6 (0.31)
No . . . . .	73.5 (3.78)	72.6 (2.63)	75.6 (3.19)	78.5 (2.17)	91.6 (2.14)	82.0 (4.04)	76.8 (3.42)	76.5 (1.29)	79.4 (0.31)
Percent distribution and standard error									
Total . . . . .	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)	100.0 (. . .)
Reported AIDS knowledge <sup>1</sup>									
A lot . . . . .	23.6 (2.31)	33.5 (2.59)	32.8 (3.55)	22.2 (2.60)	31.6 (5.08)	25.0 (3.11)	29.1 (3.87)	28.2 (1.14)	31.3 (0.36)
Some . . . . .	46.3 (3.78)	38.5 (2.91)	37.0 (3.51)	48.5 (3.40)	27.9 (4.62)	40.9 (4.07)	33.7 (3.45)	40.1 (1.61)	46.6 (0.31)
A little . . . . .	24.3 (3.53)	22.1 (2.46)	21.1 (2.94)	24.4 (3.28)	20.7 (3.59)	27.4 (3.27)	24.9 (3.90)	23.4 (1.37)	16.8 (0.34)
Nothing . . . . .	5.8 (1.34)	5.9 (1.54)	9.1 (1.99)	5.0 (0.94)	19.8 (3.91)	*6.6 (3.56)	12.4 (3.04)	8.3 (0.92)	5.2 (0.14)
Ever had blood tested for the AIDS virus infection (excluding blood donations) <sup>1</sup>									
Yes . . . . .	27.4 (2.67)	31.5 (2.73)	26.5 (3.00)	19.7 (2.55)	16.5 (3.33)	20.3 (3.53)	28.2 (3.96)	25.9 (1.15)	20.0 (0.32)
No . . . . .	72.6 (2.67)	68.5 (2.73)	73.5 (3.00)	80.3 (2.55)	83.5 (3.33)	79.7 (3.53)	71.8 (3.96)	74.1 (1.15)	80.0 (0.32)

\* Figure does not meet standard of reliability or precision.

. . . . . Category not applicable.

<sup>1</sup>AIDS is acquired immunodeficiency syndrome.<sup>2</sup>API is Asian or Pacific Islander.

NOTE: Figures may not add to 100 because of rounding.

data, additional limitations such as social desirability and recall bias may affect the accuracy of the responses.

Notwithstanding these limitations, this analysis illustrates that studying the API population as a whole masks discrepancies among the subgroups; the percent distribution of the sociodemographic characteristics as well as the health status indicators varied among the different Asian national origin groups. Based on these results, future research should consider characteristics such as national origin, nativity, years in the United States, and language, as important variables in studying the health of API's to reflect the diversity of the API population. Future research should also examine the relationship between sociodemographic variables and health indicators among

API national origin groups to better understand the mechanisms by which health disparities occur in these populations. To collect more meaningful health data on the API population, future research should address language barriers and cultural differences. Because sociodemographic characteristics influence health, and migration patterns influence the sociodemographic composition of a population, future research should also consider the sociodemographic composition and the potential changes in it when interpreting health data for the API population as a whole as well as API national origin groups. To accurately portray the health of this rapidly growing population as well as to be able to effectively identify and address the health needs of its

subgroups, future research must recognize the differences among Asian and Pacific Islander national origin groups.

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## Technical Notes

### Source of Data

The estimates presented in this report are based on data from the National Health Interview Survey (NHIS) conducted by the National Center for Health Statistics (NCHS). NHIS is an ongoing survey of the civilian noninstitutionalized household population residing in the United States. Each week, personnel of the U.S. Bureau of the Census interview a nationally representative sample of households selected using a multistage nested probability design to obtain information on health and other characteristics of each member of the household.

Through 1996, NHIS consisted of two sections: the basic health and demographic questionnaire (core) and special health topic questionnaires (supplements). The core remained the same each year and was completed for each household member. The content of the supplements varied from year to year, and the supplements were completed for all or a sample of household members.

The 1992–94 AIDS Knowledge and Attitudes supplement and the supplements that included questions on cigarette smoking were completed for one randomly selected adult, 18 years of age or over, in a portion of the sample households. The 1992 and 1994 AIDS Knowledge and Attitudes supplement was administered in one-half of the sample households. In 1993, the AIDS Knowledge and Attitudes supplement was administered in each of the NHIS sample households in the third and fourth quarter. The supplements including questions on cigarette smoking habits were Cancer Epidemiology (Smoking Habits) in 1992 and Year 2000 Objectives (Tobacco) in 1993 and 1994. In 1992, NHIS included two special supplements on cancer: Cancer Epidemiology and Cancer Control. In each NHIS household, a sample adult respondent was randomly selected to complete one of these two cancer supplements. Thus, the sample was split between the two cancer surveys. Both surveys were administered through the

first 2 weeks of the third quarter. In 1993, the Year 2000 Objectives supplement was administered in each of the sample households in the third and fourth quarter. The 1994 Year 2000 Objectives supplement was completed in one-half of the sample households.

This report presents data from the 1992–94 NHIS core, the AIDS Knowledge and Attitudes supplement, and supplements that included questions on cigarette smoking. Pooling 3 years of available data provides large enough sample sizes to produce stable estimates on the health of Asian and Pacific Islanders (API's) as a whole as well as some Asian national origin groups, including persons of Chinese, Filipino, Asian Indian, Japanese, Korean, and Vietnamese descent. Data are not presented for the Hawaiian, Guamanian, or Samoan populations due to insufficient sample sizes. These groups are included in the total API group. The sample sizes of the API national origin groups specified in the 1992–94 NHIS are shown in [table I](#).

### Response Rates

The 1992–94 NHIS sample consisted of completed interviews from 145,205 households and 354,262 persons. The average annual response rate to the 1992–94 NHIS core questionnaire was 94.8 percent. The overall response rate to NHIS supplements is estimated as a product of the core response rate and the supplement response rate. From 1992 through 1994, 60,708 persons completed the AIDS Knowledge and Attitudes supplement. The average annual supplement response rates and overall supplement response rates for the AIDS Knowledge and Attitudes supplement 1992–94 were 84.4 percent and 80.1 percent, respectively. The 1992–94 NHIS supplements covering cigarette smoking habits were completed by 52,771 persons. The average annual supplement response rates and overall supplement response rates for the supplements containing the smoking questions were 86.7 percent and 82.3 percent, respectively. The year-specific data on the number of

**Table I. Sample sizes of Asian or Pacific Islander national origin groups: National Health Interview Survey, 1992–94**

Asian or Pacific Islander national origin	Sample size
All API <sup>1</sup> . . . . .	10,838
Chinese . . . . .	2,344
Filipino . . . . .	2,249
Asian Indian . . . . .	1,347
Japanese . . . . .	1,113
Vietnamese . . . . .	1,212
Korean . . . . .	1,012
Hawaiian . . . . .	158
Samoan . . . . .	112
Guamanian . . . . .	70
Other API <sup>1</sup> . . . . .	1,221

<sup>1</sup>API is Asian or Pacific Islander.

interviews and the response rates can be found in [table II](#).

### Precision of the Estimates

The estimates presented in this report are based on a sample of the population and are subject to sampling error. Standard errors for the statistics shown in this report were calculated using Survey Data Analysis (SUDAAN) (10) software to manage the complex survey design. Age-adjusted estimates were also calculated in SUDAAN using the 1990 Census population as the standard. The age groups used in the age standardization were under 5 years, 5–17 years, 18–24 years, 25–44 years, 45–64 years, 65–74 years, and 75 years and over.

In this report, relative standard error (RSE) is used as a criterion of precision. The RSE of an estimate is calculated by dividing the standard error of the estimate by the estimate itself and expressing it as a percent. Estimates with a RSE of 30 percent or greater are shown with an asterisk (\*) indicating that those estimates do not meet the standard of precision.

### Tests of Significance

In this report, terms relating to differences such as “higher” and “less” indicate that differences are statistically significant. Terms such as “similar” or “no difference” mean that no statistically significant difference exists between the estimates being compared. A lack of comment on the differences

**Table II. Number of households and persons interviewed and response rates for the core questionnaire and selected supplements: National Health Interview Survey, United States 1992–94**

Year	Core questionnaire			Smoking supplements <sup>2</sup>			AIDS <sup>1</sup> Knowledge and Attitudes supplement		
	Household	Persons	Response rate	Persons	Response rate	Overall response rate	Persons	Response rate	Overall response rate
1992	51,643	128,412	95.7	12,005	90.0	86.1	20,974	86.9	83.2
1993	44,978	109,671	94.7	21,028	85.7	81.2	20,607	84.5	80.0
1994	48,584	116,179	94.1	19,738	84.5	79.5	19,127	81.9	77.1

<sup>1</sup>AIDS is acquired immunodeficiency syndrome.

<sup>2</sup>Supplements including cigarette smoking questions were Cancer Epidemiology (1992) and Year 2000 Objectives (1993, 1994).

between any two estimates does not necessarily mean that the difference was tested and found not to be significant. Furthermore, a difference that is statistically significant does not necessarily correspond to a large or important difference.

Statistical tests performed were two-tailed statistical tests with no adjustments for multiple comparisons. The test statistic used to determine statistical significance was calculated as:

$$Z = |(X_a - X_b) / \sqrt{(S_{Xa}^2 + S_{Xb}^2)}|$$

where  $X_a$  and  $X_b$  are the two percents being compared and  $S_{Xa}$  and  $S_{Xb}$  are the standard errors of those percents. The critical value for a two-sided test at the 5 percent level of significance is 1.96.

The format of the statistical test for multiple comparisons is the same as above. However, the critical value depends on the number of possible pairwise comparisons. For example, the Chinese national origin subgroup has six possible pairwise comparisons (with Filipino, Asian Indian, Japanese, Vietnamese, Korean, and other API subgroups). The appropriate 5 percent critical value for a two-sided test for each of the API subgroups would be closer to the 1 percent level of significance without adjustment. Therefore, a *t*-test with a critical value of 2.66 (0.01 level) was used to test comparisons between the API national origin groups that are discussed.

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