Health Characteristics of the American Indian or Alaska Native Adult Population: United States, 2004–2008

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Abstract

Objective—This report compares national estimates for selected health status indicators, health behaviors, health care utilization, health conditions, immunizations, and human immunodeficiency virus (HIV) testing status for American Indian or Alaska Native (AIAN) adults with those for white, black, Asian, and Hispanic adults aged 18 years and over.

Methods—The estimates in this report were derived from the Family Core and the Sample Adult core components of the 2004–2008 National Health Interview Surveys, conducted by the Centers for Disease Control and Prevention's National Center for Health Statistics. Estimates were generated and compared using the SUDAAN statistical package to account for the complex sample design.

Results—In general, compared with other groups, non-Hispanic AIAN adults are more likely to have poorer health, unmet medical needs due to cost, diabetes, trouble hearing, activity limitations, and to have experienced feelings of psychological distress in the past 30 days. Non-Hispanic AIAN adults are more likely to be current smokers and current drinkers compared with other adults.

Conclusion—The non-Hispanic AIAN community faces many health challenges as reflected in their higher rates of risky health behaviors, poorer health status and health conditions, and lower utilization of health services.

Keywords: • National Health Interview Survey • health behaviors • health care utilization • conditions.

Introduction

The American Indian or Alaska Native (AIAN) population are persons having origins in any of the original populations of North, Central, or South America who maintain tribal affiliation or community attachment. The 2000 U.S. Census showed that 4.3 million (1.5%) adults in the United States were AIAN. Approximately 56% (2.4 million) of AIAN adults are of one race or ethnicity, whereas the remaining 44% are AIAN in combination with one or more other races. The AIAN population is heterogeneous, with 569 federally recognized tribes, as well as numerous other tribes not federally recognized (1). Although AIAN persons live throughout the United States, they are more likely to live in some areas of the country than others. According to the 2000 census, 43% of AIAN population lived in the West, 31% lived in the South, 17% lived in the Midwest, and 9% lived in the Northeast (2).

AIAN communities face many health challenges including higher mortality rates from tuberculosis, chronic liver disease and cirrhosis, accidents, diabetes, pneumonia, suicide, and homicide compared with other racial and ethnic groups (3). In the AIAN population, chronic liver disease and cirrhosis was the sixth leading cause of death, but was not ranked in the top 10 for the white, black, or Asian or Pacific Islander populations in 2005 (4). During that same year, accidents accounted for more than twice the percentage of deaths (11.7%) of the AIAN population compared with other population groups combined (4), and their age-adjusted suicide rates were 1.73 times as high as the corresponding rates for all persons combined (4). The AIAN population has a life expectancy at birth that is 2.4 years less than that of all U.S. populations combined (5), and they have 1.2 times as many years of potential life lost at age 75 as that of all other populations combined (4). The mortality differentials noted are

conservative estimates, as studies have shown that AIAN deaths are often misidentified on the death certificates so that death rates are underestimated (3,6,7).

In addition to disparities in cause of death, substantial health disparities exist for many conditions, including heart disease, tuberculosis, sexually transmitted diseases, and injuries (8). The prevalence of diabetes is higher among the AIAN population (16.5%) than any other major racial or ethnic group in the United States, and the prevalence of diabetes has been increasing (9,10). These health disparities may be related to cultural, genetic, socioeconomic, and behavioral factors (11) as well as access to and utilization of health care.

In this report, we examine national estimates for selected health status indicators, health behaviors, health care utilization, health conditions, functional limitation, immunizations, HIV testing status, mental health status, and respondent-assessed health status using 2004–2008 National Health Interview Survey data (12–16). This report focuses on the non-Hispanic, single-race AIAN adult population, and it presents comparison data for the non-Hispanic, single-race white; non-Hispanic, single-race black; non-Hispanic, single-race Asian; and Hispanic adult populations. Other subcategories of single-race persons and multiple-race persons are not shown due to statistical unreliability.

Methods

Data source

The statistics shown in this report are based on data from the Family Core and the Sample Adult Core components of the 2004–2008 National Health Interview Surveys (NHIS) (12–16). NHIS, which is in the field continuously, is conducted by the Centers for Disease Control and Prevention's National Center for Health Statistics. It is a survey of a nationally representative sample of the civilian noninstitutionalized household population of the United States. In the family section of the survey, basic

health and demographic information is collected on all household members. Any responsible family member whose age is equal to or greater than the age of majority for that state may respond to questions in the Family Core. In most states this age is 18 years, but in Alabama and Nebraska this age is 19, and in Mississippi it is 21. For children and adults not available during the interview, information is provided by a knowledgeable adult family member (usually aged 18 years and over; see above) residing in the household. Additional information is collected from one randomly selected adult aged 18 years and over (''the sample adult'') and about one randomly selected child aged 0–17 years (''the sample child'') in each family. Information on the sample adult is self-reported except in rare cases when the sample adult is physically or mentally incapable of responding, and information on the sample child is collected from an adult who is knowledgeable about the child's health, usually a parent.

Statistical Analysis

Five years of data were combined to increase reliability of estimates for the smaller population subgroups. Even with 5 years of data, the standard errors for some subgroups were quite large. In tables shown in this report, estimates with a relative standard error of more than 30% but less than or equal to 50% are identified with an asterisk (*), indicating that they are statistically unstable due to small sample size. Readers should exercise caution when interpreting these statistics. Estimates with a relative standard error of greater than 50% are indicated with a dagger (†) and are not shown.

This report is based on data from 132,203 completed interviews with sample adults aged 18 years and over, representing a final sample adult response rate (which takes into account household and family nonresponse) for the combined data years of 68.7%. The household response rate for the combined data years was 86.5%. Procedures used in calculating response rates for combined NHIS data years are

described in detail in Appendix I of the Survey Descriptions of the NHIS data files (17–21).

All estimates and associated standard errors shown in this report were generated using SUDAAN, a software package designed to account for a complex sample design such as that of NHIS (22). All estimates for adults were weighted, using the sample adult record weight, to represent the U.S. civilian noninstitutionalized population aged 18 years and over.

Most estimates presented in this report were age adjusted using the projected 2000 U.S. population as the standard population (23,24). The SUDAAN procedure PROC DESCRIPT was used to produce age-adjusted percentages and their standard errors. Age adjustment was used to allow comparison of various sociodemographic subgroups that have different age structures. The estimates in this report were age adjusted using the age groups 18–24 years, 25–44 years, 45–64 years, and 65 years and over. Estimates for education, health insurance coverage, and pneumonia shot were restricted to certain age groups and were therefore age adjusted accordingly.

Age-adjusted estimates were compared using two-tailed significance tests at the 0.05 level. No adjustments were made for multiple comparisons. In this report, terms such as ''greater than'' and ''less than'' indicate a statistically significant difference. Terms such as ''similar'' or ''no difference'' indicate that the statistics being compared were not significantly different. Lack of comment regarding the difference between any two statistics does not mean that the difference was tested and found to be not significant.

Most statistics presented in this report can be replicated using NHIS public-use data files and accompanying documentation available for downloading from the NCHS website at: http://www.cdc.gov/nchs/nhis.htm. The variable (STATE) used to create the Indian Health Service geographic regions is not included in the public-use data files to protect respondent confidentiality. The Indian Health Service geographic regional estimates

cannot be replicated using the public-use data files. Many of the references cited in this report are also available via the NCHS website at: http://www.cdc.gov/nchs.

Selected Results

In the following section, brief, bulleted summaries of the estimates shown in Tables 1–7 and Figures 1–4 are presented for the non-Hispanic AIAN adult population, the non-Hispanic white adult population, the non-Hispanic black adult population, the non-Hispanic Asian adult population, and the Hispanic adult population. For conciseness, the qualifying term ''non-Hispanic'' will be omitted when discussing these groups in the highlights.

Demographic characteristics (Table 1)

- Single-race AIAN persons make up 0.6% of the United States adult population (Figure 1).
- A smaller percentage of the AIAN adult population (9.5%) and the Hispanic adult population (8.2%)

compared with the white adult population (18.8%), the black adult population (12.0%), and the Asian adult population (11.6%) is composed of persons aged 65 years and over.
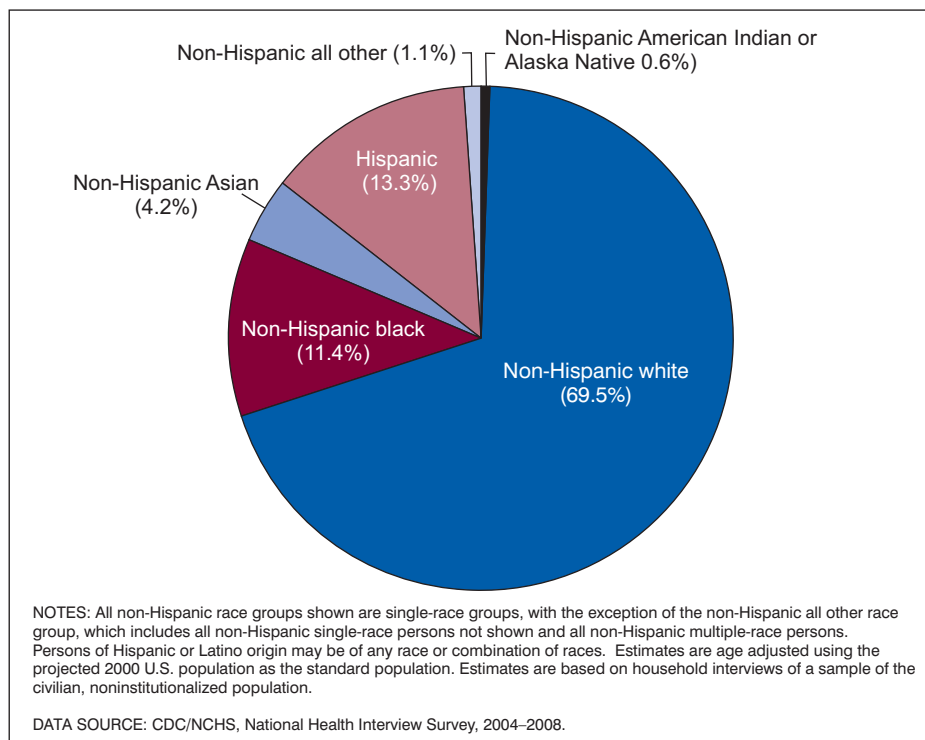- AIAN adults (21.1%) and black adults (21.2%) were more likely than Asian adults (12.4%) and about twice as likely as white adults (10.7%) to have not graduated from high school. Hispanic adults (43.9%) were most likely to have not received a high school diploma compared with other race/ethnicity groups.
- Black adults (18.3%), AIAN adults (13.6%), and Hispanic adults (12.5%) were considerably less likely to have a bachelor's degree or higher compared with Asian adults (51.4%) and white adults (31.8%).
- AIAN adults (24.4%), black adults (21.9%), and Hispanic adults (21.7%) were about twice as likely as Asian adults (11.1%) or white adults (8.7%) to be poor.
- Black adults (16.5%) and AIAN adults (15.6%) were more likely than Hispanic adults (11.1%), white adults (10.0%), and about three times as

likely as Asian adults (5.3%) to be divorced or separated.
- AIAN adults (46.4%) were less likely than Asian adults (64.4%), white adults (58.7%), or Hispanic adults (57.5%) to be married. Black adults (36.9%) were least likely to be married.
- Among adults under age 65 years, AIAN adults (41.2%) were about two to four times as likely as black adults (19.8%), Hispanic adults (14.2%), Asian adults (9.1%), or white adults (8.9%) to have public health insurance coverage.
- Among adults under age 65 years, black adults (22.9%) and AIAN adults (19.1%) were more likely than white adults (15.1%) to be uninsured. Hispanic adults (40.3%) were about twice as likely as other race/ethnicity groups to be uninsured.
- Fewer than 1 in 10 AIAN adults live in areas that were not covered by the Indian Health Service Administration.

Health behaviors (Table 2)

- Overall, AIAN adults (32.7%) were more likely to be current smokers than white adults (22.5%), black adults (20.6%), Hispanic adults (14.4%), or Asian adults (10.4%) (Figure 2).
- White men (31.0%) were more likely than AIAN (23.8%), Hispanic men (22.0%), black men (20.6%), or Asian men (13.4%) to be current moderate or heavier drinkers.
- White women (14.7%) and AIAN women (11.6%) were more likely than black women (5.8%), Asian women (4.5%), or Hispanic women (4.5%) to be current moderate or heavier drinkers.
- About one-fifth of AIAN adults (21.8%) were former drinkers compared with black adults, white adults, Hispanic adults, and Asian adults (16.8%, 14.4%, 13.6%, and 8.3%, respectively).
- About 59% of Asian adults and 39% of white adults were of a healthy weight compared with about 31% of Hispanic adults, 29% of AIAN adults, and 29% of black adults (Figure 3).

NOTES: All non-Hispanic race groups shown are single-race groups, with the exception of the non-Hispanic all other race group, which includes all non-Hispanic single-race persons not shown and all non-Hispanic multiple-race persons. Persons of Hispanic or Latino origin may be of any race or combination of races. Estimates are age adjusted using the projected 2000 U.S. population as the standard population. Estimates are based on household interviews of a sample of the civilian, noninstitutionalized population.

DATA SOURCE: CDC/NCHS, National Health Interview Survey, 2004–2008.

Figure 1. Percent distribution of race and ethnicity for adults aged 18 years and over: United States, 2004–2008
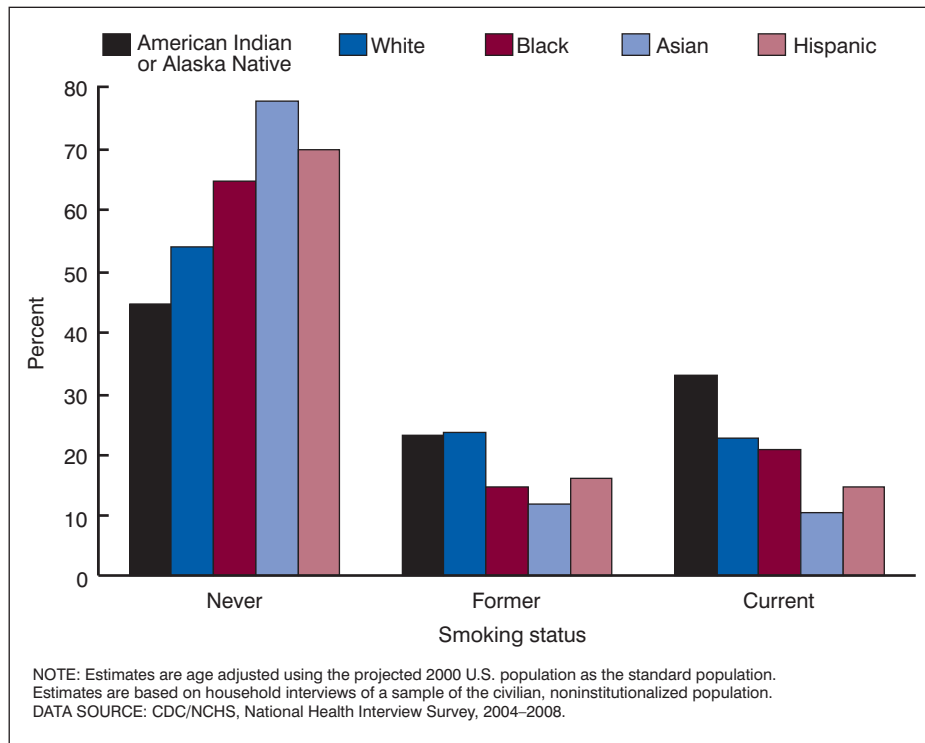
Figure 2. Percent distribution of cigarette smoking status for adults aged 18 years and over, by race, and ethnicity: United States, 2004–2008
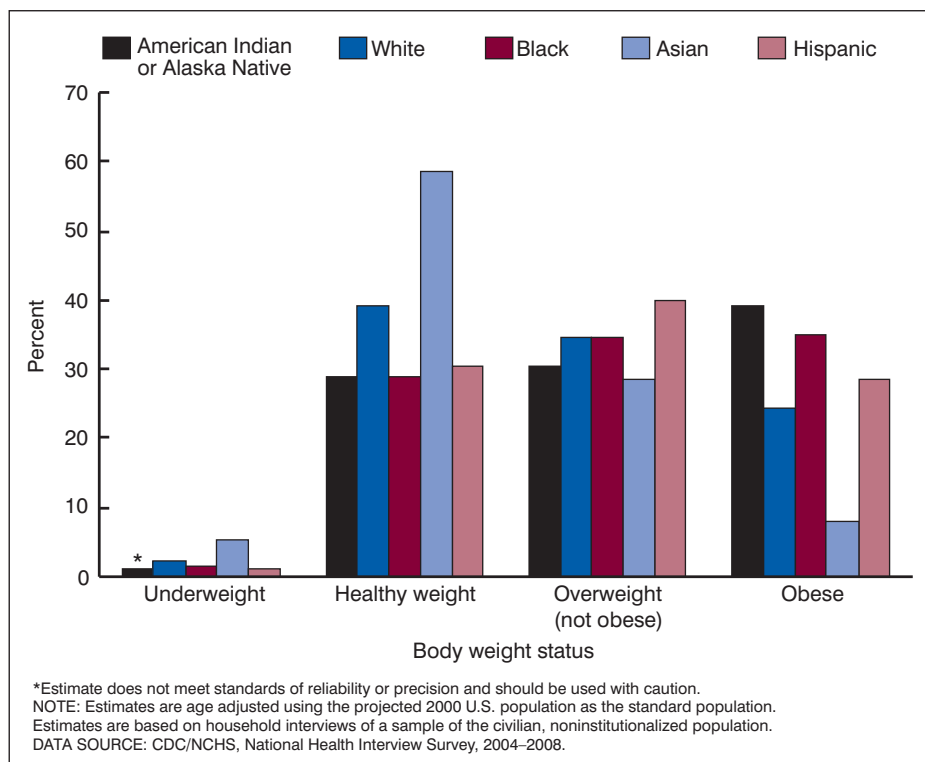
Figure 3. Percent distribution of body weight status for adults aged 18 years and over, by race and ethnicity: United States, 2004–2008

- Black women (39.8%) and AIAN women (39.7%) were more likely than Hispanic women (29.9%) and white women (23.0%) and nearly six times as likely as Asian women (7.0%) to be obese.

- AIAN adults (43.8%) were more likely than white adults (34.6%) to never engage in any leisure-time physical activity.

Health care utilization (Table 3)

- Of adults with a usual place of health care, 39% of AIAN adults compared with 81% of white adults, 78% of Asian adults, 75% of black adults, and 65% of Hispanic adults considered a doctor's office or Health Maintenance organization (HMO) their usual place of care.

- Of adults with a usual place of health care, AIAN adults (50.7%) were more likely than Hispanic adults (28.1%) and about three times as likely as Asian adults (17.9%), black adults (17.4%), or white adults (15.5%) to consider a clinic or health center as their usual place of care.

- AIAN men (66.4%), white men (63.2%), and black men (59.5%) were more likely than Asian men (54.6%) or Hispanic men (48.4%) to have seen or talked to a health professional within the past 6 months.

- White women (76.9%), black women (74.4%), and AIAN women (73.1%) were more likely than Hispanic women (66.2%) or Asian women (64.5%) to have seen or talked to a health professional within the past 6 months.

- AIAN adults (17.6%), Hispanic adults (16.5%), and black adults (15.5%), were more likely than white adults (11.3%) or Asian adults (9.2%) to have last seen a dentist more than 5 years ago.

- AIAN adults (10.3%), black adults (9.6%), and Hispanic adults (9.0%), were more likely than white adults (7.3%) and nearly three times as likely as Asian adults (3.4%) not to have received needed medical care due to cost of care.

Conditions (Table 4)

- AIAN adults (14.7%) were more likely than black adults (10.0%) and Hispanic adults (8.3%), and more than twice as likely as Asian adults
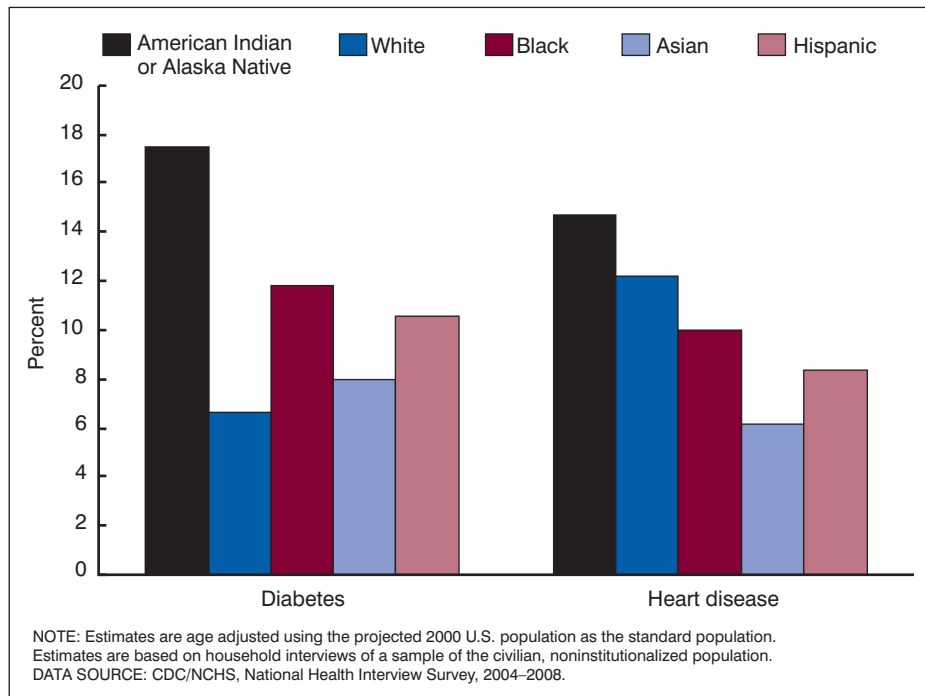
Figure 4. Percentage of adults aged 18 years and over who have ever been diagnosed with diabetes, and percentage of adults aged 18 years and over who have ever been diagnosed with heart disease, by race and ethnicity: United States, 2004–2008

(6.1%) to have ever been told they had heart disease ([Figure 4](#)).

- More than one-third of black adults (36.2%) and AIAN adults (34.5%) compared with about one-fourth of white adults (25.7%), Hispanic adults (24.1%), and Asian adults (22.2%) had ever been told they had hypertension.
- AIAN adults (17.5%) were more likely than black adults (11.8%) and Hispanic adults (10.6%) and more than twice as likely as Asian adults (8.0%) or white adults (6.6%) to have ever been told they had diabetes. ([Figure 4](#)).
- AIAN adults (18.5%) were more likely than Hispanic adults (13.8%), black adults (13.6%), or Asian adults (9.3%) to experience a migraine or severe headache during the last 3 months.
- Overall, AIAN adults (5.5%) were more likely than white adults (3.2%) and more than twice as likely as Hispanic adults (1.9%), Asian adults (1.5%), or black adults (1.2%) to have a lot of trouble hearing or to be deaf.

- AIAN adults (41.1%) were about twice as likely as Asian adults (19.0%) and were also more likely than white adults (31.6%), black adults (31.0%), and Hispanic adults (25.7%), to have a functional limitation caused by at least one chronic condition.

Selected immunizations ([Table 5](#))

- About 3 in 10 AIAN adults (31.7%), white adults (29.9%), and Asian adults (28.8%) compared with about 2 in 10 black adults (22.8%) and Hispanic adults (21.2%) had received an influenza vaccination during the past 12 months.
- Among adults aged 65 years and over, about one-half of AIAN adults (52.9%) compared with about one-third of Hispanic adults (33.2%) had ever received the pneumonia shot. White adults (62.0%) were more likely to receive the pneumonia shot compared with black, Asian, or Hispanic adults.
- AIAN adults (29.6%) were more likely than Hispanic adults (21.9%) to

have ever received a hepatitis B vaccine.

- AIAN adults (43.0%) were more likely than Hispanic adults (38.0%), white adults (34.3%), or Asian adults (30.6%) to have ever been tested for the HIV virus. Black adults (51.5%) were most likely to have ever been tested for the HIV virus.

Mental health status ([Table 6](#))

- Hispanic adults (3.5%), AIAN adults (3.4%), black adults (3.4%), and white adults (2.9%) were about twice as likely as Asian adults (1.4%) to have experienced serious psychological distress within the past 30 days.
- Overall, Hispanic women (4.9%) were most likely to have experienced serious psychological distress within the past 30 days compared with black women (3.9%), white women (3.4%), AIAN women (3.1%), and Asian women (1.6%).
- AIAN adults (3.0%) and Hispanic adults (2.9%) were nearly three times as likely as Asian adults (1.1%) to have felt hopeless most or all of the time within the past 30 days.
- AIAN adults (3.2%) and Hispanic adults (2.2%) were more likely than white adults (1.7%) and two to three times as likely as Asian adults (1.0%) to have felt worthless most or all of the time within the past 30 days.

Respondent-assessed health status ([Table 7](#))

- AIAN adults, black adults, and Hispanic adults were less likely than white and Asian adults to be in excellent or very good health.
- Black adults (14.7%), AIAN adults (14.1%), and Hispanic adults (13.2%) were more likely than white adults (8.2%) or Asian adults (6.9%) to be in fair health.
- About 6% of AIAN adults, 5% of black adults, and 4% of Hispanic adults were in poor health compared with 3% of white adults and 2% of Asian adults.

Discussion

This analysis highlights the disparities between AIAN adults and adults of other racial/ethnic groups. As shown in this report, in general compared with other groups, AIAN adults are more likely to have poorer health, unmet medical needs due to cost, diabetes, trouble hearing, activity limitations, and to have experienced feelings of psychological distress in the past 30 days. The AIAN adults are more likely to be current smokers and current drinkers compared with other adults.

The finding of poorer health status of the AIAN population compared with other adults is consistent with previous research (3–7). Some of the variation in health status indicators of AIAN adults compared with other adults may be associated with the heterogeneity of their demographic characteristics. Age, a characteristic associated with health status, was statistically controlled for in this study through age adjustment. However, controlling for other socio-demographic factors was beyond the scope of this report. Other factors that may be associated with health outcomes, including tribal affiliation, were not examined in this report due to limitations on sample sizes and available information. As with other populations, it is likely that there is heterogeneity within the AIAN population in terms of demographic characteristics as well as health outcomes. Grouping all AIAN adults into a single category may mask the differences among AIAN subgroups.

Notwithstanding the limitations of the study, NHIS provides an opportunity to merge data across years and thus increase the precision of the estimates for the AIAN population. In addition, the data are nationally representative, allowing generalization of these findings to the U.S. population as well as the AIAN population.

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Table 1. Age-adjusted percent distributions (with standard errors) of selected demographic characteristics for adults aged 18 years and over, by race and ethnicity: United States, 2004–2008

	Race[1] and ethnicity				
	Not Hispanic or Latino[2]				
Selected characteristic	American Indian or Alaska Native	White	Black or African American	Asian	Hispanic[2]
	Percent distributions[3] (standard error)				
Total.	100.00	100.00	100.00	100.00	100.00
Sex					
Male	50.4 (2.11)	48.3 (0.22)	44.3 (0.46)	48.2 (0.80)	50.2 (0.45)
Female.	49.6 (2.11)	51.7 (0.22)	55.7 (0.46)	51.8 (0.80)	49.8 (0.45)
Age[4]					
18–24 years.	18.0 (1.98)	11.5 (0.23)	15.6 (0.46)	13.0 (0.64)	17.4 (0.36)
25–44 years.	39.8 (2.38)	33.8 (0.24)	40.6 (0.50)	44.3 (0.85)	50.0 (0.49)
45–64 years.	32.8 (2.10)	35.8 (0.22)	31.8 (0.44)	31.0 (0.81)	24.4 (0.39)
65 years and over	9.5 (1.06)	18.8 (0.22)	12.0 (0.31)	11.6 (0.52)	8.2 (0.27)
Education[5]					
Less than a high school diploma	21.1 (2.34)	10.7 (0.19)	21.2 (0.47)	12.4 (0.63)	43.9 (0.59)
High school diploma or GED[6]	39.4 (2.88)	29.2 (0.26)	31.3 (0.49)	17.4 (0.67)	24.4 (0.43)
Some college	25.9 (2.17)	28.3 (0.23)	29.2 (0.47)	18.8 (0.75)	19.3 (0.40)
Bachelor's degree or higher	13.6 (2.07)	31.8 (0.34)	18.3 (0.43)	51.4 (1.13)	12.5 (0.39)
Poverty status[7]					
Poor	24.4 (3.72)	8.7 (0.20)	21.9 (0.48)	11.1 (0.58)	21.7 (0.42)
Near poor	24.1 (2.01)	15.7 (0.18)	24.0 (0.41)	17.5 (0.74)	29.3 (0.43)
Not poor	51.6 (3.71)	75.5 (0.29)	54.1 (0.61)	71.5 (0.87)	48.9 (0.56)
Marital status					
Never married.	20.4 (1.86)	18.8 (0.17)	31.7 (0.37)	21.6 (0.54)	18.6 (0.27)
Married.	46.4 (3.11)	58.7 (0.26)	36.9 (0.48)	64.4 (0.68)	57.5 (0.42)
Cohabiting	10.2 (1.47)	6.4 (0.13)	6.5 (0.25)	3.2 (0.31)	6.8 (0.21)
Divorced or separated.	15.6 (1.52)	10.0 (0.12)	16.5 (0.29)	5.3 (0.29)	11.1 (0.24)
Widowed.	7.4 (1.13)	6.1 (0.08)	8.3 (0.21)	5.5 (0.33)	6.0 (0.21)
Health insurance coverage (under 65 years)[8]					
Private	39.7 (3.70)	76.1 (0.30)	57.3 (0.57)	74.1 (0.84)	45.5 (0.57)
Public.	41.2 (4.11)	8.9 (0.18)	19.8 (0.45)	9.1 (0.53)	14.2 (0.36)
Uninsured	19.1 (2.01)	15.1 (0.21)	22.9 (0.44)	16.8 (0.72)	40.3 (0.56)
Indian Health Service (IHS) geographic regions[9]					
Alaska	*1.8 (0.65)	0.2 (0.04)	†	0.2 (0.02)	*0.1 (0.03)
East.	37.9 (5.19)	39.1 (0.52)	50.4 (0.93)	25.0 (0.97)	43.9 (0.85)
Northern plains	15.3 (3.48)	16.4 (0.47)	8.2 (0.44)	6.1 (0.61)	3.2 (0.28)
Pacific coast.	13.3 (2.12)	11.2 (0.29)	6.1 (0.28)	36.2 (1.09)	30.2 (0.78)
Southwest	*21.7 (7.27)	5.8 (0.26)	1.4 (0.13)	4.9 (0.45)	9.8 (0.54)
Not IHS region	9.9 (2.71)	27.3 (0.52)	33.8 (0.94)	27.6 (1.06)	12.8 (0.50)

* Estimates preceded by an asterisk have a relative standard error of greater than 30% and less than or equal to 50% and should be used with caution as they do not meet the standards of reliability or precision.

† Estimates with a relative standard error greater than 50% are indicated with a dagger, but are not shown.

[1]The category race refers to persons who indicated only a single race group. Persons who indicated a single race other than the groups shown are not shown separately due to small sample sizes. Persons who indicated not Hispanic or Latino and multiple races are excluded from the table.

[2]Persons of Hispanic or Latino origin may be of any race or combination of races. The category not Hispanic or Latino refers to all persons who are not of Hispanic or Latino origin, regardless of race.

[3]Unknowns for education, poverty status, marital status, and health insurance coverage were not included in the denominators when calculating percentages.

[4]Estimates for age groups are not age-adjusted.

[5]Education is shown only for persons aged 25 years and over.

[6]GED is General Educational Development high school equivalency diploma.

[7]Poverty status is based on family income and family size using the U.S. Census Bureau's poverty thresholds for 2003, 2004, 2005, 2006, and 2007. Poor persons are defined as below the poverty threshold. Near poor persons have incomes of 100% to less than 200% of the poverty threshold. Not poor persons have incomes that are 200% of the poverty threshold or greater. Because of the different income questions used in 2007 and beyond, income estimates may not be comparable with those from earlier years.

[8]Classification of health insurance coverage is based on a hierarchy of mutually exclusive categories. Persons with more than one type of health insurance were assigned to the first appropriate category in the hierarchy. Persons under age 65 years and those aged 65 years and over were classified separately because of the prominence of Medicare coverage in the older population. Persons with Indian Health Service (IHS) were included in the category public. See Definition of terms for more details.

[9]These five regions contain 36 states that are typically covered by Indian Health Service (IHS) administrative areas. The category Not IHS region contains the remaining 14 states and the District of Columbia. See Definition of terms for the states included in each region.

NOTE: Unless otherwise specified, estimates are age adjusted using the projected 2000 U.S. population as the standard population and using four age groups: 18–24 years, 25–44 years, 45–64 years, and 65 years and over. Estimates for education (for those aged 25 years and over) are age adjusted using the projected 2000 U.S. population as the standard population and using three age groups: 25–44 years, 45–64 years, 65 years and over. Estimates for health insurance coverage (for those under 65 years of age) are age adjusted using the projected 2000 U.S. population as the standard population and using three age groups: 18–24 years, 25–44 years, and 45–64 years. Estimates are based on household interviews of a sample of the civilian, noninstitutionalized population.

DATA SOURCE: CDC/NCHS, National Health Interview Survey, 2004–2008.

Table 2. Age-adjusted percent distributions (with standard errors) of selected health behaviors for adults 18 years of age and over, by race and ethnicity: United States, 2004–2008

Selected characteristic	Race[1] and ethnicity				
	Not Hispanic or Latino[2]				
	American Indian or Alaska Native	White	Black or African American	Asian	Hispanic[2]
Both sexes	Percent distributions[3] (standard error)				
Total.	100.00	100.00	100.00	100.00	100.00
Cigarette smoking status[4]					
Never smoker	44.6 (4.48)	54.0 (0.26)	64.8 (0.44)	77.9 (0.66)	69.6 (0.45)
Former smoker.	22.8 (3.02)	23.5 (0.18)	14.6 (0.32)	11.7 (0.50)	16.0 (0.35)
Current smoker	32.7 (2.87)	22.5 (0.22)	20.6 (0.39)	10.4 (0.50)	14.4 (0.32)
Alcohol drinking status[5].					
Lifetime abstainer	24.3 (3.25)	18.4 (0.29)	35.2 (0.59)	47.7 (0.84)	35.1 (0.50)
Former drinker	21.8 (1.80)	14.4 (0.19)	16.8 (0.35)	8.3 (0.45)	13.6 (0.32)
Current light or infrequent drinker	36.1 (2.17)	44.5 (0.26)	35.6 (0.50)	35.2 (0.79)	38.0 (0.46)
Current moderate or heavier drinker.	17.9 (2.22)	22.6 (0.23)	12.3 (0.31)	8.8 (0.44)	13.3 (0.31)
Body weight status[6]					
Underweight	*1.3 (0.49)	2.0 (0.07)	1.4 (0.11)	5.1 (0.40)	1.1 (0.09)
Healthy weight	29.2 (2.18)	39.2 (0.22)	29.1 (0.42)	58.7 (0.81)	30.7 (0.43)
Overweight (but not obese)	30.2 (2.08)	34.5 (0.21)	34.5 (0.42)	28.4 (0.74)	39.9 (0.45)
Obese	39.4 (2.38)	24.3 (0.21)	35.1 (0.46)	7.8 (0.46)	28.4 (0.43)
Leisure-time physical activity[7]					
Inactive	43.8 (2.81)	34.6 (0.40)	50.2 (0.64)	38.1 (0.88)	52.1 (0.55)
Engaged in some activity but less than regular	30.7 (2.21)	31.4 (0.27)	26.3 (0.46)	32.7 (0.78)	25.0 (0.42)
Engaged in regular activity	25.5 (2.12)	34.0 (0.29)	23.5 (0.44)	29.1 (0.79)	23.0 (0.43)
Male					
Total.	100.00	100.00	100.00	100.00	100.00
Cigarette smoking status[4]					
Never smoker	36.4 (4.90)	49.0 (0.35)	56.2 (0.69)	65.0 (1.11)	58.9 (0.69)
Former smoker.	25.0 (3.28)	26.9 (0.26)	18.7 (0.51)	18.6 (0.87)	22.5 (0.58)
Current smoker	38.6 (4.08)	24.1 (0.31)	25.1 (0.64)	16.4 (0.87)	18.6 (0.52)
Alcohol drinking status[5]					
Lifetime abstainer	16.6 (3.12)	13.8 (0.32)	25.4 (0.73)	33.3 (1.14)	21.0 (0.59)
Former drinker	26.7 (2.81)	14.7 (0.24)	17.0 (0.51)	10.5 (0.74)	15.0 (0.48)
Current light or infrequent drinker	32.9 (2.82)	40.5 (0.33)	37.0 (0.77)	42.8 (1.24)	42.0 (0.66)
Current moderate or heavier drinker.	23.8 (3.46)	31.0 (0.34)	20.6 (0.59)	13.4 (0.82)	22.0 (0.54)
Body weight status[6]					
Underweight	†	1.0 (0.08)	1.2 (0.17)	2.8 (0.44)	0.6 (0.09)
Healthy weight	30.0 (3.38)	30.9 (0.29)	29.8 (0.68)	51.8 (1.22)	26.5 (0.60)
Overweight (but not obese)	30.4 (3.40)	42.6 (0.31)	39.9 (0.70)	36.8 (1.15)	46.0 (0.68)
Obese	38.7 (3.88)	25.5 (0.29)	29.2 (0.65)	8.7 (0.64)	26.8 (0.58)
Leisure-time physical activity[7]					
Inactive	43.9 (4.08)	33.6 (0.48)	45.3 (0.83)	35.1 (1.17)	50.2 (0.74)
Engaged in some activity but less than regular	30.0 (3.12)	31.0 (0.37)	25.9 (0.66)	33.4 (1.11)	25.5 (0.62)
Engaged in regular activity	26.1 (3.36)	35.4 (0.37)	28.8 (0.71)	31.5 (1.12)	24.4 (0.61)
Female					
Total.	100.00	100.00	100.00	100.00	100.00
Cigarette smoking status[4]					
Never smoker	51.2 (4.30)	58.2 (0.33)	71.3 (0.51)	89.6 (0.63)	79.9 (0.46)
Former smoker.	21.2 (3.41)	20.8 (0.24)	11.6 (0.35)	5.7 (0.47)	10.2 (0.35)
Current smoker	27.6 (2.80)	21.0 (0.27)	17.1 (0.43)	4.7 (0.43)	10.0 (0.33)
Alcohol drinking status[5]					
Lifetime abstainer	31.4 (3.98)	22.4 (0.35)	42.7 (0.71)	60.6 (1.11)	48.8 (0.66)
Former drinker	17.7 (1.94)	14.3 (0.23)	16.7 (0.44)	6.5 (0.50)	12.6 (0.39)
Current light or infrequent drinker	39.3 (3.60)	48.5 (0.34)	34.8 (0.59)	28.4 (1.01)	34.1 (0.59)
Current moderate or heavier drinker.	11.6 (1.90)	14.7 (0.23)	5.8 (0.25)	4.5 (0.49)	4.5 (0.24)

See footnotes at end of table.

Table 2. Age-adjusted percent distributions (with standard errors) of selected health behaviors for adults 18 years of age and over, by race and ethnicity: United States, 2004–2008—Con.

	Race[1] and ethnicity				
	Not Hispanic or Latino[2]				
Selected characteristic	American Indian or Alaska Native	White	Black or African American	Asian	Hispanic[2]
	Percent distributions[3] (standard error)				
Body weight status[6]					
Underweight	*1.6 (0.80)	2.9 (0.11)	1.5 (0.16)	7.3 (0.64)	1.6 (0.15)
Healthy weight	29.1 (2.80)	47.5 (0.32)	28.6 (0.52)	65.4 (1.11)	35.1 (0.56)
Overweight (but not obese)	29.6 (2.94)	26.6 (0.26)	30.0 (0.50)	20.4 (0.96)	33.4 (0.55)
Obese	39.7 (3.34)	23.0 (0.27)	39.8 (0.59)	7.0 (0.61)	29.9 (0.58)
Leisure-time physical activity[7]					
Inactive	43.1 (3.16)	35.4 (0.42)	54.2 (0.72)	41.0 (1.18)	53.9 (0.65)
Engaged in some activity but less than regular	32.1 (2.74)	31.8 (0.31)	26.6 (0.58)	32.0 (1.07)	24.4 (0.51)
Engaged in regular activity	24.8 (2.44)	32.8 (0.35)	19.1 (0.47)	27.0 (1.05)	21.6 (0.52)

* Estimates preceded by an asterisk have a relative standard error of greater than 30% and less than or equal to 50% and should be used with caution as they do not meet the standards of reliability or precision.

†Estimates with a relative standard error greater than 50% are indicated with a dagger, but are not shown.

[1]The category race refers to persons who indicated only a single race group. Persons who indicated a single race other than the groups shown are not shown separately due to small sample sizes. Persons who indicated not Hispanic or Latino and multiple races are excluded from the table.

[2]Persons of Hispanic or Latino origin may be of any race or combination of races. The category not Hispanic or Latino refers to all persons who are not of Hispanic or Latino origin, regardless of race.

[3]Denominator for each percent distribution excludes persons with unknown health behavior characteristic.

[4]Cigarette smoking status: Never smoker - never smoked at all or smoked less than 100 cigarettes in lifetime; Former smoker - smoked at least 100 cigarettes in lifetime but not currently smoking; and Current smoker - smoked at least 100 cigarettes in lifetime and currently smoked every day or some days.

[5]Alcohol drinking status: Lifetime abstainer is less than 12 drinks in lifetime; Former drinker is at least 12 drinks in lifetime, but none in the past year; Current light drinker is at least 12 drinks in lifetime, at least 12 drinks in past year, and 3 drinks or fewer per week on average, infrequent drinker is at least 12 drinks in lifetime and 1–11 drinks in past year; Current moderate or heavier drinker is at least 12 drinks in lifetime, at least 12 drinks in past year, and drank more than 3 drinks per week, on average.

[6]Body weight status is based on Body Mass Index (BMI), calculated as kilograms/meters[2] using self-reported weight and height. Underweight is a BMI of less than 18.5; Healthy weight is a BMI of greater than or equal to 18.5 and less than 25; Overweight (but not obese) is a BMI of greater than or equal to 25 and less than 30; and Obese is a BMI of greater than or equal to 30.

[7]Questions related to leisure-time physical activity were phrased in terms of current behavior and lack a specific reference period. Inactive - no light-moderate or vigorous leisure-time physical activity lasting at least 10 minutes; Engaged in some activity but less than regular - some light-moderate or vigorous leisure-time physical activity lasting at least 10 minutes but the activity did not meet the definition for regular leisure-time physical activity; Engaged in regular activity - vigorous leisure-time physical activity at least three times per week lasting at least 20 minutes each time OR light-moderate leisure-time physical activity at least five times per week lasting at least 30 minutes each time OR both.

NOTE: Estimates are age-adjusted using the projected 2000 U.S. population as the standard population and using four age groups: 18–24 years, 25–44 years, 45–64 years, and 65 years and over. Estimates are based on household interviews of a sample of the civilian, noninstitutionalized population.

DATA SOURCE: CDC/NCHS, National Health Interview Survey, 2004–2008.

Table 3. Age-adjusted percent distributions (with standard errors) and age-adjusted percents (with standard errors) of selected health care access and utilization measures for adults 18 years of age and over, by race and ethnicity: United States, 2004–2008

| | Race[1] and ethnicity | | | | |
| | Not Hispanic or Latino[2] | | | | |
Selected characteristic	American Indian or Alaska Native	White	Black or African American	Asian	Hispanic[2]
Both sexes	**Percent distributions[3] (standard error)**				
Total.	100.00	100.00	100.00	100.00	100.00
Usual place for health care					
Has usual place	84.0 (2.41)	85.9 (0.21)	84.5 (0.37)	83.7 (0.64)	72.0 (0.46)
No usual place.	15.0 (2.34)	13.0 (0.20)	14.3 (0.36)	15.3 (0.62)	26.7 (0.44)
Has more than one place	†	1.1 (0.06)	1.2 (0.10)	1.0 (0.16)	1.3 (0.11)
Type of place for health care[4]					
Doctor's office or HMO[5]	38.6 (5.16)	81.2 (0.32)	75.3 (0.50)	77.9 (0.86)	65.0 (0.67)
Clinic or health center	50.7 (5.71)	15.5 (0.31)	17.4 (0.44)	17.9 (0.79)	28.1 (0.64)
Hospital emergency room or outpatient department	*7.4 (2.53)	1.5 (0.06)	5.8 (0.24)	2.2 (0.27)	4.5 (0.23)
Some other place	*1.8 (0.77)	0.9 (0.05)	0.6 (0.08)	0.9 (0.15)	0.7 (0.08)
Doesn't go to one place most often	†	0.9 (0.05)	0.9 (0.10)	1.2 (0.19)	1.6 (0.14)
Time since last saw or talked to health professional					
Never	†	0.7 (0.05)	1.5 (0.17)	2.2 (0.26)	4.2 (0.20)
6 months or less.	69.6 (2.44)	70.2 (0.23)	67.7 (0.44)	59.6 (0.82)	57.0 (0.44)
More than 6 months, but not more than 1 year ago	12.1 (1.47)	14.4 (0.17)	15.6 (0.33)	18.5 (0.68)	14.4 (0.33)
More than 1 year, but not more than 2 years ago	7.6 (1.14)	7.7 (0.12)	8.6 (0.27)	10.0 (0.59)	10.7 (0.27)
More than 2 years, but not more than 5 years ago.	5.3 (1.17)	4.7 (0.10)	4.6 (0.19)	6.4 (0.38)	8.2 (0.24)
More than 5 years ago.	4.2 (1.18)	2.3 (0.07)	2.1 (0.13)	3.3 (0.29)	5.5 (0.20)
Time since last saw a dentist					
Never	*2.0 (0.83)	0.4 (0.04)	1.3 (0.13)	2.5 (0.28)	4.0 (0.19)
6 months or less.	35.3 (1.80)	48.2 (0.28)	32.1 (0.51)	43.9 (0.90)	30.1 (0.43)
More than 6 months, but not more than 1 year ago	17.3 (1.75)	17.4 (0.17)	20.5 (0.38)	19.7 (0.69)	17.9 (0.35)
More than 1 year, but not more than 2 years ago	13.5 (1.63)	12.1 (0.15)	15.9 (0.35)	13.5 (0.55)	15.8 (0.34)
More than 2 years, but not more than 5 years ago.	14.3 (1.49)	10.6 (0.15)	14.7 (0.34)	11.3 (0.55)	15.6 (0.33)
More than 5 years ago.	17.6 (2.54)	11.3 (0.17)	15.5 (0.35)	9.2 (0.51)	16.5 (0.33)
	Percent[3] (standard error)				
Measures of health care access[6]					
Delayed medical care due to cost	11.6 (1.64)	10.4 (0.15)	10.5 (0.26)	4.8 (0.35)	10.7 (0.28)
Did not receive medical care due to cost.	10.3 (1.59)	7.3 (0.13)	9.6 (0.25)	3.4 (0.29)	9.0 (0.26)
Male	**Percent distributions[3] (standard error)**				
Total.	100.00	100.00	100.00	100.00	100.00
Usual place for health care					
Has usual place	77.3 (3.76)	81.7 (0.31)	79.5 (0.61)	81.2 (0.92)	65.3 (0.64)
No usual place.	21.4 (3.71)	17.1 (0.30)	19.1 (0.58)	17.9 (0.92)	33.3 (0.63)
Has more than one place	†	1.2 (0.08)	1.3 (0.17)	0.9 (0.18)	1.4 (0.15)
Type of place for health care[4]					
Doctor's office or HMO[5]	31.4 (5.47)	79.4 (0.43)	74.3 (0.78)	77.6 (1.25)	66.5 (0.87)
Clinic or health center	56.9 (6.24)	16.2 (0.40)	15.9 (0.64)	17.6 (1.18)	25.5 (0.81)
Hospital emergency room or outpatient department	*8.0 (2.47)	2.0 (0.10)	7.5 (0.44)	2.4 (0.38)	4.8 (0.34)
Some other place	*3.4 (1.61)	1.1 (0.07)	1.0 (0.16)	0.9 (0.21)	0.8 (0.12)
Doesn't go to one place most often	†	1.3 (0.09)	1.3 (0.19)	1.5 (0.28)	2.4 (0.25)
Time since last saw or talked to health professional					
Never	†	0.9 (0.07)	2.1 (0.24)	2.6 (0.42)	5.4 (0.29)
6 months or less.	66.4 (4.00)	63.2 (0.32)	59.5 (0.66)	54.6 (1.17)	48.4 (0.64)
More than 6 months, but not more than 1 year ago	10.6 (1.91)	15.2 (0.25)	16.4 (0.55)	18.6 (0.96)	14.5 (0.47)
More than 1 year, but not more than 2 years ago	7.0 (1.42)	10.2 (0.20)	11.4 (0.45)	11.7 (0.81)	12.2 (0.41)
More than 2 years, but not more than 5 years ago.	8.0 (2.14)	6.9 (0.18)	7.2 (0.36)	8.2 (0.63)	10.9 (0.37)
More than 5 years ago.	*6.0 (1.88)	3.5 (0.12)	3.4 (0.24)	4.3 (0.48)	8.6 (0.34)
Time since last saw a dentist					
Never	†	0.6 (0.06)	1.5 (0.17)	2.7 (0.41)	4.8 (0.25)
6 months or less.	33.7 (2.87)	44.8 (0.37)	29.5 (0.72)	40.9 (1.21)	27.0 (0.61)
More than 6 months, but not more than 1 year ago	16.0 (2.50)	17.4 (0.24)	19.5 (0.58)	18.5 (0.92)	16.7 (0.49)
More than 1 year, but not more than 2 years ago	11.8 (2.02)	12.8 (0.22)	16.8 (0.59)	13.8 (0.81)	16.1 (0.48)
More than 2 years, but not more than 5 years ago.	15.7 (2.59)	11.5 (0.21)	15.7 (0.55)	13.0 (0.86)	16.5 (0.50)
More than 5 years ago.	20.4 (3.47)	12.9 (0.24)	17.0 (0.54)	11.1 (0.88)	19.0 (0.52)

See footnotes at end of table.

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Table 3. Age-adjusted percent distributions (with standard errors) and age-adjusted percents (with standard errors) of selected health care access and utilization measures for adults 18 years of age and over, by race and ethnicity: United States, 2004–2008—Con.

| | Race[1] and ethnicity | | | | |
| | Not Hispanic or Latino[2] | | | | |
Selected characteristic	American Indian or Alaska Native	White	Black or African American	Asian	Hispanic[2]
	Percent[3] (standard error)				
Measures of health care access[6]					
Delayed medical care due to cost	12.8 (2.45)	9.2 (0.19)	8.9 (0.39)	4.3 (0.44)	9.6 (0.39)
Did not receive medical care due to cost.	12.0 (2.53)	6.4 (0.16)	8.1 (0.36)	3.3 (0.40)	8.2 (0.35)
Female	Percent distributions[3] (standard error)				
Total.	100.00	100.00	100.00	100.00	100.00
Usual place for health care					
Has usual place	90.4 (2.11)	90.0 (0.21)	88.6 (0.41)	86.1 (0.79)	79.2 (0.52)
No usual place.	8.8 (1.98)	9.1 (0.20)	10.4 (0.40)	12.7 (0.76)	19.6 (0.49)
Has more than one place	†	0.9 (0.08)	1.0 (0.10)	1.1 (0.25)	1.1 (0.13)
Type of place for health care[4]					
Doctor's office or HMO[5]	45.3 (5.67)	82.7 (0.32)	76.0 (0.57)	78.1 (1.16)	63.7 (0.76)
Clinic or health center	45.1 (5.97)	14.9 (0.31)	18.4 (0.52)	18.1 (1.08)	30.3 (0.74)
Hospital emergency room or outpatient department	*6.8 (2.93)	1.1 (0.07)	4.6 (0.25)	2.0 (0.36)	4.3 (0.30)
Some other place	†	0.8 (0.07)	0.4 (0.09)	0.8 (0.21)	0.7 (0.11)
Doesn't go to one place most often	†	0.5 (0.04)	0.6 (0.11)	0.9 (0.25)	1.0 (0.14)
Time since last saw or talked to health professional					
Never	†	0.5 (0.05)	1.1 (0.17)	1.9 (0.29)	3.0 (0.22)
6 months or less.	73.1 (3.01)	76.9 (0.27)	74.4 (0.52)	64.5 (1.09)	66.2 (0.56)
More than 6 months, but not more than 1 year ago	13.5 (2.40)	13.6 (0.22)	14.9 (0.40)	18.3 (0.89)	14.3 (0.40)
More than 1 year, but not more than 2 years ago	8.3 (1.67)	5.3 (0.13)	6.2 (0.28)	8.3 (0.76)	9.0 (0.36)
More than 2 years, but not more than 5 years ago.	2.6 (0.79)	2.6 (0.10)	2.5 (0.17)	4.7 (0.44)	5.2 (0.27)
More than 5 years ago.	*2.4 (1.09)	1.1 (0.06)	1.0 (0.11)	2.4 (0.33)	2.2 (0.16)
Time since last saw a dentist					
Never	†	0.3 (0.03)	1.2 (0.16)	2.4 (0.34)	3.2 (0.23)
6 months or less.	37.0 (2.91)	51.6 (0.34)	34.2 (0.61)	46.8 (1.17)	33.4 (0.56)
More than 6 months, but not more than 1 year ago	17.8 (2.53)	17.3 (0.23)	21.4 (0.47)	20.9 (0.94)	19.2 (0.45)
More than 1 year, but not more than 2 years ago	15.5 (2.65)	11.3 (0.18)	15.2 (0.42)	13.0 (0.76)	15.6 (0.45)
More than 2 years, but not more than 5 years ago.	13.0 (1.94)	9.7 (0.19)	13.9 (0.40)	9.6 (0.70)	14.7 (0.41)
More than 5 years ago.	15.1 (2.68)	9.8 (0.19)	14.2 (0.40)	7.4 (0.62)	13.9 (0.41)
	Percent[3] (standard error)				
Measures of health care access[6]					
Delayed medical care due to cost	10.4 (1.94)	11.5 (0.20)	11.7 (0.34)	5.3 (0.52)	11.8 (0.41)
Did not receive medical care due to cost.	8.4 (1.88)	8.1 (0.17)	10.8 (0.35)	3.6 (0.43)	9.9 (0.35)

* Estimates preceded by an asterisk have a relative standard error of greater than 30% and less than or equal to 50% and should be used with caution as they do not meet the standards of reliability or precision.

† Estimates with a relative standard error greater than 50% are indicated with a dagger, but are not shown.

[1]The category race refers to persons who indicated only a single race group. Persons who indicated a single race other than the groups shown are not shown separately due to small sample sizes. Persons who indicated not Hispanic or Latino multiple race are excluded from the table.

[2]Persons of Hispanic or Latino origin may be of any race or combination of races. The category not Hispanic or Latino refers to all persons who are not of Hispanic or Latino origin, regardless of race.

[3]Denominator for each percent distribution and percent excludes persons with unknown characteristic.

[4]Only persons who reported one or more usual places to go for health care were asked about the type of place.

[5]HMO is health maintenance organization.

[6]When asked about delaying or not receiving medical care due to cost, respondents were instructed to exclude dental care.

NOTE: Estimates are age adjusted using the projected 2000 U.S. population as the standard population and using four age groups: 18–24 years, 25–44 years, 45–64 years, and 65 years and over. Estimates are based on household interviews of a sample of the civilian, noninstitutionalized population.

DATA SOURCE: CDC/NCHS, National Health Interview Survey, 2004–2008.

Table 4. Age-adjusted percentages (with standard errors) of adults 18 years of age and over with selected conditions, sensory problems, and functional limitation status, by race and ethnicity: United States, 2004–2008

| | Race[1] and ethnicity | | | | |
| | Not Hispanic or Latino[2] | | | | |
Selected characteristic	American Indian or Alaska Native	White	Black or African American	Asian	Hispanic[2]
Both sexes	Percent[3] (standard error)				
Selected circulatory conditions[4]					
Heart disease[5]	14.7 (1.93)	12.2 (0.13)	10.0 (0.25)	6.1 (0.37)	8.3 (0.24)
Hypertension	34.5 (2.48)	25.7 (0.18)	36.2 (0.40)	22.2 (0.61)	24.1 (0.36)
Stroke	4.7 (1.27)	2.4 (0.05)	3.7 (0.16)	2.0 (0.23)	2.3 (0.15)
Selected respiratory conditions[4]					
Emphysema.	*3.0 (0.92)	1.9 (0.05)	0.9 (0.08)	0.5 (0.11)	0.9 (0.10)
Asthma.	14.2 (1.66)	11.6 (0.15)	11.6 (0.28)	8.2 (0.46)	8.6 (0.26)
Hayfever	9.6 (1.42)	8.8 (0.14)	6.5 (0.22)	7.2 (0.44)	6.1 (0.21)
Sinusitis	13.9 (1.63)	14.7 (0.17)	13.5 (0.33)	6.1 (0.37)	8.4 (0.26)
Chronic bronchitis	4.9 (0.87)	4.4 (0.09)	3.9 (0.16)	1.5 (0.20)	2.5 (0.14)
Other selected conditions					
Cancer[4]	7.0 (1.30)	8.4 (0.11)	4.2 (0.17)	3.2 (0.31)	3.7 (0.19)
Diabetes[4,6]	17.5 (1.97)	6.6 (0.10)	11.8 (0.27)	8.0 (0.44)	10.6 (0.28)
Ulcer[4].	11.4 (1.71)	7.6 (0.12)	6.0 (0.20)	3.9 (0.31)	5.6 (0.20)
Migraine or severe headache	18.5 (1.94)	14.9 (0.17)	13.6 (0.33)	9.3 (0.47)	13.8 (0.31)
Pain in neck.	15.4 (1.78)	15.2 (0.17)	10.7 (0.29)	8.9 (0.44)	13.6 (0.30)
Pain in lower back	31.1 (2.14)	28.6 (0.23)	23.9 (0.42)	17.9 (0.65)	25.1 (0.41)
Pain down leg below knees	43.0 (4.33)	30.9 (0.40)	35.4 (0.83)	25.8 (1.51)	37.5 (0.83)
Selected sensory problems					
A lot of trouble hearing or deaf	5.5 (1.16)	3.2 (0.07)	1.2 (0.09)	1.5 (0.19)	1.9 (0.15)
Absence of all natural teeth	13.9 (1.50)	8.0 (0.12)	9.4 (0.25)	5.8 (0.40)	6.8 (0.24)
Functional limitation status[7]					
Limited[8]	42.9 (2.53)	33.0 (0.24)	32.6 (0.43)	20.6 (0.61)	27.4 (0.39)
Limited; caused by at least 1 chronic condition[9].	41.1 (2.37)	31.6 (0.24)	31.0 (0.42)	19.0 (0.58)	25.7 (0.39)
Male					
Selected circulatory conditions[4]					
Heart disease[5]	15.5 (2.63)	13.5 (0.19)	9.1 (0.38)	6.8 (0.55)	8.6 (0.38)
Hypertension	38.7 (3.27)	26.7 (0.25)	33.4 (0.61)	23.2 (0.89)	22.1 (0.53)
Stroke	6.9 (2.06)	2.5 (0.09)	3.5 (0.27)	2.0 (0.37)	2.4 (0.22)
Selected respiratory conditions[4]					
Emphysema.	*2.7 (1.16)	2.3 (0.09)	1.1 (0.14)	0.6 (0.18)	0.9 (0.16)
Asthma.	10.1 (2.01)	10.1 (0.21)	9.6 (0.40)	7.6 (0.61)	6.5 (0.34)
Hayfever	7.5 (1.95)	7.8 (0.17)	5.4 (0.31)	7.3 (0.63)	4.9 (0.28)
Sinusitis	9.0 (1.86)	10.7 (0.21)	8.5 (0.42)	5.5 (0.50)	6.4 (0.32)
Chronic bronchitis	4.9 (1.46)	3.0 (0.10)	2.3 (0.19)	1.6 (0.31)	1.5 (0.17)
Other selected conditions					
Cancer[4]	7.1 (2.10)	7.7 (0.15)	4.2 (0.27)	2.3 (0.39)	3.1 (0.27)
Diabetes[4,6]	18.2 (2.67)	7.2 (0.15)	11.3 (0.42)	8.9 (0.67)	10.6 (0.43)
Ulcer[4].	12.8 (2.95)	7.6 (0.17)	5.7 (0.32)	3.9 (0.44)	4.9 (0.28)
Migraine or severe headache	11.4 (2.18)	9.3 (0.19)	8.7 (0.41)	5.3 (0.55)	8.3 (0.36)
Pain in neck.	14.9 (2.69)	12.7 (0.21)	8.7 (0.39)	7.1 (0.58)	10.9 (0.43)
Pain in lower back	31.2 (3.14)	27.0 (0.32)	20.4 (0.58)	15.6 (0.80)	22.5 (0.56)
Pain down leg below knees	45.2 (5.69)	28.8 (0.56)	33.7 (1.36)	23.6 (2.20)	35.0 (1.32)
Selected sensory problems					
A lot of trouble hearing or deaf	9.3 (2.13)	4.2 (0.11)	1.2 (0.14)	1.4 (0.26)	2.1 (0.26)
Absence of all natural teeth	14.8 (2.25)	8.0 (0.16)	8.3 (0.36)	5.2 (0.48)	6.2 (0.36)
Functional limitation status[7]					
Limited[8]	42.4 (3.20)	29.4 (0.31)	26.6 (0.61)	16.8 (0.85)	22.2 (0.53)
Limited; caused by at least 1 chronic condition[9].	40.4 (3.14)	28.3 (0.31)	25.5 (0.60)	15.8 (0.81)	20.9 (0.52)

See footnotes at end of table.

Table 4. Age-adjusted percentages (with standard errors) of adults 18 years of age and over with selected conditions, sensory problems, and functional limitation status, by race and ethnicity: United States, 2004–2008—Con.

| | Race[1] and ethnicity | | | | |
| | Not Hispanic or Latino[2] | | | | |
Selected characteristic	American Indian or Alaska Native	White	Black or African American	Asian	Hispanic[2]
Female	Percent[3] (standard error)				
Selected circulatory conditions[4]					
Heart disease[5]	15.0 (2.30)	11.3 (0.16)	10.7 (0.33)	5.6 (0.49)	8.1 (0.32)
Hypertension	30.2 (3.03)	24.7 (0.22)	38.3 (0.50)	21.1 (0.79)	25.8 (0.47)
Stroke	*2.5 (0.90)	2.4 (0.07)	3.8 (0.21)	2.0 (0.32)	2.4 (0.19)
Selected respiratory conditions[4]					
Emphysema.	*3.2 (1.28)	1.6 (0.06)	0.8 (0.10)	0.5 (0.14)	0.9 (0.12)
Asthma.	18.2 (2.19)	13.0 (0.20)	13.2 (0.37)	8.7 (0.67)	10.7 (0.36)
Hayfever	11.7 (1.94)	9.8 (0.19)	7.3 (0.30)	7.1 (0.62)	7.1 (0.31)
Sinusitis	18.8 (2.25)	18.4 (0.24)	17.3 (0.45)	6.7 (0.54)	10.4 (0.37)
Chronic bronchitis	5.2 (1.19)	5.8 (0.14)	5.2 (0.23)	1.5 (0.25)	3.4 (0.21)
Other selected conditions					
Cancer[4]	7.5 (1.64)	9.2 (0.15)	4.2 (0.21)	4.0 (0.45)	4.5 (0.26)
Diabetes[4,6]	16.2 (2.27)	6.2 (0.13)	12.1 (0.34)	7.1 (0.57)	10.7 (0.37)
Ulcer[4].	10.8 (2.01)	7.7 (0.15)	6.2 (0.27)	4.0 (0.44)	6.2 (0.29)
Migraine or severe headache	25.3 (2.61)	20.4 (0.26)	17.7 (0.44)	13.1 (0.77)	19.5 (0.45)
Pain in neck.	16.1 (1.93)	17.6 (0.24)	12.3 (0.38)	10.6 (0.64)	16.3 (0.43)
Pain in lower back	30.8 (2.89)	30.1 (0.30)	26.7 (0.53)	20.0 (0.99)	27.7 (0.55)
Pain down leg below knees	41.6 (5.81)	32.6 (0.52)	36.5 (1.01)	27.3 (2.07)	39.5 (1.04)
Selected sensory problems					
A lot of trouble hearing or deaf	2.7 (0.75)	2.3 (0.07)	1.1 (0.11)	1.6 (0.27)	1.7 (0.17)
Absence of all natural teeth	13.1 (1.71)	8.0 (0.16)	10.1 (0.33)	6.3 (0.58)	7.2 (0.33)
Functional limitation status[7]					
Limited[8]	43.0 (3.20)	36.3 (0.31)	37.2 (0.53)	24.0 (0.89)	32.5 (0.53)
Limited; caused by at least 1 chronic condition[9].	41.6 (3.28)	34.6 (0.30)	35.4 (0.53)	22.0 (0.86)	30.3 (0.52)

* Estimates preceded by an asterisk have a relative standard error of greater than 30% and less than or equal to 50% and should be used with caution as they do not meet the standards of reliability or precision.

[1]The category race refers to persons who indicated only a single race group. Persons who indicated a single race other than the groups shown are not shown separately due to small sample sizes. Persons who indicated not Hispanic or Latino and multiple races are excluded from the table.

[2]Persons of Hispanic or Latino origin may be of any race or combination of races. The category not Hispanic or Latino refers to all persons who are not of Hispanic or Latino origin, regardless of race.

[3]Denominator for each percent excludes persons with unknown characteristic.

[4]Respondents were asked if they had ever been told by a doctor or other health professional that they had these conditions.

[5]Heart disease includes coronary heart disease, angina pectoris, heart attack, or any other heart condition or disease.

[6]Female respondents were instructed to exclude pregnancy-related diabetes. Responses from persons who said they had borderline diabetes were treated as unknown with respect to diabetes.

[7]Functional limitation status is based on any degree of difficulty the respondent had in performing specific physical tasks (e.g., walking a quarter of a mile, walking up 10 steps, standing for two hours, carrying a 10-pound object) and engaging in social activities and recreation without the assistance of another person or using special equipment.

[8]Limited includes limitation caused by at least one chronic condition, limitation not caused by chronic condition, and unknown if condition causing limitation activity is chronic.

[9]The category limited; caused by at least one chronic condition is a subset of the category limited. Conditions lasting more than 3 months are classified as chronic; selected conditions (e.g., arthritis, diabetes, cancer, heart conditions) are considered chronic regardless of duration.

NOTES: Estimates are age adjusted using the projected 2000 U.S. population as the standard population and using four age groups: 18–24 years, 25–44 years, 45–64 years, and 65 years and over. See Technical Notes for information regarding time frame for questions asking about conditions. Estimates are based on household interviews of a sample of the civilian, noninstitutionalized population.

DATA SOURCE: CDC/NCHS, National Health Interview Survey, 2004–2008.

Table 5. Age-adjusted percentages (with standard errors) of adults 18 years of age and over who received selected immunizations and HIV tests, by race and ethnicity: United States, 2004–2008

| | Race[1] and ethnicity | | | | |
| | Not Hispanic or Latino[2] | | | | |
Selected characteristic	American Indian or Alaska Native	White	Black or African American	Asian	Hispanic[2]
	Both sexes		*Percent[3] (standard error)*		
Received an influenza vaccination past 12 months[4]	31.7 (2.85)	29.9 (0.22)	22.8 (0.38)	28.8 (0.71)	21.2 (0.36)
Ever received pneumonia shot[5]	52.9 (6.98)	62.0 (0.45)	41.5 (1.08)	39.0 (2.02)	33.2 (1.24)
Ever received hepatitis B vaccine.	29.6 (2.70)	29.4 (0.23)	29.3 (0.47)	32.9 (0.79)	21.9 (0.40)
Ever tested for HIV[6]	43.0 (2.39)	34.3 (0.23)	51.5 (0.51)	30.6 (0.78)	38.0 (0.45)
	Male				
Received an influenza vaccination past 12 months[4]	28.7 (2.80)	27.3 (0.27)	22.1 (0.56)	27.9 (1.00)	19.5 (0.51)
Ever received pneumonia shot[5]	58.0 (9.65)	59.6 (0.68)	38.5 (1.79)	37.8 (3.26)	31.5 (2.03)
Ever received hepatitis B vaccine.	22.2 (3.28)	25.7 (0.31)	24.3 (0.66)	31.9 (1.18)	19.6 (0.56)
Ever tested for HIV[6]	40.3 (4.48)	31.6 (0.30)	50.6 (0.75)	28.7 (1.06)	33.7 (0.66)
	Female				
Received an influenza vaccination past 12 months[4]	34.9 (3.81)	32.3 (0.29)	23.4 (0.47)	29.6 (0.98)	23.1 (0.49)
Ever received pneumonia shot[5]	54.2 (7.16)	64.1 (0.56)	43.7 (1.33)	39.1 (2.73)	34.8 (1.62)
Ever received hepatitis B vaccine.	37.8 (2.92)	33.1 (0.30)	33.4 (0.57)	34.0 (1.06)	24.6 (0.52)
Ever tested for HIV[6]	46.8 (3.17)	37.0 (0.30)	52.6 (0.59)	32.5 (1.08)	43.2 (0.56)

[1]The category race refers to persons who indicated only a single race group. Persons who indicated a single race other than the groups shown are not shown separately due to small sample sizes. Persons who indicated not Hispanic or Latino and multiple races are excluded from the table.

[2]Persons of Hispanic or Latino origin may be of any race or combination of races. The category not Hispanic or Latino refers to all persons who are not of Hispanic or Latino origin, regardless of race.

[3]Denominator for each percent excludes persons with unknown characteristic.

[4]Received an influenza vaccination past 12 months includes persons who received a flu shot in the past 12 months or had flu vaccine (FluMist®) sprayed in their nose in the past 12 months.

[5]Ever received a pneumonia shot is only shown for persons 65 years of age and over. Estimates are age adjusted using the projected 2000 U.S. population as the standard population and using two age groups: 65–74 years and 75 years and over.

[6]HIV is human immunodeficiency virus.

NOTE: Estimates are age adjusted using the projected 2000 U.S. population as the standard population using four age groups: 18–24 years, 25–44 years, 45–64 years, and 65 years and over. Estimates are based on household interviews of a sample of the civilian, noninstitutionalized population.

DATA SOURCE: CDC/NCHS, National Health Interview Survey, 2004–2008.

Table 6. Age-adjusted percentages (with standard errors) of adults 18 years of age and over with feelings of psychological distress, by race and ethnicity: United States, 2004–2008

| | Race[1] and ethnicity | | | | |
| | Not Hispanic or Latino[2] | | | | |
Selected characteristic	American Indian or Alaska Native	White	Black or African American	Asian	Hispanic[2]
Both sexes	Percent[3] (standard error)				
Serious psychological distress[4]	3.4 (0.78)	2.9 (0.08)	3.4 (0.16)	1.4 (0.16)	3.5 (0.16)
Feel sad					
Most or all of the time	4.9 (1.03)	2.7 (0.07)	4.3 (0.19)	2.1 (0.23)	4.3 (0.17)
Some of the time	11.3 (1.63)	7.4 (0.12)	9.9 (0.26)	7.6 (0.46)	9.5 (0.27)
Feel nervous					
Most or all of the time	4.1 (0.94)	4.1 (0.10)	3.6 (0.17)	1.8 (0.21)	4.5 (0.17)
Some of the time	10.6 (1.37)	12.1 (0.16)	9.9 (0.27)	8.6 (0.47)	9.6 (0.27)
Feel restless					
Most or all of the time	7.0 (1.12)	5.9 (0.11)	5.1 (0.18)	2.4 (0.26)	4.9 (0.18)
Some of the time	11.9 (1.50)	12.4 (0.17)	11.4 (0.33)	7.2 (0.42)	9.1 (0.28)
Feel hopeless					
Most or all of the time	3.0 (0.77)	1.9 (0.06)	2.3 (0.13)	1.1 (0.14)	2.9 (0.14)
Some of the time	7.1 (1.27)	3.8 (0.08)	4.6 (0.18)	3.5 (0.28)	4.9 (0.20)
Feel like everything is an effort					
Most or all of the time	6.3 (1.02)	4.9 (0.10)	7.6 (0.27)	3.5 (0.29)	5.4 (0.20)
Some of the time	10.0 (1.48)	8.3 (0.13)	9.5 (0.28)	6.1 (0.41)	7.1 (0.23)
Feel worthless					
Most or all of the time	3.2 (0.76)	1.7 (0.06)	1.7 (0.11)	1.0 (0.15)	2.2 (0.13)
Some of the time	3.7 (0.82)	3.1 (0.08)	3.5 (0.18)	2.5 (0.25)	3.5 (0.18)
Male					
Serious psychological distress[4]	*3.6 (1.25)	2.3 (0.09)	2.8 (0.25)	1.2 (0.22)	2.2 (0.18)
Feel sad					
Most or all of the time	*4.6 (1.50)	2.2 (0.09)	3.6 (0.29)	1.8 (0.32)	2.9 (0.22)
Some of the time	10.8 (2.50)	5.9 (0.15)	8.4 (0.39)	5.6 (0.54)	7.4 (0.38)
Feel nervous					
Most or all of the time	*4.0 (1.33)	3.2 (0.11)	3.0 (0.26)	1.3 (0.24)	2.7 (0.20)
Some of the time	8.7 (1.98)	10.2 (0.21)	8.2 (0.38)	6.7 (0.56)	7.5 (0.37)
Feel restless					
Most or all of the time	8.6 (1.79)	5.7 (0.15)	4.3 (0.29)	2.1 (0.34)	3.6 (0.24)
Some of the time	9.6 (2.18)	11.8 (0.23)	9.8 (0.43)	5.9 (0.53)	7.5 (0.36)
Feel hopeless					
Most or all of the time	*3.5 (1.18)	1.5 (0.08)	2.0 (0.22)	0.9 (0.19)	1.9 (0.17)
Some of the time	9.3 (2.46)	3.2 (0.11)	3.8 (0.27)	2.8 (0.36)	3.7 (0.27)
Feel like everything is an effort					
Most or all of the time	4.8 (1.35)	4.4 (0.13)	6.7 (0.37)	3.3 (0.39)	4.1 (0.24)
Some of the time	11.6 (2.26)	7.2 (0.18)	8.5 (0.41)	4.2 (0.45)	5.8 (0.32)
Feel worthless					
Most or all of the time	*3.8 (1.18)	1.4 (0.07)	1.4 (0.16)	0.7 (0.18)	1.5 (0.16)
Some of the time	*4.2 (1.39)	2.6 (0.10)	3.1 (0.27)	2.1 (0.31)	2.8 (0.27)
Female					
Serious psychological distress[4]	3.1 (0.86)	3.4 (0.11)	3.9 (0.21)	1.6 (0.22)	4.9 (0.26)
Feel sad					
Most or all of the time	4.9 (1.07)	3.2 (0.10)	5.0 (0.23)	2.3 (0.31)	5.7 (0.26)
Some of the time	11.8 (1.83)	8.7 (0.16)	11.0 (0.35)	9.4 (0.68)	11.5 (0.37)
Feel nervous					
Most or all of the time	4.0 (1.12)	5.0 (0.14)	4.1 (0.21)	2.4 (0.35)	6.2 (0.27)
Some of the time	12.4 (1.77)	13.8 (0.21)	11.3 (0.37)	10.5 (0.72)	11.7 (0.39)

See footnotes at end of table.

Table 6. Age-adjusted percentages (with standard errors) of adults 18 years of age and over with feelings of psychological distress, by race and ethnicity: United States, 2004–2008—Con.

| | Race[1] and ethnicity | | | | |
| | Not Hispanic or Latino[2] | | | | |
Selected characteristic	American Indian or Alaska Native	White	Black or African American	Asian	Hispanic[2]
	Percent[3] (standard error)				
Feel restless					
Most or all of the time	5.2 (1.44)	6.1 (0.15)	5.7 (0.24)	2.6 (0.41)	6.1 (0.28)
Some of the time	14.3 (2.05)	12.9 (0.21)	12.6 (0.42)	8.4 (0.62)	10.8 (0.40)
Feel hopeless					
Most or all of the time	*2.5 (0.84)	2.2 (0.09)	2.6 (0.17)	1.2 (0.19)	3.9 (0.23)
Some of the time	5.0 (1.17)	4.4 (0.12)	5.2 (0.24)	4.2 (0.42)	6.2 (0.29)
Feel like everything is an effort					
Most or all of the time	7.5 (1.38)	5.4 (0.13)	8.4 (0.33)	3.7 (0.41)	6.6 (0.30)
Some of the time	8.4 (1.62)	9.3 (0.18)	10.3 (0.36)	8.0 (0.65)	8.4 (0.31)
Feel worthless					
Most or all of the time	*2.4 (0.78)	2.0 (0.09)	1.9 (0.14)	1.2 (0.25)	2.9 (0.20)
Some of the time	*3.1 (1.02)	3.6 (0.11)	3.8 (0.22)	3.0 (0.39)	4.3 (0.24)

* Estimates preceded by an asterisk have a relative standard error of greater than 30% and less than or equal to 50% and should be used with caution as they do not meet the standards of reliability or precision.

[1]The category race refers to persons who indicated only a single race group. Persons who indicated a single race other than the groups shown are not shown separately due to small sample sizes. Persons who indicated not Hispanic or Latino and multiple races are excluded from the table.

[2]Persons of Hispanic or Latino origin may be of any race or combination of races. The category not Hispanic or Latino refers to all persons who are not of Hispanic or Latino origin, regardless of race.

[3]Denominator for each percent excludes persons with unknown characteristic.

[4]Serious psychological distress: Six psychological distress questions are included in the sample adult component. These questions ask how often a respondent experienced certain symptoms of psychological distress during the past 30 days. The response codes (0–4) of the six items for each person are summed to yield a scale with a 0 to 24 range. A value of 13 or more for this scale is used here to define serious psychological distress.

NOTE: Estimates are age adjusted using the projected 2000 U.S. population as the standard population and using four age groups: 18–24 years, 25–44 years, 45–64 years, and 65 years and over. Estimates are based on household interviews of a sample of the civilian, noninstitutionalized population.

DATA SOURCE: CDC/NCHS, National Health Interview Survey, 2004–2008.

Table 7. Age-adjusted percent distributions (with standard errors) of respondent-assessed health status for adults 18 years of age and over, by race and ethnicity: United States, 2004–2008

| | Race[1] and ethnicity | | | | |
| | Not Hispanic or Latino[2] | | | | |
Selected characteristic	American Indian or Alaska Native	White	Black or African American	Asian	Hispanic[2]
Both sexes	Percent distribution[3] (standard error)				
Total.	100.00	100.00	100.00	100.00	100.00
Excellent	22.6 (1.98)	31.1 (0.25)	24.0 (0.42)	31.6 (0.77)	25.3 (0.40)
Very good.	23.6 (2.19)	33.6 (0.22)	27.4 (0.41)	31.6 (0.76)	27.3 (0.40)
Good.	33.6 (2.00)	24.3 (0.20)	29.3 (0.40)	27.7 (0.73)	30.1 (0.41)
Fair.	14.1 (1.44)	8.2 (0.12)	14.7 (0.31)	6.9 (0.44)	13.2 (0.30)
Poor	6.1 (1.08)	2.8 (0.07)	4.6 (0.18)	2.2 (0.23)	4.0 (0.18)
Male					
Total.	100.00	100.00	100.00	100.00	100.00
Excellent	21.3 (2.59)	31.7 (0.33)	26.5 (0.66)	32.1 (1.04)	27.3 (0.57)
Very good.	22.9 (2.74)	33.6 (0.31)	27.3 (0.63)	32.2 (1.08)	28.7 (0.59)
Good.	34.2 (2.80)	24.0 (0.27)	28.5 (0.63)	27.4 (0.99)	28.8 (0.59)
Fair.	15.0 (2.13)	7.9 (0.17)	13.4 (0.45)	6.4 (0.58)	11.5 (0.43)
Poor	6.6 (1.78)	2.8 (0.10)	4.3 (0.29)	1.9 (0.33)	3.7 (0.27)
Female					
Total.	100.00	100.00	100.00	100.00	100.00
Excellent	23.7 (2.79)	30.6 (0.30)	21.9 (0.49)	31.2 (1.04)	23.2 (0.49)
Very good.	24.7 (2.77)	33.6 (0.30)	27.6 (0.51)	31.1 (1.04)	26.1 (0.52)
Good.	32.8 (2.63)	24.5 (0.25)	30.0 (0.50)	28.0 (1.05)	31.5 (0.55)
Fair.	13.4 (1.73)	8.5 (0.15)	15.8 (0.41)	7.4 (0.61)	14.9 (0.40)
Poor	5.3 (1.33)	2.9 (0.09)	4.8 (0.23)	2.4 (0.34)	4.3 (0.23)

[1]The category race refers to persons who indicated only a single race group. Persons who indicated a single race other than the groups shown are not shown separately due to small sample sizes. Persons who indicated not Hispanic or Latino and multiple races are excluded from the table.

[2]Persons of Hispanic or Latino origin may be of any race or combination of races. The category not Hispanic or Latino refers to all persons who are not of Hispanic or Latino origin, regardless of race.

[3]Denominator for each percent distribution excludes persons with unknown respondent-assessed health status.

NOTE: Estimates are age adjusted using the projected 2000 U.S. population as the standard population and using four age groups: 18–24 years, 25–44 years, 45–64 years, and 65 years and over. Estimates are based on household interviews of a sample of the civilian, noninstitutionalized population.

DATA SOURCE: CDC/NCHS, National Health Interview Survey, 2004–2008.

Technical Notes

Sample design

The National Health Interview Survey (NHIS) is a cross-sectional household interview survey of the U.S. civilian noninstitutionalized population. Data are collected continuously throughout the year in all 50 states and the District of Columbia. NHIS uses a multistage, clustered sample design to collect data on a variety of health indicators. Information on basic health topics is collected for all household members, if necessary by proxy from one adult family member. Additional information is collected from one randomly selected adult and about one randomly selected child in each family. Self-response is required for the Sample Adult questionnaire except in rare cases where sample adults are physically or mentally incapable of responding for themselves. Interviews are conducted in the home using a computer-assisted personal interview, or CAPI, with telephone interviewing permitted for followup, if necessary.

Starting in 2006, the NHIS sample design included Asian persons in the NHIS oversampling of minority populations; previously, only households with black and Hispanic persons were oversampled. The sample adult selection process was also revised in 2006 so that when black, Hispanic, or Asian persons aged 65 years and over were present, they had an increased chance of being selected as the sample adult.

Response rates

Combining the years 2004–2008, NHIS interviews were completed in 162,348 households and 165,954 families with 132,203 adults aged 18 years and over completing the Sample Adult questionnaire. The final response rate (which takes into account household and family nonresponse) for the 2004–2008 combined sample adult files was 68.7%. The household response rate for the combined years was 86.5%. Procedures used in calculating response rates for combined data years are described in detail in Appendix I of the Survey Descriptions of the NHIS data files (17–21). The number of completed household, family, and sample adult interviews by year and household and sample adult response rates by year are found in Table I.

Item nonresponse

Item nonresponse for each of the sociodemographic indicators shown in this report was about 1% or less for years 2004–2008, with the exception of poverty status, which is based on detailed family income asked for in the family component of the questionnaire. Item nonresponse for the poverty indicator was about 20% for years 2004–2008. To minimize the possible bias that could be introduced from a relatively large amount of missing income data, the NHIS Multiple Imputed Family Income data were used. The NHIS Imputed Family Income data were produced by multiple imputation, a technique that allows the extra variation due to imputation to be accounted for in the data analysis. Item nonresponse for the health behavior, health care, conditions, immunizations, and other health related items ranged from 0.1% to 5.7%. The denominators for statistics shown in Tables 2–7 exclude persons with unknown health related characteristics for a given table. Results for persons with unknown sociodemographic characteristics are not shown separately, but are included in the total of Table 1.

Age adjustment

Data shown in this report were age adjusted using the projected 2000 U.S. population provided by the U.S. Census Bureau as the standard population (23,24). Age adjustment was used to allow comparison among various population subgroups that have different age structures. This is particularly important for demographic characteristics such as race and ethnicity, education, and marital status. It is also helpful for other characteristics. The following age groups were used for age adjustment: 18–24 years, 25–44 years, 45–64 years, and 65 years and over (Table II). Estimates for education, health insurance coverage, and pneumonia shot are restricted to certain age groups and are therefore age adjusted accordingly.

Estimates were calculated using software for statistical analysis of correlated data (SUDAAN) (22). The SUDAAN procedure PROC DESCRIPT was used to produce age-adjusted percentages and their standard errors.

Tests of significance

Statistical tests performed to assess significance of differences between the estimates were two-tailed with no adjustments for multiple comparisons. The test statistic used to determine statistical significance of differences between two percentages was

$$Z = \frac{|X_a - X_b|}{\sqrt{S_a^2 + S_b^2}},$$

Table I. Completed interviews and response rates, by year: National Health Interview Survey, 2004–2008

Interviews and rates	Year				
	2004	2005	2006	2007	2008
Completed interviews			Number		
Household	36,579	38,509	29,204	29,266	28,790
Family.	37,466	39,284	29,868	29,915	29,421
Sample adult	31,326	31,428	24,275	23,393	21,781
Response rate			Percent		
Household	86.9	86.5	87.3	87.1	84.9
Sample adult (Final)	72.5	69.0	70.8	67.8	62.6

Table II. Age distributions used in age-adjusting estimates shown in Tables 1–7 and Figures 1–4

Age	Projected 2000 U.S. standard population (in thousands)
18 years and over	203,851
18–24 years.	26,258
25–44 years.	81,892
45–64 years.	60,991
65 years and over	34,710
Education	
25 years and over	177,593
25–44 years.	81,892
45–64 years.	60,991
65 years and over	34,710
Health insurance	
18–64 years	169,141
18–24 years.	26,258
25–44 years.	81,892
45–64 years.	60,991
Pneumonia shot	
65 years and over	34,710
65–74 years.	18,136
75 years and over	16,574

where X_a and X_b are the two percentages being compared, and S_a and S_b are the standard errors of those percentages. The critical value used for two-sided tests at the 0.05 level of significance was 1.96.

Relative standard error

Estimates with a relative standard error of more than 30% but less than or equal to 50% are identified with an asterisk (*). Estimates with a relative standard error of greater than 50% are indicated with a dagger (†) and are not shown. The relative standard errors are calculated as follows:

Relative standard error (as a percentage) = (SE/*Est*) 100,

where SE is the standard error of the estimate, and *Est* is the estimate.

Demographic terms

Age—The age recorded for each person is the age at the last birthday.

Education—The categories of education are based on the years of school completed or highest degree obtained for persons aged 25 and over.

Only years completed in a school that advances a person toward an elementary or high school diploma, General Educational Development high school equivalency diploma (GED), college, university, or professional degree are included. Education in other schools or home schooling is counted only if the credits are accepted in a regular school system.

Health insurance coverage—NHIS respondents were asked about their health insurance coverage at the time of the interview. Respondents reported whether they were covered by private insurance (obtained from their employer or workplace, purchased directly, or through a local or community program), Medicare, Medigap, (supplemental Medicare coverage), Medicaid, Children's Health Insurance Program (CHIP), Indian Health Service (IHS), military coverage (including VA, TRICARE, or CHAMP-VA), a state-sponsored health plan, another government program or single service plans. This information was used to form a health insurance hierarchy that consisted of three mutually exclusive categories. Persons with more than one type of health insurance were assigned to the first appropriate category in the following hierarchy: private coverage, public coverage (includes persons with Medicare, Medigap, Medicaid, CHIP, military coverage, a state-sponsored health plan, IHS, or another government program), and uninsured (also includes persons who only have a plan that pays for one type of service, such as accidents or dental care).

Hispanic or Latino origin—Hispanic or Latino origin includes persons of Mexican, Puerto Rican, Cuban, Central or South American, or Spanish origins. Persons of Hispanic or Latino origin may be of any race.

Indian Health Service (IHS) geographic regions—Consists of five regions that contain 36 states that are typically covered by the IHS administrative areas. An additional category of "Not IHS region" was included so that all 50 states and the District of Columbia would be accounted for. The five regions and the additional category are as follows:

Alaska = Alaska; East = Alabama, Connecticut, Florida, Kansas, Louisiana, Maine, Massachusetts, Mississippi, New York, North Carolina, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, and Texas; Northern Plains = Indiana, Iowa, Michigan, Minnesota, Montana, Nebraska, North Dakota, South Dakota, Wisconsin, and Wyoming; Pacific Coast = California, Idaho, Oregon, and Washington; Southwest = Arizona, Colorado, Nevada, New Mexico, and Utah; Not IHS region = Arkansas, Delaware, District of Columbia, Georgia, Hawaii, Illinois, Kentucky, Maryland, Missouri, New Hampshire, New Jersey, Ohio, Vermont, Virginia, and West Virginia.

Marital status—Respondents were asked to choose a marital status category. Adults could select the category they felt most appropriate for their marital situation. In some cases, persons reporting their marital status as "married" may have been living in common-law marital unions. Alternatively, these individuals could have identified their marital status as "living with partner." Adults who were living with a partner were considered to be members of the same family (as if married) and are categorized as "cohabiting." The distinction between "married" and "living with partner" was made by the respondent.

Poverty status—Poverty categories are based on the ratio of the family's income in the previous calendar year to the appropriate poverty threshold (given the family's size and number of children) defined by the U.S. Census Bureau for that year. "Poor" persons are defined as persons whose family incomes are below the poverty threshold. "Near poor" persons have family incomes of 100% to less than 200% of the poverty threshold, and "Not poor" persons have family incomes that are 200% of the poverty threshold or greater.

Race—The 1997 Office of Management and Budget (OMB) federal guidelines (25) for reporting race require that persons of "single race" be distinguished from persons of "multiple race." "Single race" refers to persons

who indicated only a single-race group. Estimates for the smaller subcategories of single-race persons and multiple-race combinations can only be reported to the extent that the estimates meet the requirements for confidentiality and statistical reliability. In this report, four categories are shown for single-race individuals (AIAN, white, black or African American, and Asian). Other subcategories of single- race persons and multiple-race persons are not shown due to statistical unreliability as measured by the relative standard errors of the estimates.

Health behavior terms

Lifetime alcohol drinking status

Lifetime abstainer—Had fewer than 12 drinks in lifetime.

Former drinker—Had 12 drinks or more in lifetime, but no drinks in the past year.

Current infrequent or light drinker—Current infrequent drinker had at least 12 drinks in lifetime and 1 to 11 drinks in the past year; and light drinker had at least 12 drinks in lifetime and 3 drinks or less per week on average.

Current moderate or heavier drinker—Had at least 12 drinks in lifetime and more than 3 drinks per week, on average.

Body weight status—Body weight status is based on body mass index (BMI), which is calculated from self-reported height and weight without shoes. BMI is calculated as weight divided by height² using metric units (i.e., kilograms/meter²).

Underweight—Is a BMI of less than 18.5.

Healthy weight—Is a BMI of greater than or equal to 18.5 and less than 25.

Overweight but not obese—Is a BMI of greater than or equal to 25 and less than 30.

Obese—Is a BMI of greater than or equal to 30.

Leisure-time physical activity

Inactive—Includes persons who engaged in no light, moderate, or vigorous leisure-time physical activity lasting 10 minutes or longer. Persons classified as physically inactive includes persons who volunteered that they were unable to engage in the activity. ''Inactive'' may include individuals who engaged in only strengthening activities.

Some activity, less than regular activity—Is any light, moderate or vigorous leisure-time physical activity lasting at least 10 minutes that did not meet the criteria for ''regular.''

Regular activity—Is vigorous leisure-time physical activity at least three times per week lasting at least 20 minutes each time or light-moderate leisure-time physical activity at least five times per week lasting at least 30 minutes each time or both. It does not include other combinations of activity levels (e.g., vigorous activity twice a week combined with light or moderate activity three times a week). The number of individuals with such combinations of activity is small.

Smoking status

Never—Never smoked a cigarette or smoked fewer than 100 cigarettes in lifetime.

Former—Smoked at least 100 cigarettes in lifetime, but currently do not smoke.

Current—Smoked at least 100 cigarettes in lifetime and currently smoked cigarettes every day or some days.

Health care utilization terms

Doctor or other health care professional—Refers to medical doctors (MDs) and osteopathic physicians (DOs), including general practitioners as well as specialists, dermatologists, psychiatrists, ophthalmologists, psychologists, nurses, physical therapists, and chiropractors.

Usual place for health care—Usual place of health care was based on a question that asked whether respondents had a place that they usually went to when they were sick or needed advice about their health. These places include a walk-in clinic, doctor's office, clinic, health center, health maintenance organization, hospital emergency room or outpatient clinic, or a military or VA health care facility.

Time since last physician contact or other health professional contact—This is the length of time, prior to the week of interview, since the respondent last consulted a physician or other health care professional in person or by telephone for health treatment or advice of any type. This may include a contact while a patient is in the hospital as well as a contact from a home visit.

Time since last dental contact—This is the length of time since the respondent last saw or talked to a dentist, including dental specialists as well as dental hygienists, prior to the week of interview.

Chronic condition—A condition is considered chronic if its onset was more than 3 months before the date of interview, or it is a type of condition that ordinarily lasts more than 3 months. Examples of conditions considered chronic regardless of onset are diabetes, emphysema, and arthritis.

Functional limitation—Is based on any degree of difficulty the respondent had in performing specific tasks (e.g., walking a quarter of a mile, walking up 10 steps, standing for 2 hours, carrying a 10-pound object, etc.) and engaging in social activities and recreation without the assistance of another person or using special equipment because of a physical, mental, or emotional problem.

Influenza vaccination—Respondents were asked in separate questions if they had received a flu shot during the past 12 months and if they had received a flu vaccine sprayed in their nose during the past 12 months.

Pneumonia shot—This variable is based on a question that asked whether the respondent has ever had a pneumonia shot.

Human immunodeficiency virus (HIV) testing status—This variable is based on a question that asked whether the respondent has ever had his or her blood tested for HIV.

Serious psychological distress—Is based on a series of six questions asking about symptoms of psychological distress experienced in the past 30 days. The symptoms include feeling: so sad

that nothing could cheer you up, nervous, restless or fidgety, hopeless, that everything was an effort, and worthless. The response options ranged from ''never'' (score=0) to ''all of the time'' (score=4). Items with missing data were assigned a score of zero for that item. A summary score for these six items was calculated and a total score of 13 or higher was classified as ''serious psychological distress,'' consistent with a scoring algorithm developed by Kessler, et al. (26).

Respondent-assessed health status—Respondent-assessed health status was based on the question, ''Would you say your health, in general, was excellent, very good, good, fair, or poor?'' Information was obtained from all respondents with proxy responses allowed for adults not taking part in the interview and all children 17 years of age and under.

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