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# Health Status of Non-Hispanic U.S.-Born and Foreign-Born Black and White Persons: United States, 1992–95



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Centers for Disease Control and Prevention  
National Center for Health Statistics

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# Vital and Health Statistics

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## Health Status of Non-Hispanic U.S.-Born and Foreign-Born Black and White Persons: United States, 1992–95

Data From the National Health  
Interview Survey

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Centers for Disease Control and Prevention  
National Center for Health Statistics

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July 2005  
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## Abstract

### Objective

This report describes differences in selected sociodemographic and health characteristics of the non-Hispanic U.S. population by race (black and white) and nativity (U.S.-born and foreign-born), using data from the 1992–95 National Health Interview Surveys (NHIS).

### Methods

Data were collected for a household, multistage probability sample representative of the U.S. civilian noninstitutionalized population. A total of 456,729 persons were included in these analyses for the 4 data years combined. Statistics were age adjusted to the 2000 U.S. standard population, and unadjusted estimates are also presented for comparison.

### Results

Over 67 percent of the foreign-born black population assessed their health as being excellent or very good, significantly higher than U.S.-born black persons (52 percent), and similar to U.S.- and foreign-born white persons (69 percent for each group). Eleven percent of foreign-born black persons were limited in performing some type of activity, compared with 20 percent of their U.S.-born counterparts. Among white persons, 14 percent of foreign-born and 16 percent of U.S.-born individuals were limited in activity. The foreign-born black population, especially women, had the lowest current smoking prevalence of all of the study groups.

### Conclusions

The data show significant differences in health characteristics between groups classified by race and nativity. Information about the nativity status of black and white populations may be useful in public health efforts to eliminate health disparities.

**Keywords:** Foreign-born • race • National Health Interview Survey • activity limitation • smoking • AIDS knowledge

# Health Status of Non-Hispanic U.S.-Born and Foreign-Born Black and White Persons: United States, 1992–95

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## Introduction

According to the 2000 Census of the United States, the immigrant population increased by more than 50 percent in the preceding decade (1,2). Foreign-born individuals now comprise approximately 11 percent of the U.S. population (2), the largest proportion since the early 1900s (3). The majority of immigrants to the United States are of Hispanic origin, and substantial research has been done on the health of U.S.-born Hispanic Americans (4–7). Other public health studies have focused on non-Hispanic immigrant groups, such as immigrant Asian Americans (8–11), but fewer studies have focused on black immigrants from Africa and the Caribbean (12), or white immigrants of non-Hispanic origin (13). In order to focus on groups that have not been well studied previously, this report is limited to non-Hispanic black and non-Hispanic white U.S.- and foreign-born persons.

Non-Hispanic foreign-born persons represent a substantial proportion of both the black and white population groups. In 2000, 6.1 percent of the black population was foreign-born, and 6.3 percent of the white population was foreign-born (14). These numbers represent an increase in both populations from previous Census years—in 1980, foreign-born persons made up

3.1 percent of the black population, and 4.9 percent of the white population (15). The growth in the number of non-Hispanic black immigrants and non-Hispanic white immigrants has important implications for the overall health of this country's population. The health status, health behaviors, and socioeconomic status of these two immigrant groups may differ substantially from one another, from other ethnic immigrant groups, and from their U.S.-born counterparts.

Previous research has shown that foreign-born persons living in the United States differ from native-born persons with respect to sociodemographic characteristics that are correlates of health status. Foreign-born persons are more likely to be older and male (3), to live in urban areas, and to have larger immediate families than U.S.-born persons (16). Immigrants are less likely to have completed high school, but just as likely to complete college as the native-born population. Foreign-born persons are also more likely to be unemployed, to earn less, and to live in poverty than native-born persons (3,17). The foreign-born population is also more geographically concentrated in the West and Northeastern parts of the United States than the native-born population (16).

The health patterns seen among recent immigrants must be viewed within the context of the history of

immigration to the United States. The country or region of origin of specific immigrant groups may be especially important for understanding health patterns because different countries display widely varying levels of disease exposure, health-related characteristics, and health practices. Most U.S.-born black Americans are the descendants of slaves who were brought to the United States in the 17th to early 19th centuries, supplemented by a small flow of voluntary black immigration to the United States from the Caribbean that began in the late 19th century. The stream of black immigrants increased with the elimination of the U.S. immigration quota system in 1965 (18) and passage of the Immigration Act of 1990, which introduced the diversity visa program and an increased number of employment visas (19). Currently, the majority of new black immigrants to the United States are from the Caribbean (20,21), mainly Jamaica, Trinidad and Tobago, Guyana, and Barbados (22). Additionally, a growing minority of black immigrants come from Africa, primarily from Nigeria, Sudan, and Ethiopia (12,23).

The countries of origin for white immigrants have changed over time. During the 17th and 18th centuries, most of America's immigrants came from northern and western Europe, primarily Great Britain and Ireland (17). During the early 19th century, southern and eastern Europeans began coming to America in increasing numbers. While western Europe continues to produce a significant number of white immigrants to the United States, in recent years a significant number of white immigrants have come from the former nations of the Soviet Union, such as Russia, Latvia, Estonia, and Lithuania. Germany, France, and the United Kingdom also continue to be sources of non-Hispanic white immigrants to the United States (24).

Immigrants constitute a diverse group in American society with their assorted immigration experiences, customs, and traditions. It is important to study the health patterns of both black and white immigrants to provide a richer understanding of how health status varies by race, ethnicity, and

socioeconomic status in the United States. In this report, we use one of the few available large, nationally representative health data sets to describe the patterns of health status among foreign-born non-Hispanic black and white populations in the United States, and compare them to each other and to their U.S.-born counterparts.

## Methods

This is the last of three reports describing the health of racial and ethnic subpopulations in the United States. Earlier reports examined the health status of Asian American and Hispanic subgroups (4,9). For this report, data from the 1992–95 National Health Interview Survey (NHIS) were used to describe the health of non-Hispanic black and non-Hispanic white U.S. immigrants and their native-born counterparts. To facilitate comparison to the earlier reports, this report uses the same variables and tabulation formats, and covers the same data years (1992–95) as the report on the Hispanic population groups. It is useful to examine older years of data for this report because little research has been published comparing the health status of native and immigrant black and white populations in the United States. Additional research on these populations using more current NHIS data has recently been published (25), and more research is underway. Comparing the results from this study to those of analyses of more recent NHIS data will be beneficial for observing trends.

For each year included in these analyses (1992–95), the NHIS collected data on a wide variety of health topics and general health status measures from approximately 127,000 persons in about 49,000 households. These data were collected from nationally representative samples of the civilian, noninstitutionalized population of the United States; and they have been widely used to monitor trends in illness and disability and to track progress toward achieving national health objectives. In 1992–95, the NHIS consisted of two parts: (1) the core

questionnaire—a set of basic health and demographic items; and (2) the supplements—one or more sets of questions on current health topics. The core questionnaire remained the same from 1992 to 1995 and collected data on health status and health care utilization, such as hospital visits, physician contacts, restricted activity days, and perceived health status. The supplements changed from year to year depending on data needs and current research topics of interest; they covered such issues as health insurance, immunization, smoking, and AIDS knowledge and attitudes.

For this report, data were analyzed from the 1992–95 core NHIS questionnaires (all demographic data, activity limitation, hospital stays, physician contacts, respondent-assessed health status), the 1992–95 AIDS knowledge and attitudes supplements (self-reported knowledge of HIV/AIDS, ever tested for HIV, perceived risk of getting HIV), and the 1992 cancer epidemiology supplement combined with the 1993–95 Year 2000 Objectives supplements (smoking and tobacco use). Four years of data were aggregated to increase the sample size of the populations and increase the reliability of the estimates of the health indicators. To account for the complex, multistage sample design of the NHIS, SUDAAN software was used to produce the point estimates and standard errors (26).

For this report, we limited the analyses to non-Hispanic black and white immigrants, and for comparative purposes, their U.S.-born non-Hispanic counterparts. Our results are therefore generalizable only to these populations. The sizes and the percent distributions of the populations are shown in [table 1](#). On average, during the period 1992–95, there were about 1.5 million black immigrants and 6.8 million white immigrants living in the United States. Black immigrants comprised about 4.9 percent of the non-Hispanic black population, and white immigrants comprised about 3.7 percent of the non-Hispanic white population.

The demographic characteristics in the analyses include sex, age, education, employment status, family income, poverty status, family size, geographic



region, place of residence, and duration of residence in the United States. For these analyses, persons born in a U.S. territory were considered U.S.-born. The health indicators examined include respondent-assessed health status, activity limitation, interval since last physician contact, number of physician contacts, restricted activity days, hospital stays, days of hospitalization, smoking status, self-reported AIDS knowledge, HIV testing, and perceived risk of acquiring the AIDS virus. The time frame for the occurrences of physician contacts, restricted activity days, hospital stays, and days of hospitalization was the last year before interview. All variables are defined in the “Technical Notes” at the end of this report.

Age-adjusted estimates are presented for all data in this report, standardized to the 2000 U.S. population (27). The age-adjusted estimates are presented because foreign-born and U.S.-born populations differ substantially with respect to age composition, which can confound differences in health characteristics. The unadjusted estimates for selected tables and health outcomes are included in “Appendix I” of this report for the reader’s reference and are not discussed in the body of the report.

Standard errors are shown for all percentages in the tables but not for the frequencies. Unknown responses from these analyses are excluded for all variables except family income and poverty status. The detailed family income variable had a substantial proportion of unknown data (15–18 percent of data unknown for all data years) due to the reluctance of some survey participants to disclose information about their annual income. Since family income was used to calculate poverty status, it also contained a substantial proportion of unknown data. Unknown responses were very low (5 percent or less) for all other variables included in this study.

Estimates with relative standard errors of greater than 30 percent are considered unreliable and are indicated with an asterisk. The statistical significance of differences between point estimates was evaluated using

two-sided *t*-tests at the 0.05 level and assuming independence. Terms such as “greater than,” “less than,” “more likely,” “less likely,” “compared with,” or “opposed to” indicate a statistically significant difference between estimates, whereas “similar,” “no difference,” or “comparable” indicate that the estimates are not statistically different. A lack of commentary about any two estimates should not be interpreted to mean that the difference was found to be not significant. In addition, these data were not adjusted for multiple comparisons. Refer to the “Technical Notes” for further information.

## Results

The results are presented in two sections. The “Demographic Characteristics” section describes the black and white foreign-born and U.S.-born populations with respect to selected social, economic, and demographic characteristics that are often associated with health (table 2). The “Health Characteristics” section describes differences among the same groups with respect to health status, health care, and health-related behaviors (tables 3–7).

For reasons discussed in the “Introduction,” this analysis does not include persons of Hispanic origin. While that exclusion is not always mentioned in the presentation of results, it should be understood to apply throughout the report. The presentation of results emphasizes comparisons of foreign-born and U.S.-born persons of the same race.

### Demographic Characteristics

Table 2 presents demographic characteristics of non-Hispanic black and non-Hispanic white immigrants and their U.S.-born counterparts.

#### Age

For both the black and white populations, the mean age of the immigrant population was greater than

the mean age of the native population (35.6 years compared with 29.9 years for the black population and 46.4 years compared with 36.4 years for the white population). Compared with the U.S.-born black population, the black immigrant population had a smaller percentage of children (persons under 18) and elderly persons (persons aged 65 and over). More than one-half of black immigrants were in the age group 25–44 years, compared with less than one-third of U.S.-born black persons. Compared with the U.S.-born white population, the white immigrant population had a smaller percentage of children and a larger percentage of persons in all other age groups. Of foreign-born white persons, 22.6 percent were 65 years of age or over, whereas only 13.8 percent of U.S.-born white persons were 65 or over.

#### Education

On average, black immigrants had higher levels of educational attainment than U.S.-born black persons: 17.3 percent of black immigrants had completed college compared with 10.8 percent of U.S.-born black persons. The white immigrant population had a higher percentage of persons with less than a high school education but also had a higher percentage of college graduates than U.S.-born white persons: 34.0 percent of white immigrants compared with 32.5 percent of U.S.-born white persons had not completed high school, and 24.1 percent of white immigrants compared with 18.7 percent of U.S.-born white persons had completed college.

#### Employment Status

Black immigrants were more likely than U.S.-born black persons to be currently employed (64.5 percent compared with 57.1 percent). Conversely, white immigrants were less likely than their U.S.-born counterparts to be currently employed (61.2 percent and 66.3 percent, respectively).

#### Income and Poverty Status

Black immigrants were more likely than U.S.-born black persons to have an

annual family income of \$35,000 or more and less likely to have an income below the poverty level. White immigrants were less likely than U.S.-born white persons to have an annual family income of \$35,000 or more and more likely to have an income below the poverty level. Nativity differences in income and poverty were smaller among white persons than among black persons.

### Family Size

Black immigrants were more likely than U.S.-born black persons to live in large families: 15.6 percent of black immigrants lived in families with six or more persons compared with 10.9 percent of U.S.-born black persons who lived in families of that size. There was no significant difference in family size for foreign-born and U.S.-born white persons.

### Geographic Region

Most (52.5 percent) foreign-born black persons lived in the Northeast region of the United States, whereas most (56.2 percent) U.S.-born black persons lived in the South. Although the white population groups were more evenly distributed, the greatest concentration of white immigrants was also in the Northeast (31.2 percent), and the greatest concentration of U.S.-born white persons was also in the South (32.3 percent).

### Place of Residence

Immigrants were much more likely than native-born persons to live in nonmetropolitan statistical areas (MSA) areas. Comparable proportions of foreign- and U.S.-born black persons lived in the central cities of MSAs, but black immigrants were more likely to live outside of central cities in MSAs (40.4 percent and 27.9 percent, respectively) than black native-born persons. White immigrants were more likely to live in the central cities of MSAs than their U.S.-born counterparts (35.8 percent and 22.4 percent, respectively), but equally likely to live outside of central cities in metropolitan areas.

### Years in the United States

Compared with white immigrants, black immigrants were much less likely to have been in the United States for 15 years or more (37.6 percent of black immigrants and 50.6 percent of white immigrants). Black immigrants were more likely than white immigrants to have been in the United States for 5–14 years (39.0 percent and 24.0 percent, respectively). Similar proportions of white and black immigrants had lived in the United States for less than 5 years.

### Health Characteristics

Table 3 provides data on respondent-assessed health status, activity limitation, and interval since last physician contact.

### Respondent-Assessed Health Status

Figure 1 provides a comparison of self-assessed health status for U.S.-born and foreign-born black and white persons. Nearly 38 percent of black immigrants reported being in “excellent” health, compared with 27.5 percent of U.S.-born black persons; and black immigrants were also more likely than U.S.-born black persons to

report being in “very good” health. Foreign-born white persons and U.S.-born white persons reported similar levels of “very good” or “excellent” health. The percent of black immigrants with fair or poor health was about one-half that of black U.S.-born persons; but little difference in fair or poor health was seen between the foreign-born and U.S.-born white populations.

### Activity Limitation Status

Black immigrants were less likely than U.S.-born black persons to have a health-related limitation of activity (11.4 percent compared with 20.0 percent). White immigrants were also less likely than U.S.-born white persons to have an activity limitation (13.6 percent vs. 15.5 percent).

### Interval Since Last Physician Contact

Although a larger proportion of U.S.-born black persons were in fair or poor health than their foreign-born counterparts, there was little difference between foreign-born and U.S.-born black persons with respect to the interval since the most recent contact with a physician. Conversely, although similar proportions of foreign-born and

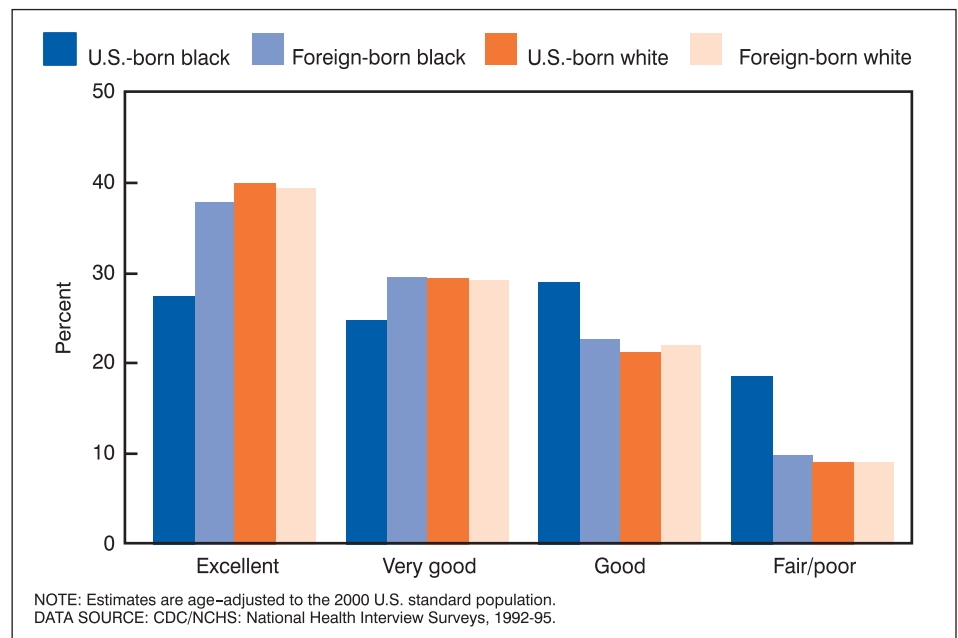


Figure 1. Age-adjusted respondent-assessed health status, by race and nativity: United States, 1992–95

U.S.-born white persons had excellent or very good health, U.S.-born white persons were more likely to have been in contact with a physician in the last year than their foreign-born counterparts. Table 4 shows data on the mean number of physician contacts and the mean number of restricted activity days per year.

### Physician Contacts

Black immigrants had a lower average number of physician contacts in the year prior to the interview than U.S.-born black persons (5.0 percent vs. 6.2 percent), and white immigrants had a lower average number of physician contacts in the year prior to the interview than U.S.-born white persons (5.6 percent vs. 6.4 percent).

### Restricted Activity Days

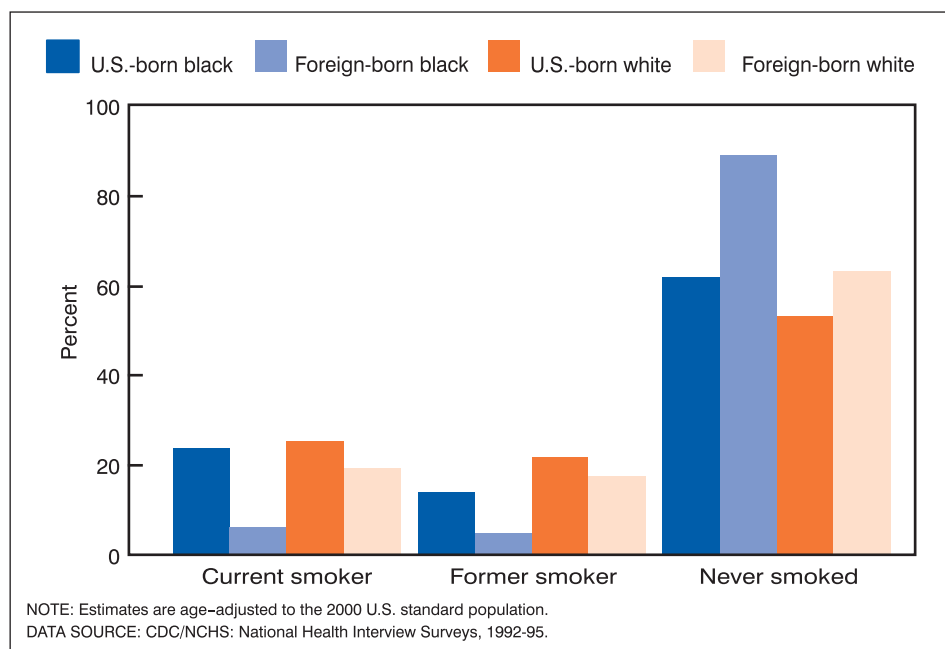
Foreign-born black persons had fewer restricted activity days in the year prior to the interview than U.S.-born black persons (11.7 days vs. 22.4 days); however, the average number of restricted activity days in the year prior to the interview was similar for foreign- and U.S.-born white persons.

### Hospital Stays

Table 5 provides data on the number of days of hospitalization and hospital stays. A smaller proportion of foreign-born persons were hospitalized in the year before interview than their U.S.-born counterparts: 5.3 percent of foreign-born black persons compared with 7.8 percent of U.S.-born black persons, and 5.6 percent of foreign-born white persons compared with 6.6 percent of U.S.-born white persons.

### Smoking Status

Table 6 presents data on smoking status by sex. The foreign-born adult populations were less likely to be current smokers than their U.S.-born counterparts (11.1 percent of foreign-born black adults compared with 27.9 percent of U.S.-born black adults; and 22.5 percent of foreign-born white adults compared with 26.3 percent of U.S.-born white adults). The age-



**Figure 2. Age-adjusted smoking status, by race and nativity for women 18 years and over: United States, 1992–95**

adjusted data by sex show that men were more likely to be current smokers than women of the same race and nativity. Foreign-born black men were less likely to be current smokers (17.7 percent) than U.S.-born black men (32.9 percent), but there was no significant difference in current smoking status between foreign- and U.S.-born white men. Differences in smoking status among the U.S.- and foreign-born populations were more striking for women, as shown in figure 2.

Foreign-born black women were much less likely to be current smokers than all other groups of women. Foreign-born women were more likely than U.S.-born women to never have smoked; this difference was especially noticeable for foreign-born black women, as nearly 90 percent of foreign-born black women reported never having smoked. Table 7 shows data on AIDS knowledge, testing, and the perceived risk of getting the AIDS virus.

### Self-Reported AIDS Knowledge

The foreign- and U.S.-born black populations had similar proportions of persons with “a lot” of AIDS knowledge (32.7 percent and 29.1 percent, respectively). Foreign- and U.S.-born white persons also had similar

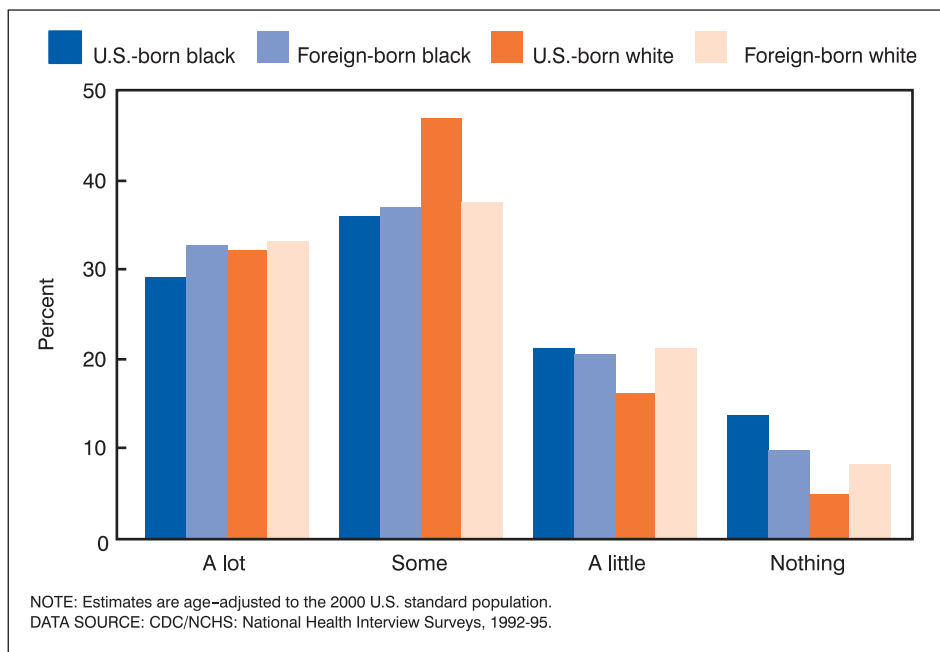
proportions reporting “a lot” of knowledge (33.1 percent and 32.1 percent, respectively). Figure 3 compares self-reported AIDS knowledge for the four study groups. It shows that native-born black persons were more likely to know “nothing” about AIDS than foreign-born persons, while the opposite was true for the white population.

### Testing for AIDS Virus Infection

Similar proportions of foreign- and U.S.-born black persons had been tested for the AIDS virus (32.7 percent and 33.4 percent, respectively). However, white immigrants were more likely than U.S.-born white persons to have been tested (27.0 percent and 20.8 percent, respectively).

### Perceived Risk of Acquiring the AIDS Virus

Among both black and white persons, there was no significant difference between foreign- and U.S.-born populations in the proportions who perceived a high or medium risk of infection; however, black persons were more likely to perceive themselves at



**Figure 3. Age adjusted self-reported AIDS knowledge, by race and nativity for adults 18 years and over: United States, 1992–95**

high or medium risk than were white persons, regardless of nativity.

## Discussion

This report highlights selected sociodemographic and health characteristics of non-Hispanic black and white immigrants and U.S.-born persons. Consistent with previous studies that analyzed regional or national data on cancer, cardiovascular disease, birth weight, and maternal health behaviors for U.S.- and foreign-born black persons and U.S.-born white persons (28–36), this study finds that foreign-born non-Hispanic black persons are in better health than U.S.-born non-Hispanic black persons; in fact, the health status of foreign-born non-Hispanic black persons is similar to that of U.S.-born non-Hispanic white persons. This study also shows that, in most cases, non-Hispanic white immigrants enjoy similar health advantages over their U.S.-born counterparts, a finding that is consistent with mortality studies that examined differentials between U.S.- and foreign-born non-Hispanic white groups (37–39). However, the differences between U.S.-born and

foreign-born non-Hispanic white persons were often smaller than the differences between U.S.-born and foreign-born non-Hispanic black persons. This may be attributable to the fact that the majority of foreign-born white immigrants have reported having lived in the United States for 15 years or more (table 2). Previous studies have shown that foreign-born persons who have lived in the United States for a considerable length of time lose some of the advantages of being foreign-born over the long term due to acculturation (39).

Important sociodemographic differences between foreign- and U.S.-born non-Hispanic black persons were found, as well as between foreign- and U.S.-born non-Hispanic white persons. In general, the immigrant subpopulations had smaller percentages of children and youth than the populations of their U.S.-born counterparts. In addition, the foreign-born non-Hispanic white population had a relatively large proportion of elderly persons. Foreign-born non-Hispanic black persons had higher levels of education than U.S.-born non-Hispanic black persons, and had educational levels that were similar to U.S.-born non-Hispanic white persons. A similar pattern was found among non-Hispanic

white immigrants and U.S.-born white persons: foreign-born white persons were more likely than U.S.-born white persons to have completed a college education. This finding may be related to the fact that some immigrants come to the United States to further their education, although others are more educated than U.S.-born persons when they arrive in the United States (23, 40–41) or migrate based on particular skills that are needed in various fields of employment (38); therefore, it is not surprising that many foreign-born persons have a higher level of education than their U.S.-born counterparts.

Differences were also noted in the health characteristics of the foreign- and U.S.-born populations in this study. Foreign-born non-Hispanic black persons were more likely than their U.S.-born counterparts to assess their health as excellent or very good, less likely to have an activity limitation, and less likely to experience restricted activity days. These findings are consistent with previous research that has shown that foreign-born black persons report better health than their U.S.-born counterparts (28–36). Although foreign-born white persons were equally likely to report their health as excellent or very good as their U.S.-born counterparts, they were also less likely to have an activity limitation and less likely to experience restricted activity days. Selection bias in the migration process may account for many of these differences. Persons with health problems are less likely to migrate, resulting in immigrants being a relatively healthy group, a phenomenon often described as the “healthy immigrant” effect (42).

There were large differences in smoking status among the study groups, especially by sex. Overall, immigrants were less likely to be current smokers than their U.S.-born counterparts. Immigrants were also less likely to have ever smoked than U.S.-born persons among both the non-Hispanic black and non-Hispanic white populations and among both women and men. The one exception to this was current smoking status among men: although foreign-born black men were less likely to be current smokers than their U.S.-born

counterparts, there was no difference in current smoking status for foreign-born white men compared with U.S.-born white men. Overall, these results were consistent with other studies that showed that the prevalence of smoking is lower in the countries of origin of immigrants represented in this report, and that immigrants to the United States tend to retain the lower smoking rates of their origin countries (43–44).

Our findings also show that one third of foreign-born non-Hispanic black adults and one-fourth of foreign-born non-Hispanic white adults had their blood tested for the AIDS virus. The substantial proportion of immigrants who had been tested likely reflects the U.S. Government's requirement that all applicants for immigration be tested for HIV (18). This policy became effective in 1990, and immigrants with positive tests were prevented from entering the United States unless the HIV-positive immigrant had a close family relationship with a U.S. citizen or legal resident and applied for a waiver. Even prior to the change in law, from 1987–90, new immigrants whom the Government suspected might have the disease were frequently required to be tested.

An important strength of this study is that we were able to use 4 years of data from a national health survey to obtain a sufficiently large sample size to produce reliable estimates for relatively small populations, such as non-Hispanic black and non-Hispanic white immigrants. Data were also examined on a wide range of health measures, which will add new information to the existing body of literature on immigrant health.

However, there were some limitations to this study. One limitation was the inability of non-English-speaking respondents to complete the interview. If NHIS interviewers encountered situations where respondents could not be interviewed in English, they were instructed to conduct the interview through a bilingual interpreter, if one could be found. Even with an interpreter, however, misunderstandings about the survey questions or respondent's answers could have occurred. Although this happened infrequently, it may have been more of a

problem for the foreign-born non-Hispanic white population than the foreign-born non-Hispanic black population because most non-Hispanic white immigrants arrive from countries in which English is not widely spoken (17). The majority of black immigrants, on the other hand, are natives of former British colonies where English was the primary language (20). However, foreign-born black persons who emigrated from French-speaking colonies may also have experienced language difficulty. Communication problems could lead to the misinterpretation of questions and answers, which could, in turn, cause biases in the data. Unfortunately, the extent to which language problems affected the data used in this study could not be determined.

Another limitation of this study is that it did not explore differences within the foreign-born population by country of birth. Information on the actual country of birth was not collected in the 1992–95 NHIS; only information on whether the respondent was U.S.-born or foreign-born was collected. Because the economic and social well-being of foreign-born populations varies widely depending on their nation of origin (17), the impact of these factors on the health status of foreign-born persons in the United States could be significant.

## Recommendations for Future Research

While this study presents an overview of patterns of health status and sociodemographic characteristics of non-Hispanic white and non-Hispanic black persons who are foreign-born or U.S.-born, this report does not control for socioeconomic status (SES) in these analyses. Significant differences in SES between race or nativity groups were observed in this study, and controlling for SES might help to explain some of these differences. Some research examining the contribution of SES to explaining differences between race or nativity groups has suggested that social factors contribute little in explaining or determining the health of populations (38), although other research has

suggested the opposite (39). Future research should further explore what role social inequality and other dimensions of socioeconomic status plays in race or nativity differences in health, and to what degree this role is altered by other factors such as selective migration of people to the United States. Studies have shown that acculturation influences and plays a major role in health for immigrants (13), and those more recent immigrants are healthier than immigrants who have lived in the United States for 10 years or more (45). Acculturation was not explored in this study because the 1992–95 NHIS data provided only a single measure of acculturation: duration of residence in the United States. Future studies should use a variety of measures of acculturation to investigate the health of foreign-born populations as they integrate into American society.

Another area that would benefit from further research is the extent to which sex differences play a role in immigrant health. In this study, sex differences were examined in smoking status for the U.S.-born and foreign-born black and white populations as one example of these kinds of differences. Studies have shown that race-nativity patterns in demographic and health data do vary considerably by sex (37–39). Future analyses of NHIS data should examine these differences in greater detail and consider their role in understanding variations in the health of U.S.-born and foreign-born populations.

## Conclusion

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This analysis described differences in various sociodemographic and health characteristics for two little-studied populations: foreign-born non-Hispanic black and white persons. The results show how immigrant populations differ from their native counterparts and from each other and illuminate variations that are usually masked when nativity is not considered when assessing differences in social and health status by race. Our findings also illustrate the usefulness of looking at nativity status as possible mechanism for understanding

black-white differences in health status. As non-Hispanic black and white foreign-born populations in the United States continue to grow, understanding their health status and correlates of it may assist in further explaining health disparities among race groups in the United States.

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**Table 1. Number of persons and percent distribution of non-Hispanic U.S.- and foreign-born, by race: National Health Interview Survey, average annual figures, 1992–95**

Nativity and race <sup>1</sup>	Number in thousands	Percent distribution
Total non-Hispanic black . . . . .	31,431	100.0
U.S.-born non-Hispanic black . . . . .	29,892	4.9
Foreign-born non-Hispanic black . . . . .	1,539	95.1
Total non-Hispanic white . . . . .	185,781	100.0
U.S.-born non-Hispanic white . . . . .	178,932	96.3
Foreign-born non-Hispanic white . . . . .	6,849	3.7
Total population <sup>2</sup> . . . . .	217,211	...

... Category not applicable.

<sup>1</sup>Includes persons of all ages.<sup>2</sup>Includes all non-Hispanic black and white persons and all nativity groups.

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

SOURCE: National Health Interview Surveys, 1992–95.

**Table 2. Percent distributions of selected demographic characteristics (with standard errors), by race and nativity: United States, average annual figures, 1992–95**

Selected demographic characteristics	Total population <sup>1</sup>	U.S.-born non-Hispanic black	Foreign-born non-Hispanic black	U.S.-born non-Hispanic white	Foreign-born non-Hispanic white
		Number in thousands			
All persons . . . . .	217,211	29,892	1,539	178,932	6,849
		Age-adjusted percent distribution (standard error)			
Total . . . . .	100.0	100.0	100.0	100.0	100.0
Sex					
Male . . . . .	48.5 (0.08)	45.7 (0.23)	47.4 (1.16)	49.0 (0.08)	48.3 (0.62)
Female . . . . .	51.5 (0.08)	54.3 (0.23)	52.6 (1.16)	51.0 (0.08)	51.7 (0.62)
Mean age <sup>2</sup> . . . . .	35.9 (0.09)	29.9 (0.17)	35.6 (0.38)	36.4 (0.10)	46.4 (0.31)
Age <sup>2</sup>					
Under 5 years . . . . .	7.2 (0.06)	10.5 (0.18)	1.1 (0.26)	6.9 (0.06)	1.1 (0.12)
5–17 years . . . . .	18.1 (0.10)	24.5 (0.27)	9.3 (0.70)	17.5 (0.11)	6.5 (0.33)
18–24 years . . . . .	9.1 (0.13)	10.9 (0.20)	13.0 (0.83)	8.8 (0.14)	6.8 (0.30)
25–44 years . . . . .	32.0 (0.11)	30.2 (0.25)	52.6 (1.20)	31.9 (0.12)	36.0 (0.55)
45–64 years . . . . .	20.4 (0.11)	15.7 (0.23)	18.4 (0.89)	21.0 (0.12)	27.1 (0.50)
65–74 years . . . . .	7.8 (0.08)	5.2 (0.13)	3.6 (0.38)	8.1 (0.09)	11.6 (0.36)
75 years and over . . . . .	5.5 (0.07)	3.0 (0.10)	1.9 (0.26)	5.7 (0.08)	11.0 (0.37)
Education <sup>3</sup>					
Less than high school graduate . . . . .	33.8 (0.13)	43.6 (0.35)	39.1 (1.20)	32.5 (0.16)	34.0 (0.43)
High school graduate . . . . .	30.7 (0.14)	30.1 (0.26)	27.9 (1.03)	31.0 (0.15)	24.6 (0.46)
Some college . . . . .	17.5 (0.10)	15.5 (0.25)	15.7 (0.80)	17.8 (0.12)	17.3 (0.39)
College graduate or more . . . . .	17.9 (0.15)	10.8 (0.26)	17.3 (0.92)	18.7 (0.17)	24.1 (0.50)
Employment status <sup>4</sup>					
Currently employed . . . . .	64.9 (0.14)	57.1 (0.39)	64.5 (1.08)	66.3 (0.16)	61.2 (0.53)
Currently unemployed . . . . .	3.1 (0.05)	4.6 (0.13)	3.8 (0.45)	2.8 (0.05)	3.1 (0.20)
Not in labor force . . . . .	32.1 (0.14)	38.3 (0.37)	31.7 (1.08)	30.9 (0.15)	35.7 (0.51)
Family income					
Less than \$20,000 . . . . .	22.5 (0.25)	39.6 (0.77)	28.2 (1.85)	19.4 (0.26)	22.1 (0.86)
\$20,000–\$34,999 . . . . .	20.9 (0.17)	17.6 (0.37)	18.8 (1.55)	21.5 (0.19)	20.2 (0.76)
\$35,000 and over . . . . .	40.4 (0.29)	20.0 (0.49)	28.1 (1.81)	44.1 (0.33)	41.1 (0.98)
Unknown . . . . .	16.2 (0.32)	22.8 (0.86)	24.9 (1.86)	14.9 (0.30)	16.6 (0.70)
Poverty status <sup>5</sup>					
At or above poverty . . . . .	81.4 (0.25)	59.1 (0.76)	70.9 (1.87)	85.3 (0.23)	82.1 (0.85)
Below poverty . . . . .	10.3 (0.17)	24.9 (0.64)	15.1 (1.38)	7.7 (0.17)	9.9 (0.71)
Unknown . . . . .	8.3 (0.22)	16.0 (0.78)	14.0 (1.50)	7.0 (0.18)	8.0 (0.51)

See footnotes at end of table.



**Table 2. Percent distributions of selected demographic characteristics (with standard errors), by race and nativity: United States, average annual figures, 1992–95—Con.**

Selected demographic characteristics	Total population <sup>1</sup>	U.S.-born non-Hispanic black	Foreign-born non-Hispanic black	U.S.-born non-Hispanic white	Foreign-born non-Hispanic white
Family size		Age-adjusted percent distribution (standard error)			
1–3 members . . . . .	59.0 (0.19)	57.2 (0.46)	48.7 (1.69)	59.3 (0.20)	59.2 (0.81)
4–5 members . . . . .	34.2 (0.17)	31.9 (0.41)	35.7 (1.71)	34.8 (0.18)	33.5 (0.88)
6 or more members . . . . .	6.8 (0.12)	10.9 (0.34)	15.6 (1.59)	5.9 (0.12)	7.3 (0.80)
Geographic region					
Northeast . . . . .	20.2 (0.22)	14.7 (0.55)	52.5 (2.45)	20.3 (0.27)	31.2 (1.00)
Midwest . . . . .	26.8 (0.23)	20.2 (0.78)	7.3 (1.04)	28.5 (0.30)	16.9 (0.78)
South . . . . .	35.2 (0.28)	56.2 (1.05)	31.1 (2.44)	32.3 (0.37)	22.7 (0.95)
West . . . . .	17.8 (0.20)	8.9 (0.42)	9.0 (1.25)	19.0 (0.25)	29.2 (1.12)
Place of residence <sup>6</sup>					
MSA, central city . . . . .	27.8 (0.43)	56.7 (1.29)	57.9 (2.72)	22.4 (0.43)	35.8 (1.16)
MSA, not central city . . . . .	48.9 (0.50)	27.9 (1.02)	40.4 (2.71)	52.2 (0.55)	53.5 (1.21)
Non-MSA <sup>7</sup> . . . . .	23.4 (0.38)	15.4 (1.41)	1.7 (0.50)	25.4 (0.48)	10.7 (0.73)
Years in United States <sup>7</sup>					
Less than 1 year . . . . .	5.4 (0.39)	...	4.1 (0.86)	...	5.9 (0.57)
1 to less than 5 years . . . . .	19.8 (0.56)	...	19.2 (1.34)	...	19.5 (0.79)
5 to less than 10 years . . . . .	16.2 (0.44)	...	20.3 (1.17)	...	13.7 (0.61)
10 to less than 15 years . . . . .	12.5 (0.40)	...	18.7 (1.18)	...	10.3 (0.52)
15 years or more . . . . .	46.1 (0.46)	...	37.6 (1.20)	...	50.6 (0.61)

... Category not applicable.

<sup>1</sup>Includes all non-Hispanic black and white persons and all nativity groups.

<sup>2</sup>Age estimates are not standardized.

<sup>3</sup>For persons 5 years of age and older.

<sup>4</sup>For persons 18 years of age and older.

<sup>5</sup>Poverty status is based on family size, number of children under 18 years old, and family income.

<sup>6</sup>MSA is metropolitan statistical area.

<sup>7</sup>Years of residence in the United States is asked of all foreign-born persons.

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

SOURCE: National Health Interview Surveys, 1992–95.

**Table 3. Age-adjusted percent distributions of selected health characteristics (with standard errors), by race and nativity: United States, average annual figures, 1992–95**

Selected health characteristics	Total Population <sup>1</sup>	U.S.-born non-Hispanic black	Foreign-born non-Hispanic black	U.S.-born non-Hispanic white	Foreign-born non-Hispanic white
Number in thousands					
All persons . . . . .	217,211	29,892	1,539	178,932	6,849
Age-adjusted percent distribution (standard error)					
Total . . . . .	100.0	100.0	100.0	100.0	100.0
Respondent-assessed health status <sup>2</sup>					
Excellent . . . . .	38.3 (0.19)	27.5 (0.36)	37.8 (1.59)	40.0 (0.22)	39.6 (0.86)
Very good . . . . .	28.9 (0.14)	24.9 (0.34)	29.6 (1.91)	29.4 (0.15)	29.3 (0.71)
Good . . . . .	22.6 (0.12)	29.1 (0.31)	22.7 (1.30)	21.3 (0.14)	22.0 (0.59)
Fair to poor . . . . .	10.3 (0.09)	18.6 (0.33)	9.9 (0.70)	9.2 (0.10)	9.1 (0.34)
Activity limitation status <sup>2</sup>					
Not limited or unknown . . . . .	84.1 (0.11)	80.0 (0.28)	88.6 (0.71)	84.5 (0.12)	86.4 (0.39)
Limited . . . . .	15.9 (0.11)	20.0 (0.28)	11.4 (0.71)	15.5 (0.12)	13.6 (0.34)
Unable to perform major activity . . . . .	4.7 (0.06)	8.3 (0.17)	3.9 (0.47)	4.3 (0.06)	4.0 (0.21)
Limited in kind/amount of major activity . . . . .	6.1 (0.06)	7.0 (0.16)	4.4 (0.53)	6.1 (0.07)	5.1 (0.23)
Limited in other activity . . . . .	5.1 (0.05)	4.7 (0.12)	3.1 (0.41)	5.2 (0.06)	4.5 (0.22)
Interval since last physician contact					
Less than 1 year . . . . .	79.7 (0.11)	79.1 (0.26)	79.4 (1.15)	80.0 (0.12)	78.4 (0.59)
1 to less than 2 years . . . . .	9.5 (0.07)	10.5 (0.18)	10.3 (0.86)	9.3 (0.08)	9.4 (0.41)
2 to less than 5 years . . . . .	7.7 (0.06)	7.4 (0.16)	7.1 (0.53)	7.7 (0.07)	8.7 (0.39)
5 years or more . . . . .	3.1 (0.04)	3.1 (0.10)	3.2 (0.53)	3.0 (0.04)	3.6 (0.22)

<sup>1</sup>Includes all non-Hispanic black and white persons and all nativity groups.

<sup>2</sup>Includes persons of all ages.

NOTES: Figures may not add to 100% because of rounding. See "Appendix I, table II" for the unadjusted percent distributions for this table.

SOURCE: National Health Interview Surveys, 1992–95.

**Table 4. Age-adjusted mean number of physician contacts and restricted activity days per year (with standard errors), by race and nativity: United States, average annual figures, 1992–95**

Selected health indicator	Total population <sup>1</sup>	U.S.-born non-Hispanic black	Foreign-born non-Hispanic black	U.S.-born non-Hispanic white	Foreign-born non-Hispanic white
Number in thousands					
All persons . . . . .	217,211	29,892	1,539	178,932	6,849
Age-adjusted mean number (standard error)					
Physician contacts <sup>2</sup> . . . . .	6.3 (0.04)	6.2 (0.11)	5.0 (0.46)	6.4 (0.05)	5.6 (0.25)
Restricted activity days <sup>2</sup> . . . . .	16.7 (0.18)	22.4 (0.49)	11.7 (1.29)	16.2 (0.19)	14.6 (0.68)
Bed disability days <sup>2</sup> . . . . .	6.4 (0.08)	9.9 (0.26)	6.3 (0.86)	6.0 (0.09)	5.7 (0.35)
Work-loss days <sup>3</sup> . . . . .	3.8 (0.06)	4.8 (0.19)	3.3 (0.59)	3.7 (0.06)	3.0 (0.27)
School-loss days <sup>4</sup> . . . . .	4.8 (0.10)	4.8 (0.26)	*1.2 (0.47)	4.8 (0.11)	5.7 (1.08)
Other restricted activity <sup>2</sup> . . . . .	8.4 (0.12)	10.1 (0.33)	4.2 (0.71)	8.3 (0.13)	7.3 (0.49)

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

<sup>1</sup>Includes all non-Hispanic black and white persons and all nativity groups.

<sup>2</sup>Includes persons of all ages.

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

<sup>4</sup>For persons 5–17 years of age.

NOTES: Figures may not add to 100% because of rounding. See "Appendix I, table III" for the unadjusted estimates for this table.

SOURCE: National Health Interview Surveys, 1992–95.

**Table 5. Number of persons, hospital stays, and days of hospitalization and age-adjusted percent distribution of number of hospital stays (with standard errors), by race and nativity: United States, average annual figures, 1992–95**

Hospital stay <sup>1</sup>	Total population <sup>2</sup>	U.S.-born non-Hispanic black	Foreign-born non-Hispanic black	U.S.-born non-Hispanic white	Foreign-born non-Hispanic white
Number in thousands					
Number of persons <sup>3</sup>	217,211	29,892	1,539	178,932	6,849
Number of hospital stay <sup>3</sup>	19,689	2,769	79	16,163	677
Number of days of hospitalization <sup>3</sup>	119,238	18,992	526	94,967	4,753
Age-adjusted percent distribution (standard error)					
Total	100.0	100.0	100.0	100.0	100.0
No hospital stays	93.3 (0.05)	92.2 (0.15)	94.7 (0.58)	93.4 (0.05)	94.4 (0.23)
1 or more hospital stays	6.7 (0.05)	7.8 (0.15)	5.3 (0.58)	6.6 (0.05)	5.6 (0.23)

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

<sup>2</sup>Includes all non-Hispanic black and white persons and all nativity groups.

<sup>3</sup>Rounded to the nearest integer.

NOTES: Figures may not add to 100% because of rounding.

See "Appendix I, table IV" for the unadjusted estimates for this table.

SOURCE: National Health Interview Surveys, 1992–95.

**Table 6. Age-adjusted percent distributions of smoking status (with standard errors), by sex, race and nativity: United States, average annual figures, 1992–95**

Smoking status <sup>1</sup>	Total population <sup>2</sup>	U.S.-born non-Hispanic black	Foreign-born non-Hispanic black	U.S.-born non-Hispanic white	Foreign-born non-Hispanic white
Number in thousands					
All persons	166,980	19,275	1,407	137,972	8,325
Age-adjusted percent distribution (standard error)					
Total	100.0	100.0	100.0	100.0	100.0
Current	26.0 (0.24)	27.9 (0.63)	11.1 (1.68)	26.3 (0.27)	22.5 (0.88)
Former	25.2 (0.20)	17.1 (0.49)	12.1 (2.03)	26.5 (0.22)	22.9 (0.84)
Never smoked	48.8 (0.25)	55.0 (0.70)	76.7 (2.56)	47.2 (0.28)	54.5 (1.03)
Age-adjusted percent distribution (standard error) by sex					
Men					
Current	27.6 (0.33)	32.9 (1.12)	17.7 (3.23)	27.3 (0.36)	25.9 (1.34)
Former	30.9 (0.30)	21.1 (0.82)	23.2 (4.09)	32.2 (0.33)	29.9 (1.34)
Never smoked	41.5 (0.35)	45.9 (1.15)	59.1 (4.59)	40.4 (0.39)	44.3 (1.51)
Women					
Current	24.6 (0.30)	24.0 (0.70)	6.2 (1.59)	25.3 (0.35)	19.3 (1.13)
Former	20.4 (0.27)	14.1 (0.57)	4.8 (1.44)	21.7 (0.32)	17.5 (0.98)
Never smoked	55.0 (0.33)	61.9 (0.82)	89.0 (2.08)	53.0 (0.38)	63.3 (1.35)

<sup>1</sup>Includes persons 18 years of age and over.

<sup>2</sup>Includes all non-Hispanic black and white persons and all nativity groups.

NOTES: Figures may not add to 100% because of rounding. See "Appendix I, table V" for the unadjusted estimates for this table.

SOURCE: National Health Interview Surveys, 1992–95.

**Table 7. Age-adjusted percent distributions of AIDS knowledge, testing, and perceived risk (with standard errors), by race and nativity: United States, average annual figures, 1992–95**

AIDS knowledge, testing, and risk <sup>1,2</sup>	Total population <sup>3</sup>	U.S.-born non-Hispanic black	Foreign-born non-Hispanic black	U.S.-born non-Hispanic white	Foreign-born non-Hispanic white
		Number in thousands			
All persons . . . . .	168,081	19,429	1,429	138,996	8,226
		Age-adjusted percent distribution (standard error)			
Total . . . . .	100.0	100.0	100.0	100.0	100.0
Self-reported AIDS knowledge <sup>1</sup>					
A lot . . . . .	31.9 (0.24)	29.1 (0.59)	32.7 (2.34)	32.1 (0.27)	33.1 (0.99)
Some . . . . .	45.1 (0.24)	36.0 (0.63)	37.0 (2.57)	46.8 (0.26)	37.5 (0.97)
A little . . . . .	17.1 (0.19)	21.1 (0.53)	20.5 (2.37)	16.2 (0.21)	21.1 (0.83)
Nothing . . . . .	6.0 (0.11)	13.8 (0.45)	9.8 (1.78)	4.9 (0.11)	8.2 (0.59)
Ever had blood tested for the AIDS virus infection (excluding blood donations) <sup>1</sup>					
Yes . . . . .	22.7 (0.23)	33.4 (0.66)	32.7 (2.42)	20.8 (0.23)	27.0 (0.88)
No . . . . .	77.3 (0.23)	66.6 (0.66)	67.3 (2.42)	79.2 (0.23)	73.0 (0.88)
Perceived risk of getting the AIDS virus <sup>1</sup>					
High/medium . . . . .	4.4 (0.09)	7.3 (0.34)	6.5 (1.33)	3.9 (0.10)	3.7 (0.40)
Low. . . . .	32.8 (0.26)	29.9 (0.65)	30.8 (2.30)	33.4 (0.29)	28.4 (0.97)
None. . . . .	62.9 (0.27)	62.7 (0.70)	62.7 (2.56)	62.6 (0.29)	67.9 (1.02)

<sup>1</sup>AIDS is acquired immunodeficiency syndrome.<sup>2</sup>Includes persons 18 years of age and older.<sup>3</sup>Includes all non-Hispanic black and white persons and all nativity groups.

NOTES: Figures may not add to 100 percent because of rounding. See "Appendix I, table VI" for the unadjusted estimates for this table.

SOURCE: National Health Interview Surveys, 1992–95.

# Appendix I

## Technical Notes on Methods

### Sample Design

The National Health Interview Survey (NHIS) is a cross-sectional household interview survey of the civilian noninstitutionalized population of the United States. Data collection is continuous throughout each year, and the sampling plan follows a multistage area probability design that permits the representative sampling of households. Sampling is done throughout the continental United States, Alaska, and Hawaii (the 50 States and the District of Columbia); dependent areas of the United States (Puerto Rico, Virgin Islands, Guam, and others) are not sampled in the NHIS.

### Response Rate

The 1992–95 NHIS contained completed interviews from a total of 187,029 households and 456,729 persons. The average annual household response rate to the 1992–95 NHIS core questionnaire was 94.6 percent. The overall household response rate to NHIS supplements is estimated as a product of the core response rate and the supplement response rate. From 1992 through 1995, 77,556 persons completed the AIDS knowledge and attitudes

supplement. The average annual supplement response rates and the overall supplement response rates for the AIDS knowledge and attitudes supplement in 1992–95 were 84.4 percent and 79.8 percent, respectively. The 1992–95 NHIS supplements related to smoking habits were completed by 70,088 persons. The average annual supplement response rates and overall supplement response rates for the supplements containing the smoking questions were 86.2 percent and 81.5 percent, respectively. The year-specific data on the number of interviews, households, and the household response rates can be found in [table I](#).

### Precision of Estimates

All estimates (with the exception of the variable age) are age-adjusted and most are also presented as unadjusted estimates. Considering the varying age structures of the populations under study, age adjustment is a necessary tool to compare estimates in a more meaningful manner. The direct method of age adjustment was used, and the projected 2000 U.S. population provided by the Census Bureau was used as the standard population (46). For variables that covered all ages, the following age groups were used for standardization: under 5 years, 5–17 years, 18–24 years, 25–44 years, 45–64 years, 65–74 years, and 75 years and over. For variables that were restricted to persons of a particular age (such as employment status of

persons 18 and over) only age groups within the restricted range were used (such as 18–24 years, 25–44 years, 45–64 years, and 65 years and over).

The relative standard error (RSE) was 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 the ratio as a percent. In the tables, estimates with a RSE of 30 percent or greater are shown with an asterisk (\*), indicating that those estimates do not meet the conventional NHIS standard for adequate precision and stability. The statistical package SUDAAN (25) was used to analyze NHIS data.

### Tests of Significance

Two-tailed *t*-tests of significance were performed on all the comparisons discussed in this report (no adjustments were made for multiple comparisons). The test statistic used to determine statistical significance of the difference between two percents was:

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

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

**Table I. Response rate, number of persons, and number of households interviewed for the core questionnaire and selected supplements: National Health Interview Survey, 1992–95**

Year	Core questionnaire			Smoking supplement <sup>1</sup>			AIDS knowledge and attitudes supplement <sup>2</sup>		
	Response rate	Number of persons interviewed	Total number of households	Response rate	Overall response rate	Number of persons interviewed	Response rate	Overall response rate	Number of persons interviewed
1992 . . . . .	95.7	128,412	51,642	90.0	86.1	12,005	86.9	83.2	20,974
1993 . . . . .	94.7	109,671	44,978	85.7	81.2	21,028	84.5	80.0	20,607
1994 . . . . .	94.1	116,179	48,584	84.5	79.5	19,738	81.9	77.1	19,127
1995 . . . . .	93.8	102,467	41,824	86.2	80.9	17,317	83.8	78.6	16,848

<sup>1</sup>Cigarette smoking questions were included in Cancer Epidemiology (1992) and Year 2000 Objectives (1993, 1994, 1995) supplements.

<sup>2</sup>AIDS is acquired immunodeficiency syndrome.

NOTE: See "Technical Notes" for definitions of the terms "response rate" and "overall response rate."

SOURCE: National Health Interview Surveys, 1992–95.

## Appendix II

### Definition of Terms

Below are the definitions for the variables examined in this report, listed alphabetically. The definitions do not necessarily represent how the variables were defined in the NHIS, but describe how they were defined in the report.

*Activity limitation status*—This refers to a long-term reduction in a person's capacity to perform the average kind or amount of major activity usually associated with his or her age group.

*Major activity*—The major activities for the age groups were: (a) ordinary play for children under 5 years of age; (b) attending regular school for those 5–17 years of age; (c) working or keeping house for persons 18–69 years of age; and (d) living independently (e.g., the ability to bathe, shop, dress, and eat without needing the help of another person) for those 70 years of age and over.

*Age*—Age was recorded for each person as the age at last birthday.

*AIDS variables*—The knowledge question asked, “How much would you say you know about AIDS—a lot, some, a little, or nothing?” This was the respondent's perception of his or her own AIDS knowledge, a subjective measure.

*Risk*—“What are your chances of getting the AIDS virus; would you say high, medium, low, or none?” The high and medium categories were combined.

*Testing*—The testing question excluded blood donations since 1985. It asked “(Except for tests you may have had as part of blood donations,) have you ever had your blood tested for the AIDS virus infection?”

*Day of hospitalization*—A day of hospitalization was a day in which a person was confined to a hospital. It was counted as a hospital day only if the patient stayed overnight.

*Education*—Persons 5 years of age and over were classified as less than a high school graduate, a high school graduate, completed some college, or college graduate or more.

*Employment status*—Employment status included persons 18 years of age and over.

*Currently employed*—This category included anyone who reported that at any time during the 2-week period covered by the interview they either worked at or had a job or business; persons with part-time employment were included in this category.

*Currently unemployed*—This category included those who had been laid off or were looking for work.

*Not in labor force*—This category included retirees, students, homemakers, and others who were not seeking employment.

*Family income*—Each family member was classified according to the same total family income. The income was the sum of all income received by household members related to each other by blood, adoption, or marriage in the 12-month period preceding the week of the interview. The income recorded was the total income received by all family members in the previous calendar year. Income from all sources including, wages, salaries, pensions, government payments, child support or alimony, dividends, help from relatives, etc., was included. This variable was categorized as less than \$20,000, \$20,000–\$34,999, \$35,000 or more, and unknown. The “unknown” category included nonresponses. A substantial proportion of data is missing for this variable due to the hesitancy of some survey participants to disclose information about their annual income.

*Family size*—Family size was defined as the number of kinfolk residing in the sample household and categorized as 1–3 members, 4–5 members, or 6 or more members.

*Geographic region of residence*—The States were grouped into four regions corresponding to those used by

the U.S. Census Bureau. The regions included the following States:

<i>Region</i>	<i>States included</i>
Northeast	Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, and Pennsylvania
Midwest	Ohio, Illinois, Indiana, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Kansas, and Nebraska
South	Delaware, Maryland, District of Columbia, West Virginia, Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Mississippi, Alabama, Louisiana, Oklahoma, Arkansas, and Texas
West	Washington, Oregon, California, Nevada, New Mexico, Arizona, Idaho, Utah, Colorado, Montana, Wyoming, Alaska, and Hawaii

*Health status*—The categories related to this concept result from asking the respondent, “Would you say \_\_\_\_\_'s health is excellent, very good, good, fair, or poor?” It was based on a family respondent's opinion and not directly on any clinical evidence.

*Hospital stay*—A hospital stay was any continuous period of stay of one night or more in a hospital as an inpatient, except the period of stay of a well newborn infant.

*Interval since last physician contact*—The interval since last physician contact was ascertained by asking persons interviewed about how long it had been since they last saw or talked to a medical doctor or doctor's assistant.

*Nativity*—Nativity was defined as having been born in the United States or abroad.

*U.S.-born*—This category included those individuals born in 1 of the 50 United States or the District of Columbia. Individuals born in U.S.

dependencies are included in this category.

*Foreign-born*—This category included those individuals born outside of the 50 United States, the District of Columbia, and any of the U.S. dependencies.

*Physician contact*—A physician contact was a consultation with a physician, nurse, or other person acting under a physician's supervision. The consultation could have been in person or by telephone and for the purpose of an examination, diagnosis, treatment, or advice.

*Place of residence*—The place of residence of an individual was classified as inside a metropolitan statistical area (MSA) or outside an MSA. It was further classified as either central city or not central city.

*Metropolitan statistical area*—The definition and titles of MSAs were established by the U.S. Office of Management and Budget with the advice of the Federal Committee on Metropolitan Statistical Areas. A MSA consists of a county or group of counties containing at least one city that had a population of 50,000 or more, plus adjacent counties that were metropolitan in character and were economically and socially integrated with the central city.

*Central city*—The largest city in a MSA is always a central city.

*Not central city*—This includes all of the MSA that is not part of the central city itself.

*Not in MSA*—This includes all other places in the county other than MSAs.

*Poverty status*—Poverty status was based on family size, number of children under 18 years of age, and family income, using thresholds set by the Census Bureau.

*Restricted activity day*—A restricted activity day was a general term encompassing the following four measures: bed disability days, work-loss days (for currently employed persons 18 years of age and over), and school-loss days (for children 5–17 years of age).

The number of restricted activity days was the number of days on which a person experienced at least one of the four types of activity restriction.

*Bed disability day*—A day during which a person stayed in bed more than one-half day because of illness or injury.

*Work-loss day*—A day in which an employed person 18 years of age or over missed more than one-half day of work due to illness.

*School-loss day*—A day in which a child 5–17 years old missed more than one-half day of school due to illness or injury.

*Current smoker*—Current smokers included anyone who had smoked at least 100 cigarettes in his/her lifetime and who currently smoke every day or some days.

*Former smoker*—Former smokers included those who had smoked at least 100 cigarettes in their life, but did not currently smoke every day or some days.

*Never smoked*—Persons who never smoked included those who never smoked a cigarette during their lifetime.

## Appendix III

### Tables of Unadjusted Estimates for Selected Tables and Health Outcomes

Unadjusted estimates for [tables 3–7](#) are provided in this appendix for comparison with the adjusted estimates presented in the report. [Table II](#) provides the unadjusted estimates for the health outcomes in [table 3](#); [table III](#) provides the unadjusted estimates for the health outcomes in [table 4](#); and so on. Note that in [table V](#), unadjusted estimates are provided only for overall smoking status and not for smoking status by sex.

**Table II. Unadjusted percent distributions of selected health characteristics (with standard errors), by race and nativity: United States, average annual figures, 1992–95**

Selected health characteristics	Total population <sup>1</sup>	U.S.-born non-Hispanic black	Foreign-born non-Hispanic black	U.S.-born non-Hispanic white	Foreign-born non-Hispanic white
			Number in thousands		
All persons . . . . .	217,211	29,892	1,539	178,932	6,849
			Unadjusted percent distribution (standard error)		
Total . . . . .	100.0	100.0	100.0	100.0	100.0
Respondent-assessed health status <sup>2</sup>					
Excellent . . . . .	38.2 (0.18)	30.5 (0.40)	38.5 (1.47)	39.6 (0.21)	34.2 (0.62)
Very good . . . . .	28.9 (0.14)	25.8 (0.36)	32.2 (1.80)	29.4 (0.15)	28.5 (0.54)
Good . . . . .	22.6 (0.12)	28.6 (0.33)	21.5 (1.08)	21.5 (0.13)	24.8 (0.49)
Fair to poor . . . . .	10.3 (0.09)	15.1 (0.29)	7.7 (0.56)	9.4 (0.10)	12.6 (0.44)
Activity limitation status <sup>2</sup>					
Not limited or unknown . . . . .	84.1 (0.11)	83.4 (0.26)	91.6 (0.61)	84.3 (0.12)	82.3 (0.47)
Limited . . . . .	15.9 (0.11)	16.6 (0.26)	8.4 (0.61)	15.7 (0.12)	17.7 (0.47)
Unable to perform major activity . . . . .	4.7 (0.06)	6.6 (0.15)	3.1 (0.38)	4.4 (0.06)	5.4 (0.27)
Limited in kind/amount of major activity . . . . .	6.1 (0.06)	6.1 (0.15)	2.9 (0.37)	6.1 (0.07)	6.5 (0.27)
Limited in other activity . . . . .	5.1 (0.05)	3.8 (0.11)	2.4 (0.30)	5.3 (0.06)	5.8 (0.24)
Interval since last physician contact					
Less than 1 year . . . . .	79.7 (0.11)	78.7 (0.27)	76.0 (1.18)	80.0 (0.12)	78.1 (0.48)
1 to less than 2 years . . . . .	9.4 (0.07)	11.0 (0.19)	10.9 (0.77)	9.2 (0.08)	9.0 (0.31)
2 to less than 5 years . . . . .	7.8 (0.07)	7.4 (0.17)	9.2 (0.62)	7.8 (0.07)	9.0 (0.32)
5 years or more . . . . .	3.1 (0.04)	2.9 (0.10)	3.9 (0.57)	3.1 (0.04)	4.0 (0.21)

<sup>1</sup>Includes all non-Hispanic black and white persons and all nativity groups.

<sup>2</sup>Includes persons of all ages.

NOTES: Figures may not add to 100% because of rounding. See table 3 for the adjusted estimates for this table. SOURCE: National Health Interview Surveys, 1992–95.



**Table III. Unadjusted mean number of physician contacts and restricted activity days per year (with standard errors), by race and nativity: United States, average annual figures, 1992–95**

Selected health indicator	Total population <sup>1</sup>	U.S.-born non-Hispanic black	Foreign-born non-Hispanic black	U.S.-born non-Hispanic white	Foreign-born non-Hispanic white
			Number in thousands		
All persons . . . . .	217,211	29,892	1,539	178,932	6,849
		Unadjusted mean number of physician contacts (standard error)			
Physician contacts <sup>2</sup> . . . . .	6.3 (0.04)	5.6 (0.10)	4.2 (0.33)	6.4 (0.05)	6.2 (0.20)
Restricted activity day <sup>2</sup> . . . . .	16.7 (0.17)	18.8 (0.40)	10.2 (1.01)	16.4 (0.19)	18.0 (0.87)
Bed disability days <sup>2</sup> . . . . .	6.4 (0.08)	8.3 (0.21)	4.9 (0.57)	6.0 (0.09)	7.1 (0.46)
Work-loss days <sup>3</sup> . . . . .	2.6 (0.04)	2.9 (0.11)	2.8 (0.47)	2.5 (0.04)	2.4 (0.21)
School-loss days <sup>4</sup> . . . . .	0.9 (0.02)	1.2 (0.07)	0.1 (0.04)	0.8 (0.02)	0.4 (0.07)
Other restricted activity <sup>2</sup> . . . . .	8.4 (0.12)	8.2 (0.26)	3.7 (0.53)	8.4 (0.13)	9.4 (0.64)

<sup>1</sup>Includes all non-Hispanic black and white persons and all nativity groups.<sup>2</sup>Includes persons of all ages.<sup>3</sup>For persons 18 years of age and over.<sup>4</sup>For persons 5–17 years of age.

NOTES: Figures may not add to 100% because of rounding. See table 4 for the adjusted estimates for this table. SOURCE: National Health Interview Surveys, 1992–95.

**Table IV. Number of persons, hospital stays, and days of hospitalization, and unadjusted percent distribution of number of hospital stays (with standard errors), by race and nativity: United States, average annual figures, 1992–95**

Hospital stay <sup>1</sup>	Total population <sup>2</sup>	U.S.-born non-Hispanic black	Foreign-born non-Hispanic black	U.S.-born non-Hispanic white	Foreign-born non-Hispanic white
			Number in thousands		
Number of persons <sup>3</sup> . . . . .	217,211	29,892	1,539	178,932	6,849
Number of hospital stays <sup>3</sup> . . . . .	19,689	2,769	79	16,163	677
Number of days of hospitalization <sup>3</sup> . . . . .	119,238	18,992	526	94,967	4,753
		Unadjusted percent distribution (standard error)			
Total . . . . .	100.0	100.0	100.0	100.0	100.0
No hospital stays . . . . .	93.3 (0.05)	93.3 (0.13)	95.8 (0.37)	93.3 (0.06)	92.7 (0.27)
1 or more hospital stays . . . . .	6.7 (0.05)	6.7 (0.13)	4.2 (0.37)	6.7 (0.06)	7.3 (0.27)

<sup>1</sup>Hospital stay is any continuous period of stay of one night or more in a hospital as an inpatient, except the period of stay of a well newborn infant.<sup>2</sup>Includes all non-Hispanic black and white persons and all nativity groups.<sup>3</sup>Rounded to the nearest whole number.

NOTES: Figures may not add to 100% because of rounding. See table 5 for the adjusted estimates for this table.

SOURCE: National Health Interview Surveys, 1992–95.

**Table V. Unadjusted percent distribution of smoking status (with standard errors), by race and nativity: United States, average annual figures, 1992–95**

Smoking status <sup>1</sup>	Total population <sup>2</sup>	U.S.-born non-Hispanic black	Foreign-born non-Hispanic black	U.S.-born non-Hispanic white	Foreign-born non-Hispanic white
			Number in thousands		
All persons . . . . .	166,980	19,275	1,407	137,972	8,325
		Unadjusted percent distribution (standard error)			
Total . . . . .	100.0	100.0	100.0	100.0	100.0
Current . . . . .	26.1 (0.24)	27.8 (0.63)	11.4 (1.72)	26.2 (0.27)	22.6 (0.87)
Former . . . . .	24.9 (0.21)	15.2 (0.47)	10.7 (1.94)	26.5 (0.24)	23.0 (0.85)
Never smoked . . . . .	49.0 (0.26)	57.0 (0.70)	77.9 (2.49)	47.3 (0.29)	54.4 (1.03)

<sup>1</sup>Includes persons 18 years of age and over.<sup>2</sup>Includes all non-Hispanic black and white persons and all nativity groups.

NOTES: Figures may not add to 100% because of rounding. See table 6 for the adjusted estimates for this table.

SOURCE: National Health Interview Surveys, 1992–95.

**Table VI. Unadjusted percent distributions of AIDS knowledge, testing, and perceived risk (with standard errors), by race and nativity: United States, average annual figures, 1992–95**

AIDS knowledge, testing, and risk <sup>1,2</sup>	Total population <sup>3</sup>	U.S.-born non-Hispanic black	Foreign-born non-Hispanic black	U.S.-born non-Hispanic white	Foreign-born non-Hispanic black
Number in thousands					
All persons. . . . .	168,081	19,429	1,429	138,996	8,226
Unadjusted percent distribution (standard error)					
Total. . . . .	100.0	100.0	100.0	100.0	100.0
Self-reported AIDS knowledge <sup>1</sup>					
A lot. . . . .	32.0 (0.25)	31.3 (0.63)	37.8 (2.42)	32.0 (0.28)	33.0 (0.97)
Some. . . . .	45.0 (0.24)	37.4 (0.64)	38.2 (2.50)	46.6 (0.26)	37.6 (0.95)
A little. . . . .	17.0 (0.20)	20.2 (0.51)	16.9 (1.97)	16.3 (0.22)	21.2 (0.83)
Nothing. . . . .	6.0 (0.11)	11.2 (0.43)	7.1 (1.23)	5.1 (0.12)	8.2 (0.57)
Ever had blood tested for the AIDS virus infection (excluding blood donations) <sup>1</sup>					
Yes. . . . .	23.3 (0.24)	36.4 (0.73)	39.3 (2.55)	21.0 (0.25)	27.8 (0.92)
No. . . . .	76.7 (0.24)	63.6 (0.73)	60.8 (2.55)	79.0 (0.25)	72.2 (0.92)
Perceived risk of getting the AIDS virus <sup>1</sup>					
High/medium. . . . .	4.4 (0.10)	8.2 (0.39)	7.2 (1.41)	3.9 (0.10)	3.6 (0.38)
Low. . . . .	33.0 (0.28)	31.9 (0.68)	34.5 (2.27)	33.4 (0.31)	28.4 (0.98)
None. . . . .	62.6 (0.30)	59.9 (0.76)	58.4 (2.60)	62.7 (0.32)	68.0 (1.03)

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

<sup>2</sup>Includes persons 18 years of age and older.

<sup>3</sup>Includes all non-Hispanic black and white persons and all nativity groups.

NOTES: Figures may not add to 100 percent because of rounding. See table 7 for the adjusted estimates for this table.

SOURCE: National Health Interview Surveys, 1992–95.

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