

## 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. The NHIS uses a multistage, clustered sample design to produce national estimates for a variety of health indicators. Information on basic health topics is collected for all household members, by proxy from one family member if necessary. Additional information is collected for one sample adult and one sample child in each family, with self-response required for the Sample Adult questionnaire. Interviews are conducted in the home using a computer-assisted personal interview (CAPI) questionnaire with telephone permitted for followup if necessary.

### Response rates

In 1997, interviews were completed in 39,832 households and 40,623 families, with 36,116 adults completing the Sample Adult portion of the interview. The final response rate for the Sample Adult questionnaire in 1997 was 80.4% (16). In 1998, interviews were completed in 38,209 households and 38,773 families, with 32,440 adults completing the Sample Adult component. The final response rate for the Sample Adult questionnaire in 1998 was 73.9% (17). Combining years 1997 and 1998, NHIS interviews were completed in 78,041 households, with 79,396 interviewed families and 68,556 interviewed sample adults aged 18 years and older. The final response rate for the 1997–98 combined sample adult files was 77.2%. Procedures used in calculating response rates are described in detail in appendix I of the Survey Description of the NHIS data files (16,17). Item nonresponse for the alcohol data shown in this report ranged from 1% to 3%. Item nonresponse was even lower for the sociodemographic indicators (less than 1%), with the exception of questions related to

income. Item nonresponse for detailed income was about 19.5%.

### Age adjustment

Data shown in tables 1–4 were age adjusted using the projected year 2000 population provided by the U.S. Bureau of the Census (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, 65–74 years, and 75 years and older (table B).

Estimates were calculated using Software for Statistical Analysis of Correlated Data (SUDAAN) (22). The SUDAAN procedure PROC DESCRIPT was used to produce age-adjusted percents and their standard errors.

### Tests of significance

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

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

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

### Relative standard error

The relative standard error (RSE) of an estimate is obtained by dividing the standard error (SE) of the estimate by the estimate  $x$  itself. This quantity is expressed as a percent of the estimate:

$$RSE = \frac{SE(x)}{x}$$

**Table B. Age distribution and age-adjustment weights used in age-adjusting data shown in tables 1–4 and figures 3–6**

Age	Standard population in thousands
18 years and older . . . . .	203,851
18–24 years . . . . .	26,258
25–44 years . . . . .	81,892
45–64 years . . . . .	60,991
65–74 years . . . . .	18,136
75 years and older . . . . .	16,574

## Definition of terms

### Demographic terms

**Age**—Age at last birthday is initially asked of the household respondent for all family members. Age was subsequently verified with the sample adult respondent.

**Race-ethnicity**—The questions related to race and ethnicity initially were asked of the household respondent and subsequently verified with the sample adult. A flash card showing the response categories was shown to the respondent. Persons reporting any Hispanic ethnicity were classified as “Hispanic” regardless of racial identification. Respondents were asked to report as many racial identifications as they thought applicable, with a followup question asking which race best described them. The “best race” question was used in this report to classify persons according to a limited set of race groups. The categories “white, non-Hispanic” and “black, non-Hispanic” are single race categories. The category “Asian/Pacific Islander, non-Hispanic” includes Chinese, Filipino, Hawaiian, Vietnamese, Japanese, Korean, Samoan, Guamanian, Asian Indian, and any other Asian/Pacific Islander group. For increased readability, the term “non-Hispanic” was omitted when describing the three non-Hispanic groups in the text. Several race-ethnic groups identified in the NHIS were not shown separately in this report due to small sample sizes and large standard errors associated with most statistics for these groups. These include American Indian, Aleut, Eskimo, multiple races with no main race specified, and other