# VITAL & HEALTH STATISTICS

# Use of Selected Preventive Care Procedures
## United States, 1982

Data by selected demographic and health characteristics are presented on the proportion of specific population groups ever receiving routine physicals, eye examinations, dental visits, breast examinations, pap smears, glaucoma tests, blood pressure tests, electrocardiograms, and chest x rays. The interval since the examination is also presented.

**Data From the National Health Survey Series 10, No. 157**

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## Symbols

- - -  Data not available

. . .  Category not applicable

-  Quantity zero

0.0  Quantity more than zero but less than 0.05

Z  Quantity more than zero but less than 500 where numbers are rounded to thousands

*  Figure does not meet standard of reliability or precision (more than 30-percent relative standard error)

#  Figure suppressed to comply with confidentiality requirements

# Use of Selected Preventive Care Procedures

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## Introduction

In 1982 the National Center for Health Statistics (NCHS) gathered information on the use of preventive services by the civilian noninstitutionalized population of the United States in a supplement to the 1982 National Health Interview Survey (NHIS). This report uses that information to examine the demographic and health characteristics of persons who have used selected preventive care procedures.

Data are presented on the proportion of persons who ever received these tests and the time interval since the last examination. Data on routine physical examinations, eye examinations, and dental care for children and youths are included in tables 1–4. Data on breast examinations and pap smears (Papanicolaou test for cervical cancer) for females are included in tables 5–7. Data on eye examinations and glaucoma tests for adults are included in tables 8–10. Data on electrocardiograms, chest x rays, and blood pressure tests for adults are included in tables 11–14. Data on frequent and occasional use, and on infrequent or non-use of preventive care services are presented in tables 15–17. Table 18 contains data on each examination for alternative age groups.

# Highlights

- In 1982 most children (96 percent) had had a routine physical examination at least once during their lifetime, but only about two-thirds of them had an examination in the past year.
- A higher proportion of black children (71 percent) than white children (64 percent) had had a routine physical examination within the past year.
- Between 1973 and 1982, there was a marked increase in dental care occurring before 5 years of age among both white and black children.
- In general, for both white and black persons, higher education was associated with a greater proportion of children receiving early dental care.
- Females who had not completed high school were less likely to have had a breast examination (82 percent) than those who had completed at least 1 year of college (95 percent).
- In 1973 white females were more likely to have ever had a pap smear (Papanicolaou test for cervical cancer) than were females of other races; in 1982, black females were more likely to have ever had a pap smear than white females.
- Non-Hispanic adults were more likely to have had an eye examination (97 percent) than were Hispanic adults (88 percent), particularly Mexican-Americans (84 percent).
- Black adults were consistently less likely than white adults to have been examined recently for glaucoma.
- In 1982 there was no difference in the proportions of white and black adults who had ever received an electrocardiogram.
- There was a significant difference, however, between the percent of white and black adults ever having had a chest x ray, 85 and 89 percent, respectively. The difference was even greater for a recent chest x ray.
- A higher proportion of black persons (78 percent) than white persons (75 percent) had had a blood pressure test within the past year.

# Source and limitations of the data

The information on preventive care presented in this report is based on a continuing nationwide survey by household interview conducted by the National Center for Health Statistics (NCHS). Each week a probability sample of households in the civilian noninstitutionalized population of the United States is interviewed by personnel of the U.S. Bureau of the Census. Information is obtained about the health and other characteristics of each household member.

In 1982 the NHIS questionnaire and data preparation procedures were revised extensively. It is important that the reader recognize at the outset that *beginning in 1982, the basic concepts of NHIS have changed in some cases, and in other cases the concepts are measured in a different way. Earlier results should not be compared without having carefully examined the nature of these changes.* To neglect this caveat may lead to serious errors regarding trends in health-related characteristics. A full discussion of these changes can be found in the *Current Estimates*, Series 10, Number 150.[1]

Two weeks of data collection were omitted in 1982 because of budget restrictions. The results from the 50 weeks of data collection were weighted to compensate for these missing weeks of data. The sample was composed of approximately 40,000 households containing about 104,000 persons living at the time of the interview. The total noninterview rate was about 3 percent—1.8 percent was attributed to respondent refusal, and the remainder was primarily a result of the failure to locate an eligible respondent at home after repeated calls.

A description of the survey design, the methods used in estimation, and general qualifications of the data obtained from the survey are shown in appendix I. Because the estimates shown in this report are based on a sample of the population, they are subject to sampling errors. Therefore, particular attention should be paid to the section entitled "Reliability of estimates." Sampling errors for most of the estimates are relatively low. However, where an estimated number or the numerator or denominator of a rate or percent is small, the sampling error may be high. Charts of relative sampling errors and instructions for their use are also shown in appendix I.

Certain terms used in this report are defined in appendix II. Some of the terms are defined specifically for the purpose of this survey. The questions used in 1982 to obtain information on preventive care are given in appendix III. The entire questionnaire for 1982 is presented in *Current Estimates,* Series 10, Number 150.[1]

Information about each selected medical procedure was obtained only for certain age groups. For example, information on routine physical examinations was obtained for children under 17 years of age; dental visit data were collected for children 5–16 years of age; and eye examination questions were asked for all persons who were at least 3 years of age.

Questions about chest x rays and blood pressure tests were asked for all persons 17 years of age and over. Data on two of the medical procedures, electrocardiograms and glaucoma tests, were obtained only for persons 40 years of age and over. This age restriction was applied to electrocardiograms because this test is not a routine preventive health care procedure received by younger individuals. Questions about glaucoma tests were also limited to this age group, because glaucoma poses more of a health problem to older persons.

Two medical procedures applicable to women only were included in the survey, pap smears (Papanicolaou test for cervical cancer) and breast examinations by a doctor; questions about these exams were asked for all females 17 years and over. Some provisional data on breast examinations, pap smears, and blood pressure tests, collected by NCHS as a part of the 1985 National Health Interview Survey, is available in *Advance Data*, No. 119, May 14, 1986.[2]

All information collected in the survey is derived from reports by responsible family members who reside in the household. When possible, all adult family members participate in the interview; however, proxy responses are accepted for family members who are not at home. Such responses are also required for all children and for family members who do not meet the NHIS criteria required to qualify as a respondent. For data on the preventive care services discussed in this report, telephone interviews were permitted if face-to-face contact could not be arranged. Although considerable effort was made to ensure accurate reporting, the information from both proxy and self-respondents may be inaccurate if the respondent had not understood the intended meaning of a question.

In this report, terms such as "similar" and "no difference" mean that there is no statistically significant difference between the measures being compared. Terms relating to difference (for example, "greater than" or "less than") indicate that differences are statistically significant. The *t*-test, with a critical value of 1.96 (0.05 level of significance), was used to test all comparisons that are discussed. Lack of comment regarding the difference between any two statistics does not mean the difference was tested and found to be not significant.

# Children and youth

## Routine physical examination

Today, children in the United States enjoy good health overall. Although children under 5 years of age have the highest number of doctor visits per year of any age group, as might be expected, they have the largest proportion of visits for general checkups and for immunizations or vaccinations.[3] In 1982 approximately 54 million children under 17 years of age, or 96.4 percent, had had at least one routine physical examination during their lifetime (table 1). This represents an increasing trend in the use of preventive care services since 1973, when only 86.2 percent of children were examined (see text table).

The increase in preventive care services for children occurred among all segments of the population.[4] In 1982 about the same proportion of children in each age, sex, or race group had ever received a routine physical examination. A significant difference in the use of preventive care services occurred between the Hispanic origin categories. Compared to non-Hispanic children (97.0 percent), the proportion of children who had had a routine physical was significantly lower for those of Hispanic origin (90.8 percent), and for Mexican-Americans (86.9 percent) in particular.

The 1982 data reflect a notable change in the use of preventive care services since 1973 for two variables—family income and education of the family reference person. In both 1982 and 1973, the proportion of children ever having had a routine examination increased with each higher family income group. However, in 1982 the disparity between the lowest (less than $10,000) and the highest ($35,000 or more) income groups had decreased (3.8 percent). This represents a narrowing of the income differential in routine physical

exams for children since 1973;[5] in that year the disparity between lower and higher income groups at approximately comparable levels in the income structure (less than $7,000 and $15,000 or more) was 13.9 percent.

Similarly, in 1982 when the family reference person had completed at least 1 year of college, a larger proportion of the children (98.3 percent) had been examined than when the reference person had a high school diploma (96.9 percent) or had not completed high school (92.8 percent). This also represents a narrowing of the differential since 1973, when the maximum difference among education groups for children's routine medical care was about three times larger.

Although most children had had a physical at some time during their lifetime, only about two-thirds had had one recently, during the 12 months prior to interview. This rate varied considerably with age. As would be expected, children with the highest percent of recent routine physicals (87.9 percent) were newborns through 2 years of age. Rates for other age groups having a routine physical in the past year ranged from 66.1 percent for those 3–4 years of age to 53.6 percent for those 9–11 years of age.

Although there was no difference between the percent of white and black children who had ever had a routine physical, race differences occurred in the percent with recent examinations. A higher proportion of black children (71.2 percent) than white children (64.4 percent) had had a routine physical within the past year; likewise, more black children were examined during the past 2 years than white children.

## Eye examination

An eye examination to determine the need for glasses is another routine preventive care service often administered to children, particularly once they enter school. About one-third of all children 3–4 years of age had ever had an eye examination (table 2). The rate increased to almost nine-tenths of all children aged 5–8 years old, undoubtedly including a large proportion of children who received an eye examination at school. By 9–11 years of age, almost all children (96.9 percent) had had their eyes examined at least once.

A higher proportion of white children (86.8 percent) than black children (83.9 percent) had ever had an eye examination. In addition, a higher proportion of non-Hispanic children (86.7 percent) than Hispanic children (80.7 percent) had ever had their eyes examined. These patterns occurred for recent examinations during the past 12 months and for examinations at all other time intervals.

Table. Percent of persons having an examination: United States, 1973 and 1982

| Types of examination | Ever had an examination | |
| --- | --- | --- |
| | 1973 | 1982 |
| | Percent | |
| Routine physical (children under 17 years) | 86.2 | 96.4 |
| Eye examination (children 3–16 years) | 79.7 | 86.1 |
| Breast examination (females 17 years and over) | 76.3 | 90.2 |
| Pap smear (females 17 years and over) | 75.2 | 89.2 |
| Eye examination (adults 17 years and over) | 90.8 | 96.7 |
| Glaucoma test (adults 40 years and over) | 53.7 | 80.7 |
| Electrocardiogram (adults 40 years and over) | 60.4 | 76.4 |
| Chest x ray (adults 17 years and over) | 80.1 | 85.8 |

Data on family income and the educational status of the family reference person show that the higher the levels of these variables, the greater the likelihood of children ever receiving an eye examination. When family income was less than $10,000, 83.3 percent of children had been examined; when family income was $35,000 or more, 90.9 percent had been examined. In the education categories, these figures increased from 84.1 percent of children whose family reference person had less than a high school education, to 87.4 percent of those whose reference person had at least 1 year of college.

## Dental visit

Early dental care, before a child reaches 5 years of age, is believed to be an important factor in the prevention of tooth decay or loss. Children were grouped into four age cohorts, based on their age in 1982: from 5–8 years, 9–11 years, 12–14 years, and 15–16 years.

In 1982, one-half of all children in the 5–8 years age group first visited the dentist before they were 5 years of age. Large differences, however, occurred among the race, Hispanic origin, income, and education categories (table 3). A higher proportion of white children (53.0 percent) than black children (39.0 percent) visited the dentist before 5 years of age. The same was true for non-Hispanic children (52.8 percent) and Hispanic children (32.0 percent).

The disparity in dental care was even greater when income levels were examined. As might be expected, in families with an income of less than $10,000 per year, a smaller proportion of children (38.2 percent) had an early dental visit than in families with an income of $35,000 or more, where 70.5 percent of the children had an early dental visit.

The largest differences were found according to the education level of the family reference person. In families where the reference person did not have a high school diploma, about one-third of the children had a dental visit before age five. By contrast, in families where the reference person completed at least 1 year of college, the proportion who had had an early dental visit was more than twice as high.

A comparison of data on dental visits before the age of 5 among children 5–8 years of age and youth 15–16 years of age illustrates an important change. A marked increase occurred in the proportion with dental visits before the age of 5. One-third of the children who reached 5 years of age during 1971–72 (that is, those 15–16 years of age in 1982) had an early dental visit. One-half of the children who reached 5 years of age during 1979–82 (those who were 5–8 years of age in 1982) had seen a dentist before the age of 5. This increase was shown among all socioeconomic groups.

However, similar socioeconomic relationships occurred within all age groups. For example, in the 15–16 years of age cohort a higher proportion of white children (38.3 percent) than black children (15.7 percent) had an early dental visit. This racial relationship was similar in all age cohorts, but the proportions with early visits for both races increased as the age cohorts became younger. In the most recent cohort of 5–8 years an even larger proportion of white children than black children had an early dental visit (53.0 percent and 39.0 percent, respectively). In other words, among both black and white children, the proportion with early dental visits increased in the late 1970's and early 1980's, but the *difference* between the racial groups did not narrow.

It should be noted that respondents' recall of the early childhood dental visits of their older children may be less accurate than their recall of early visits by their younger children. If there is a bias in the reporting of visits that occurred long ago—if, for instance, they are systematically underreported—then the above described trends may be, at least in part, artifacts of that bias. Also, if bias does exist and yet differs for subgroups of the population—if, for instance, there is greater underreporting of past visits by respondents with less education—then the differentials in trends just described could be artifacts. The extent and nature of recall errors or biases in reporting of childhood dental visits is not known, and may be small; however, their possible effects should be considered carefully.

Data in table 4 are presented to examine the interactive effects of race and education on early dental care. In general, for both white and black persons, higher education was associated with a greater proportion of children having had a dental visit before 5 years of age. For white persons, the proportion of children who had an early visit was more than twice as large if the family reference person had completed at least 1 year of college, than it was if the family reference person had not completed high school. For black persons, the proportion of children having an early dental visit increased 50 percent from the lowest to the highest education levels. Although the education effect for both races was similar, the significance was greater for white persons.

Among families in which the reference person had completed at least 1 year of college, a greater proportion of white children (67.3 percent) than black children (48.3 percent) visited a dentist before 5 years of age. However, persons who had not completed high school were less likely to have taken their children for an early dental visit, regardless of race.

# Females of reproductive age

## Breast examination

In 1982, nine-tenths of all adult females (17 years and over) in the United States had ever had a breast examination by a medical doctor or assistant. Overall, there was a substantial increase in the use of this preventive care procedure since 1973, when only three-quarters of all females had ever had a breast examination. The highest proportion ever receiving a breast examination was among women 25–44 years of age (96.9 percent) (table 5). In contrast, only 76.7 percent of the civilian noninstitutionalized females 75 years and over had ever had this examination.

Although there was no difference between the proportion of white and black females who ever had a breast examination, race differences did occur in the percent with recent examinations. For each yearly interval during the 5 years before interview, a significantly higher proportion of black females than white females had had breast examinations.

A contrasting trend emerged among Hispanic and non-Hispanic females. There were virtually no differences among the proportions of Hispanic and non-Hispanic females who had had breast examinations within the past year or within the past 2 years. However, a higher proportion of non-Hispanic females had ever had a breast examination (90.5 percent) than Hispanic females (84.8 percent).

Data on income show a direct relationship with the proportion of females who ever had a breast examination. As family income increased, the percent of females reporting a breast examination rose from 84.7 percent of females with family incomes of less than $10,000, to 93.9 percent of females with family incomes of $35,000 or more.

Education was also related to this preventive care service. Females who had not completed high school were less likely to have had breast examinations (81.8 percent) than females with more education. Females who graduated from high school were less likely to have had breast examinations (92.6 percent) than females who had completed at least 1 year of college (95.1 percent).

## Pap smear

Nine-tenths of all adult females (17 years and over) had ever had a pap smear, a Papanicolaou test for cervical cancer (table 6). This represents an increase in screening for cervical cancer since 1973, when only three-quarters of adult females reported ever having had a pap smear. The overall increases in this preventive care procedure have contributed to increases

in early detection of cervical cancer, and the resultant declining death rates for this disease.[5]

The highest proportions of females who had ever had a pap smear were among those 25–44 years of age (97.5 percent), and those 45–64 years of age (94.4 percent). However, females 45–64 years of age were less likely to have had a recent pap test (37.0 percent) than females 25–44 years of age (56.0 percent). Substantial numbers of women 45–64 years of age have had hysterectomies,[6] which may account for the lower rate of recent pap tests for that age group.

Although cervical cancer mortality rates have declined over the past 10 years for females of both races, the rates for black females are still about three times higher than for white females.[7] Nonetheless, there has been a change in the racial differences reported in cervical cancer testing since 1973. In that year, white females were more likely to have had a pap smear (76.0 percent) than were females of other races (69.4 percent).[8] In 1982, black females were just as likely to have ever had a pap smear (90.9 percent) as white females (89.3 percent). Black females were more likely to have had an examination within the past year (52.5 percent) than white females (44.9 percent).

There were no differences between the proportions of Hispanic and non-Hispanic females who had had a pap smear within the past year or within the past 2 years. However, a higher proportion of non-Hispanic females who had ever had a pap smear (89.6 percent) than Hispanic females (82.9 percent).

Family income and education of the individual had a direct effect on the likelihood of a female ever having had a pap smear. The percent of females who ever had a pap test increased from 84.0 percent in families earning less than $10,000, to 92.2 percent in families with an annual income of $35,000 or more. Similarly, females who did not complete high school were less likely to have had a pap smear than females who completed additional years of education. In addition, females with higher family income and education were more likely to have had this test recently.

Table 7 presents data on adult females who had had a pap smear within the past 2 years, according to racial category and level of education. From this table, the interactive effects of these two variables on cervical cancer testing can be examined.

Race had a significant impact on the frequency of pap smear testing. Black females were consistently more likely to have had a pap smear than white females at all education

levels. For example, after age-adjustment, 54.9 percent of black females without a high school diploma, compared with 42.6 percent of white females with the same education, had a pap smear in the past 2 years. The same pattern occurred among females with the highest educational level—77.8 percent of black females who completed at least 1 year of college, compared with 69.0 percent of white females with the same education, had had a pap smear within the past 2 years.

Education was also a primary factor in predicting cervical cancer testing. The more education a female had, the greater the likelihood of her having had a pap smear, regardless of race or age. For example, after age-adjustment, the percent of the most educated females who had a recent pap smear was about 25 percentage points greater than that for females with the least education. The education differential for both white and black females was approximately the same.

Both the race and education variables had a strong relationship to cervical cancer screening, independent of each other (and independent of age). Furthermore, little interaction occurred between the two variables: the education differential was the same for both races, and the racial differential was the same for all education groups.

# Adult vision tests

## Eye examination

Almost all adults in the survey had had their eyes examined at least once in their lives to determine the need for glasses. The proportion ranged from 95.3 percent of persons 35–44 years of age to 98.5 percent of persons 55–64 years of age (table 8). However, only about one-third of the adult population had been examined recently, that is, within the past year. Higher proportions of persons 65–74 years of age and 75 years and over (40.1 and 43.5 percent, respectively) had a recent eye examination than any other age groups.

A higher proportion of females (97.2 percent) than males (96.3 percent) had ever had an eye exam, but there was no difference between the sexes in the proportion with a recent exam. The same pattern occurred among racial categories—a higher proportion of white adults (97.2 percent) than black adults (94.5 percent) had ever had an eye exam, but there was no difference in the proportion with a recent exam.

Larger differences were reported for persons of Hispanic origin. Non-Hispanic adults were more likely to have had an eye exam (97.3 percent) than were Hispanic adults (87.8 percent), particularly Mexican-Americans (84.1 percent). Non-Hispanic adults were also more likely to have had a recent examination than were Hispanic adults.

Data on family income and education level show that the higher the levels of these variables, the greater the likelihood of adults ever receiving an eye exam. When family income was less than $10,000, 95.3 percent of the adults had been examined; when family income was $35,000 or more, 98.4 percent had been examined. With respect to education, these figures increased from 93.9 percent of those with less than a high school education, to 98.6 percent of those with at least 1 year of college.

## Glaucoma test

Glaucoma is a vision disease associated with aging. In 1982 the glaucoma rates per 1,000 resident population increased from 11.6 for civilian noninstitutionalized adults 45–64 years of age, to 33.7 for adults 65–74 years of age, to 55.1 for those 75 years of age or over.[1] In that year about one-half of adults 40 years of age and over had been checked for glaucoma within the past 2 years, the generally recommended interval for glaucoma testing. The percent examined ranged from 37.4 percent of those 40–44 years of age, to 53.1 percent of those 65–74 years of age. About four-fifths of persons 40 years of age or older had ever been tested for glaucoma

(table 9). This represents a 50 percent increase in glaucoma testing since 1973 (see text table).

In 1982, a higher proportion of females (83.1 percent) than males (77.7 percent) had ever had a glaucoma test. Similar differences between the sexes were found for all frequency intervals during the past 5 years.

Greater disparity occurred among racial and ethnic minorities. A higher proportion of white adults (82.1 percent) than black adults (71.1 percent) had ever been examined for glaucoma. Also, a higher proportion of non-Hispanic adults (81.3 percent) than Hispanic adults (67.3 percent) or Mexican-Americans (62.9 percent) had ever been examined. Black and Hispanic adults were also less likely to have been examined within the past 2 years.

Data on family income and educational background show that the higher the levels of these variables, the greater the likelihood of adults ever or recently having had a glaucoma test. Although these differences for a basic eye examination were small, as noted in the previous section, the differences for glaucoma testing were more pronounced. When family income was less than $10,000, about three-quarters of the adults had ever been examined; when income was $35,000 or more, almost nine-tenths of adults 40 years and over were examined. Correspondingly, with respect to education, these figures increased from 73.5 pecent of those with less than a high school education, to 87.1 percent of those with at least 1 year of college. Differences in reporting of glaucoma tests may account for these income and educational differentials: persons with higher income or education may be better informed about the vision tests they receive, and therefore more likely to remember and report a particular vision test, such as a glaucoma test.

Glaucoma, one of the leading causes of visual impairment in the United States, may be the major cause of blindness among black Americans.[9] Table 10 presents data on the proportion of white and black adults who were tested for glaucoma within the past 2 years, by education level. Black adults were consistently less likely than white adults to have been examined recently for glaucoma. Overall, after age adjustment, 41.6 percent of black adults had a glaucoma test within the past 2 years, compared with 47.5 percent of white adults.

When examined for all races, the education variable had a significant impact on glaucoma testing. The higher the education level, the greater the proportion of persons with a recent glaucoma test. However, this was not true when black adults were considered separately. Education showed no consistent influence on whether or not a black adult had had a glaucoma test within the past 2 years.

# Adult cardiovascular and pulmonary tests

## Electrocardiogram

Three-quarters of all persons 40 years of age and over had had an electrocardiogram (EKG) at some point during their lifetime (table 11). The percent of persons ever having had an EKG generally increased with age from 64.4 percent for adults 40–44 years of age, to 81.3 percent for those 75 years and over. Proportionately more males received EKG's than females, 79.1 and 74.2 percent, respectively. This difference may be related to the fact that males had higher mortality rates from heart disease, nearly twice the rates for females.[10]

In 1982, there was no difference in the proportions of white and black adults ever receiving an EKG. This is a notable change since 1973, when the rate for white persons was about 8 percentage points higher than the rate for persons of all other races.[9] In addition, during the 5 years before the interview (that is, 1977–1982) a significantly higher proportion of black adults than white adults had received EKG's. This is particularly important, because the mortality rates from heart disease for black males and females (316.7 and 191.2 per 100,000 resident population, respectively) are substantially greater than those for white males and females (268.8 and 129.8 per 100,000 resident population, respectively).[10]

There was no well-defined pattern in the percent of persons having had an EKG within the past 1 to 5 years among the income categories in table 11. However, a higher percent of persons with a family income of $35,000 or more had ever had an EKG (79.8 percent) than persons with a family income of less than $10,000 (76.3 percent). The likelihood of having had an EKG was greater for persons with some college education than for those who were less educated.

The percent of civilian noninstitutionalized adults receiving an EKG varied significantly according to the perceived health status category: Persons whose health was perceived to be excellent, very good, or good were less likely to have had an EKG than those whose health was perceived to be fair or poor. Seventy-three percent of persons who rated their own health as excellent, very good, or good had received an EKG at least once in their lives, and 25.8 percent had had the test during the past year. By contrast, among persons who rated their own health as fair or poor 86.0 percent had ever had an EKG, with 46.0 percent receiving the test during the past year.

## Chest x ray

In 1982, 85.8 percent of all persons 17 years of age and over had ever had a chest x ray. Persons 45–64 years of age had the highest proportion reporting a chest x ray (95.0 percent) and persons 17–24 years of age had the lowest (64.8 percent). A slightly higher proportion of males (86.8 percent) than females (84.9 percent) had ever had a chest x ray (table 12).

There was a significant difference between the percent of white and black adults ever having a chest x ray, or 85.3 and 89.3 percent, respectively. The difference was even greater for recent chest x rays. During each of the past 5 yearly intervals, the rate for black adults ranged from 10.0 to 15.5 percentage points higher than that for white adults.

Among the income categories in table 12, there was no well-defined pattern in the percent of persons having had a chest x ray within the past 1 to 5 years. However, a higher percent of persons with a family income of $35,000 or more had ever had a chest x ray (88.4 percent) than persons with a family income of less than $10,000 (84.2 percent). The likelihood of having a chest x ray was greater for persons with some college education than for persons who were less educated.

The largest variation in the percent of adults having a chest x ray occurred among health status categories. Eighty-four percent of persons who rated their own health as excellent, very good, or good had ever had a chest x ray, and 24.7 percent had had a chest x ray during the past year. In comparison, 93.8 percent of persons who perceived their own health as fair or poor had ever had a chest x ray, and 48.7 percent had had an x ray during the past year.

## Blood pressure test

Almost every American adult (98.8 percent) had had a blood pressure test at sometime during their lifetime (table 13). Only minor variations occurred in the proportion of persons ever tested for high blood pressure by sex, family income, education, or health status; furthermore, there was no difference found between rates for white and black persons. The only difference of note occurred in the Hispanic origin categories, where 99.0 percent of non-Hispanic adults compared with 95.3 percent of Hispanic adults and 93.1 percent of Mexican-Americans had ever been tested for high blood pressure.

Nonetheless, the data on persons who had had their blood pressure checked within the past year has shown significant differences among several categories. With increasing age, there was a corresponding rise in the proportion of persons having a recent blood pressure test, from 71.0 percent of

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persons 17–24 years of age to 86.0 percent of persons 75 years and over. Females (79.7 percent) were also more likely than males (69.8 percent) to have been tested recently.

In addition, a higher proportion of black persons (77.9 percent) than white persons (74.9 percent) had a blood pressure test within the past year. This is particularly important, because black adults have reported higher rates of hypertension (25 percent) than white adults (14 percent).[10] Finally, as would be expected, persons in fair or poor health were much more likely to have had a recent blood pressure test (86.9 percent) than persons in excellent, very good, or good health (73.0 percent).

The disparity in the percent of persons in the Hispanic origin categories who had a recent test was comparable to the disparity among those who had ever been tested. Non-Hispanic adults were more likely to have had a recent blood pressure test (75.5 percent) than Hispanic persons (68.0 percent) or Mexican-Americans (65.3).

Table 14 presents data on the proportion of white and black adults who had a blood pressure test within the past 2 years, according to educational level. Data in six age-specific categories and age-adjusted totals are shown.

In general, for both white and black persons of all ages, higher education was associated with a greater proportion of persons being tested for hypertension within the past 2 years. For example, after age-adjustment, 81.6 percent of black adults with less than a high school education were tested, while 86.7 percent of those with at least 1 year of college were tested. The figures for white adults were virtually identical.

Previously, it was noted that black persons were more likely than white persons to have had a blood pressure test within the past year. These data are generally consistent with the 2-year racial differences shown in table 14, although the racial differences shown in table 14 are not statistically significant.

# Multiple use

Tables 15–17 present data on the multiple use of preventive care services. Persons were classified into three categories—frequent, occasional, or infrequent/nonusers of preventive care services. For example, table 15 classifies children 3–16 years of age as: frequent users, if they had both an eye examination and a routine physical within the past 2 years; occasional users, if they had either examination within the past 2 years (but not both); and infrequent/nonusers, if they had neither examination within the past 2 years. Table 16 classifies women of reproductive age (17–39 years) and table 17 classifies adults at risk of chronic disease (40 years and older) in similar categories. Appendix II gives further detailed definitions of frequent, occasional, and infrequent/nonusers.

In all cases, that is, children (3–16 years), females of reproductive age (17–39 years), and adults at risk of chronic disease (40 years and over), education has a significant impact on the frequency of use of preventive care services. For example, in table 16 there was a 60 percent increase from the lowest to the highest educational levels in the proportion of females who were frequent users of preventive care services. In addition, 28.7 percent of females who had less than a high school education were infrequent/nonusers, compared with 14.4 percent of females who had some college background. There was a similar education effect for both white and black races.

Race also had an effect on the frequency in which children and females of reproductive age use these services. Black children and black females were more likely than white children and white females to be frequent users of preventive care services. However, no differences occurred in the frequency of multiple use among white and black adults with respect to cardiovascular and pulmonary tests.

# Recommended use

The need for these preventive care tests and their optimal frequency varies with·age. A test may not be necessary for persons under a certain age, and thereafter its optimal frequency may increase. In tables 1–17, the age categories relevant to the need for and frequency of tests are not necessarily the standard categories used previously in this and other NHIS reports. Consequently, table 18 presents data on use and frequency of preventive care services for age groups that are comparable to those used in the Surgeon General's Report on Health Promotion and Disease Prevention.[11]

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# List of detailed tables

**Table 1. Number and percent of population and cumulative percent of persons under 17 years of age having a routine physical examination, and percent never having an examination, by interval since last routine physical examination and selected characteristics: United States, 1982**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

| Characteristic | All persons 16 years and under | | Interval since last routine physical | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Less than 1 year | Less than 2 years | Less than 3 years | Less than 4 years | Less than 5 years | Ever | Never |
| | Number in thousands[1] | Percent[2] | Cumulative percent | | | | | Percent | |
| All persons[3] . . . . . . . . . . . . . . . | 58,589 | 100.0 | 65.4 | 76.7 | 86.7 | 90.3 | 92.2 | 96.4 | 3.6 |
| **Age** | | | | | | | | | |
| Under 6 years . . . . . . . . . . . . . . | 20,663 | 100.0 | 78.8 | 89.1 | 94.2 | 95.7 | 96.4 | 96.5 | 3.5 |
| 6–16 years . . . . . . . . . . . . . . | 37,926 | 100.0 | 58.1 | 69.9 | 82.6 | 87.4 | 89.9 | 96.3 | 3.7 |
| 0–2 years . . . . . . . . . . . . . . | 10,780 | 100.0 | 87.9 | 95.4 | 96.6 | 96.6 | 96.6 | 96.6 | 3.4 |
| 3–4 years . . . . . . . . . . . . . . | 6,546 | 100.0 | 66.1 | 81.5 | 92.5 | 95.8 | 96.4 | 96.4 | 3.6 |
| 5–8 years . . . . . . . . . . . . . . | 12,768 | 100.0 | 63.7 | 76.4 | 88.1 | 92.7 | 94.8 | 96.7 | 3.3 |
| 9–11 years . . . . . . . . . . . . . | 10,325 | 100.0 | 53.6 | 65.2 | 79.1 | 84.0 | 88.1 | 95.9 | 4.1 |
| 12–16 years . . . . . . . . . . . . | 18,170 | 100.0 | 59.8 | 70.5 | 81.9 | 86.6 | 88.5 | 96.2 | 3.8 |
| 16 years . . . . . . . . . . . . . . | 3,671 | 100.0 | 60.5 | 70.1 | 81.7 | 86.6 | 88.9 | 95.9 | 4.1 |
| **Sex** | | | | | | | | | |
| Male . . . . . . . . . . . . . . . . . . | 29,924 | 100.0 | 66.8 | 77.5 | 87.3 | 90.8 | 92.6 | 96.4 | 3.6 |
| Female . . . . . . . . . . . . . . . . | 28,665 | 100.0 | 64.0 | 75.8 | 86.0 | 89.9 | 91.7 | 96.3 | 3.7 |
| **Race** | | | | | | | | | |
| White . . . . . . . . . . . . . . . . . | 47,847 | 100.0 | 64.4 | 75.7 | 86.1 | 90.0 | 92.1 | 96.5 | 3.5 |
| Black . . . . . . . . . . . . . . . . . | 8,872 | 100.0 | 71.2 | 82.2 | 89.4 | 91.9 | 93.1 | 95.8 | 4.2 |
| Other . . . . . . . . . . . . . . . . . | 1,870 | 100.0 | 65.6 | 76.3 | 87.3 | 90.4 | 90.9 | 95.1 | 4.9 |
| **Hispanic origin** | | | | | | | | | |
| Non-Hispanic . . . . . . . . . . . . . | 52,865 | 100.0 | 65.4 | 76.9 | 87.0 | 90.8 | 92.7 | 97.0 | 3.0 |
| Hispanic . . . . . . . . . . . . . . . . | 5,724 | 100.0 | 65.5 | 75.1 | 83.4 | 86.2 | 87.6 | 90.8 | 9.2 |
| Mexican-American . . . . . . . . . . | 3,502 | 100.0 | 58.9 | 68.3 | 77.8 | 80.7 | 82.7 | 86.9 | 13.1 |
| **Income** | | | | | | | | | |
| Less than $10,000 . . . . . . . . . . . | 10,033 | 100.0 | 67.7 | 79.0 | 86.7 | 89.7 | 91.4 | 94.6 | 5.4 |
| $10,000–$19,999 . . . . . . . . . . . . | 15,281 | 100.0 | 62.4 | 74.7 | 85.1 | 89.3 | 90.9 | 96.7 | 4.3 |
| $20,000–$34,999 . . . . . . . . . . . . | 18,236 | 100.0 | 63.7 | 75.3 | 86.8 | 90.6 | 92.7 | 97.2 | 2.8 |
| $35,000 or more . . . . . . . . . . . | 10,099 | 100.0 | 70.0 | 79.2 | 89.2 | 93.0 | 94.8 | 98.4 | 1.6 |
| **Education of family reference person** | | | | | | | | | |
| Less than 12 years . . . . . . . . . . | 15,340 | 100.0 | 59.8 | 71.4 | 81.4 | 85.3 | 87.3 | 92.8 | 7.2 |
| 12 years . . . . . . . . . . . . . . . . | 21,844 | 100.0 | 64.5 | 76.2 | 86.8 | 90.6 | 92.6 | 96.9 | 3.1 |
| 13 years or more . . . . . . . . . . . | 20,997 | 100.0 | 70.5 | 80.9 | 90.2 | 93.6 | 95.2 | 98.3 | 1.7 |
| **Geographic region** | | | | | | | | | |
| Northeast . . . . . . . . . . . . . . . | 12,112 | 100.0 | 84.0 | 91.6 | 96.4 | 97.8 | 98.2 | 99.1 | 0.9 |
| North Central . . . . . . . . . . . . . | 15,482 | 100.0 | 61.8 | 73.6 | 86.2 | 90.8 | 93.2 | 97.7 | 2.3 |
| South . . . . . . . . . . . . . . . . . | 19,643 | 100.0 | 59.4 | 72.1 | 82.6 | 86.5 | 88.7 | 93.9 | 6.1 |
| West . . . . . . . . . . . . . . . . . | 11,352 | 100.0 | 61.0 | 72.6 | 83.9 | 88.3 | 90.4 | 95.8 | 4.2 |
| **Place of residence** | | | | | | | | | |
| SMSA . . . . . . . . . . . . . . . . . | 39,488 | 100.0 | 69.3 | 80.0 | 89.1 | 92.3 | 93.7 | 96.9 | 3.1 |
| Central city . . . . . . . . . . . . . | 15,598 | 100.0 | 70.1 | 80.5 | 89.2 | 92.2 | 93.5 | 96.0 | 4.0 |
| Not central . . . . . . . . . . . . . | 23,890 | 100.0 | 68.8 | 79.6 | 89.1 | 92.4 | 93.9 | 97.5 | 2.6 |
| Outside SMSA . . . . . . . . . . . . | 19,101 | 100.0 | 57.5 | 69.8 | 81.6 | 86.3 | 89.0 | 95.3 | 4.7 |
| **Health status** | | | | | | | | | |
| Excellent, very good, good . . . . . . . | 56,249 | 100.0 | 65.3 | 76.6 | 86.7 | 90.4 | 92.3 | 96.4 | 3.6 |
| Fair or poor . . . . . . . . . . . . . . | 1,689 | 100.0 | 69.3 | 79.1 | 85.2 | 87.2 | 89.7 | 94.1 | 5.9 |

[1]Includes unknown interval.
[2]Excludes unknown interval.
[3]Total includes unknown income, education, and health status not shown separately.

NOTES: The relative standard errors (RSE's) can be found in appendix I, figures I, II. Estimates for which the numerator has an RSE of more than 30 percent are indicated with an asterisk.

**Table 2. Number and percent of population and cumulative percent of persons 3–16 years of age having an eye examination, and percent never having an eye examination, by interval since last eye examination and selected characteristics: United States, 1982**

[Data are based on household interviews of the civilian noninstitutionalized population The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

| Characteristic | All persons 3–16 years | | Interval since last eye examination | | | | | | |
| | | | Less than 1 year | Less than 2 years | Less than 3 years | Less than 4 years | Less than 5 years | Ever | Never |
| | Number in thousands[1] | Percent[2] | Cumulative percent | | | | | Percent | |
| All persons[3] . . . . . . . . . . . . . . . | 47,809 | 100.0 | 61.8 | 75.2 | 82.1 | 84.0 | 84.9 | 86.1 | 13.9 |
| **Age** | | | | | | | | | |
| 3–4 years . . . . . . . . . . . . . | 6,546 | 100.0 | 26 7 | 33.5 | 35.6 | 35.9 | 35.9 | 35.9 | 64.1 |
| 5–8 years . . . . . . . . . . . . . . | 12,768 | 100.0 | 68.3 | 80.7 | 85.0 | 86.1 | 86.2 | 86.3 | 13.7 |
| 9–11 years . . . . . . . . . . . . | 10,325 | 100.0 | 72.5 | 87.0 | 93.5 | 95.2 | 96.2 | 96.9 | 3.1 |
| 12–16 years . . . . . . . . . . . | 18,170 | 100.0 | 63.1 | 78.8 | 89.4 | 92.8 | 94.2 | 97.0 | 3.0 |
| 16 years . . . . . . . . . . . . . . . | 3,671 | 100.0 | 56.9 | 73.1 | 84.6 | 89.7 | 92.7 | 97.4 | 2.6 |
| **Sex** | | | | | | | | | |
| Male . . . . . . . . . . . . . . . . . . . | 24,407 | 100.0 | 61.9 | 75.1 | 82.0 | 84.0 | 85.0 | 86.2 | 13.8 |
| Female . . . . . . . . . . . . . . . . . | 23,402 | 100.0 | 61.7 | 75.2 | 82.1 | 84.1 | 84.8 | 86.0 | 14.0 |
| **Race** | | | | | | | | | |
| White . . . . . . . . . . . . . . . . . | 39,090 | 100.0 | 62.8 | 75.8 | 83.0 | 84.8 | 85.6 | 86.8 | 13.2 |
| Black . . . . . . . . . . . . . . . . . | 7,176 | 100.0 | 57.9 | 73.2 | 79.1 | 81.7 | 82.5 | 83.9 | 16.1 |
| Other . . . . . . . . . . . . . . . . . | 1,543 | 100.0 | 54.5 | 68.7 | 73.8 | 75.3 | 76.0 | 77.4 | 22.6 |
| **Hispanic origin** | | | | | | | | | |
| Non-Hispanic . . . . . . . . . . . . . . | 43,254 | 100.0 | 62.2 | 75.7 | 82.7 | 84.7 | 85.4 | 86.7 | 13.3 |
| Hispanic . . . . . . . . . . . . . . | 4,555 | 100.0 | 58.4 | 70.1 | 76.3 | 78.1 | 79.2 | 80.7 | 19.3 |
| Mexican-American . . . . . . . . . . . | 2,795 | 100 0 | 59 5 | 68.8 | 74.3 | 76.4 | 78.0 | 79.4 | 20.5 |
| **Income** | | | | | | | | | |
| Less than $10,000 . . . . . . . . . . | 7,927 | 100.0 | 59.4 | 72.7 | 78.5 | 80.7 | 81.4 | 83.3 | 16.7 |
| $10,000–$19,999 . . . . . . . . . . . . | 12,153 | 100.0 | 58.9 | 73.2 | 80.2 | 82.2 | 83.2 | 84.3 | 15.7 |
| $20,000–$34,999 . . . . . . . . . . . . | 14,978 | 100.0 | 62.4 | 75.8 | 83.0 | 85.0 | 85.7 | 86.8 | 13.2 |
| $35,000 or more . . . . . . . . . . . | 8,634 | 100.0 | 66.0 | 79.1 | 87.0 | 88.8 | 89.8 | 90.9 | 9.1 |
| **Education of family reference person** | | | | | | | | | |
| Less than 12 years . . . . . . . . . . . | 12,780 | 100.0 | 58.5 | 71.8 | 78.4 | 81.0 | 82.2 | 84.1 | 15.9 |
| 12 years . . . . . . . . . . . . . . . . | 17,870 | 100.0 | 61.1 | 75.1 | 82.5 | 84.3 | 85.1 | 86.2 | 13.8 |
| 13 years or more . . . . . . . . . . . | 16,832 | 100.0 | 65.0 | 77.7 | 84.4 | 86.0 | 86.6 | 87.4 | 12.6 |
| **Geographic region** | | | | | | | | | |
| Northeast . . . . . . . . . . . . . . . . | 10,049 | 100.0 | 72.0 | 83.5 | 88.2 | 89.2 | 89.5 | 90.0 | 10.0 |
| North Central . . . . . . . . . . . . . | 12,620 | 100.0 | 60.8 | 75.1 | 82.9 | 85.3 | 86.0 | 87.2 | 12.8 |
| South . . . . . . . . . . . . . . . . . | 16,058 | 100.0 | 57.2 | 71.2 | 78.7 | 80.7 | 81.8 | 83.6 | 16.4 |
| West . . . . . . . . . . . . . . . . . . | 9,082 | 100.0 | 60.0 | 73.2 | 80.2 | 82.5 | 83.4 | 84.7 | 15.3 |
| **Place of residence** | | | | | | | | | |
| SMSA . . . . . . . . . . . . . . . . . . | 32,062 | 100.0 | 63.1 | 76.4 | 83.0 | 84.9 | 85.6 | 86.8 | 13.2 |
| Central city . . . . . . . . . . . . . | 12,365 | 100.0 | 61.6 | 75.0 | 81.5 | 83.6 | 84.3 | 85.6 | 14.5 |
| Not central . . . . . . . . . . . . . | 19,697 | 100.0 | 64.1 | 77.3 | 84.0 | 85.8 | 86.4 | 87.5 | 12.5 |
| Outside SMSA . . . . . . . . . . . . | 15,747 | 100.0 | 59.1 | 72.7 | 80.2 | 82.3 | 83 3 | 84.7 | 15.3 |
| **Health status** | | | | | | | | | |
| Excellent, very good, good . . . . . . . . | 45,862 | 100.0 | 61.9 | 75.3 | 82.3 | 84.2 | 85.0 | 86.3 | 13.7 |
| Fair or poor . . . . . . . . . . . . . . . | 1,414 | 100.0 | 59.2 | 71.4 | 78.1 | 80.7 | 81.9 | 83.5 | 16.5 |

[1] Includes unknown interval
[2] Excludes unknown interval
[3] Total includes unknown income, education, and health status not shown separately

NOTES: The relative standard errors (RSE's) can be found in appendix I, figures I, II Estimates for which the numerator has an RSE of more than 30 percent are indicated with an asterisk.

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**Table 3. Number and percent of children 5-16 years of age having a first dental visit before 5 years of age, by selected characteristics: United States, 1982**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

| Characteristic | All children 5–16 years | Age 5–8 years | Age 9–11 years | Age 12–14 years | Age 15–16 years |
|---|---|---|---|---|---|
| | Number in thousands | Percent | | | |
| Total[1] | 17,839 | 50.6 | 44.5 | 39.2 | 34.5 |
| **Sex** | | | | | |
| Male | 9,145 | 51.2 | 45.0 | 39.1 | 34.1 |
| Female | 8,694 | 50.0 | 44.1 | 39.3 | 34.8 |
| **Race** | | | | | |
| White | 15,714 | 53.0 | 48.0 | 42.9 | 38.3 |
| Black | 1,707 | 39.0 | 28.8 | 21.7 | 15.7 |
| Other | 418 | 44.1 | 33.1 | 23.5 | *17.8 |
| **Hispanic origin** | | | | | |
| Non-Hispanic | 16,868 | 52.8 | 46.1 | 41.3 | 36.5 |
| Hispanic | 971 | 32.0 | 29.3 | 17.5 | 14.3 |
| Mexican-American | *13 | *26.7 | *40.0 | *40.0 | 0.0 |
| **Income** | | | | | |
| Less than $10,000 | 1,967 | 38.2 | 31.9 | 23.2 | 17.8 |
| $10,000–$19,999 | 3,887 | 44.7 | 40.0 | 31.6 | 27.8 |
| $20,000–$34,999 | 6,047 | 55.2 | 46.3 | 42.6 | 37.9 |
| $35,000 or more | 4,644 | 70.5 | 61.5 | 56.2 | 52.4 |
| **Education of family reference person** | | | | | |
| Less than 12 years | 2,810 | 32.1 | 25.7 | 22.6 | 18.1 |
| 12 years | 6,647 | 48.4 | 45.3 | 39.5 | 36.4 |
| 13 years or more | 8,292 | 65.2 | 58.2 | 52.9 | 49.3 |
| **Geographic region** | | | | | |
| Northeast | 4,100 | 54.8 | 48.1 | 42.8 | 38.2 |
| North Central | 5,337 | 55.4 | 50.0 | 45.8 | 40.9 |
| South | 5,067 | 44.4 | 38.2 | 33.2 | 25.9 |
| West | 3,335 | 50.1 | 44.1 | 37.2 | 37.0 |
| **Place of residence** | | | | | |
| SMSA | 12,304 | 51.8 | 45.8 | 40.0 | 37.1 |
| Central city | 3,901 | 46.1 | 37.5 | 30.7 | 27.9 |
| Not central city | 8,403 | 55.6 | 51.1 | 45.3 | 42.3 |
| Outside SMSA | 5,535 | 48.2 | 42.1 | 37.8 | 28.8 |
| **Health status** | | | | | |
| Excellent, very good, good | 17,255 | 50.9 | 44.8 | 39.5 | 35.2 |
| Fair or poor | 416 | 41.0 | 38.3 | 29.6 | 24.9 |

[1]Total includes unknown income, education, and health status not shown separately.

NOTES: The relative standard errors (RSE's) can be found in appendix I, figures I, II. Estimates for which the numerator has an RSE of more than 30 percent are indicated with an asterisk.

**Table 4. Number and percent of children 5–16 years of age having a first dental visit before 5 years of age with total age adjusted, by race and education: United States, 1982**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

| Race and education | All children 5–16 years | Age | | | | Total age adjusted |
|---|---|---|---|---|---|---|
| | | 5–8 years | 9–11 years | 12–14 years | 15–16 years | |
| **All races**[1] | Number in thousands | | | Percent | | |
| All education . . . . . . . . . . . . . . . . . . . . . | 17,839 | 50.6 | 44.5 | 39.2 | 34.5 | 43.2 |
| *Education of family reference person* | | | | | | |
| Less than 12 years . . . . . . . . . . . . . . . . . | 2,810 | 32.1 | 25.7 | 22.6 | 18.1 | 25.0 |
| 12 years . . . . . . . . . . . . . . . . . . . . . | 6,647 | 48.4 | 45.3 | 39.5 | 36.4 | 43.2 |
| 13 years or more . . . . . . . . . . . . . . . . . | 8,292 | 65.2 | 58.2 | 52.9 | 49.3 | 57.7 |
| **White** | | | | | | |
| All education . . . . . . . . . . . . . . . . . . . | 15,714 | 53.0 | 48.0 | 42.9 | 38.3 | 46.4 |
| *Education of family reference person* | | | | | | |
| Less than 12 years . . . . . . . . . . . . . . . . . | 2,136 | 31.6 | 26.6 | 24.7 | 19.5 | 25.9 |
| 12 years . . . . . . . . . . . . . . . . . . . . . | 5,911 | 50.5 | 48.7 | 43.9 | 40.5 | 46.5 |
| 13 years or more . . . . . . . . . . . . . . . . . | 7,603 | 67.3 | 60.8 | 54.8 | 53.0 | 60.2 |
| **Black** | | | | | | |
| All education . . . . . . . . . . . . . . . . . . . | 1,707 | 39.0 | 28.8 | 21.7 | 15.7 | 27.9 |
| *Education of family reference person* | | | | | | |
| Less than 12 years . . . . . . . . . . . . . . . . . | 575 | 33.2 | 22.6 | 15.3 | 12.8 | 21.6 |
| 12 years . . . . . . . . . . . . . . . . . . . . . | 666 | 40.1 | 32.4 | 17.0 | 15.5 | 29.2 |
| 13 years or more . . . . . . . . . . . . . . . . . | 446 | 48.3 | 35.4 | 43.9 | 22.3 | 39.4 |

[1]Includes other races not shown separately.

NOTES: The relative standard errors (RSE's) can be found in appendix I, figures I, II. Estimates for which the numerator has an RSE of more than 30 percent are indicated with an asterisk.

**Table 5. Number and percent of population and cumulative percent of females 17 years of age and over having a breast examination, and percent never having an examination, by interval since last breast examination and selected characteristics: United States, 1982**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

| Characteristic | All females 17 years and over | | Interval since last breast examination | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Less than 1 year | Less than 2 years | Less than 3 years | Less than 4 years | Less than 5 years | Ever | Never |
| | Number in thousands[1] | Percent[2] | Cumulative percent | | | | | Percent | |
| All persons[3] . . . . . . . . . . . . . . . . | 88,914 | 100.0 | 51.5 | 66.9 | 76.0 | 80.3 | 82.5 | 90.2 | 9.8 |
| **Age** | | | | | | | | | |
| 17–24 years . . . . . . . . . . . . . . | 16,746 | 100.0 | 57.2 | 70.2 | 75.4 | 77.3 | 78.2 | 79.2 | 20.8 |
| 25–44 years . . . . . . . . . . . . . | 33,912 | 100.0 | 58.3 | 76.7 | 85.8 | 89.8 | 91.9 | 96.9 | 3.1 |
| 25–34 years . . . . . . . . . . . . | 19,710 | 100.0 | 63.1 | 80.9 | 89.0 | 92.3 | 94.0 | 96.9 | 3.1 |
| 35–44 years . . . . . . . . . . . . | 14,202 | 100.0 | 51.6 | 70.9 | 81.4 | 86.3 | 88.9 | 96.9 | 3.1 |
| 45–64 years . . . . . . . . . . . . . | 23,235 | 100.0 | 45.3 | 60.9 | 72.4 | 78.7 | 81.5 | 93.5 | 6.5 |
| 45–54 years . . . . . . . . . . . . | 11,540 | 100.0 | 48.4 | 65.2 | 76.3 | 82.1 | 84.8 | 95.3 | 4.7 |
| 55–64 years . . . . . . . . . . . . | 11,696 | 100.0 | 42.2 | 56.6 | 68.6 | 75.3 | 78.2 | 91.7 | 8.3 |
| 65–74 years . . . . . . . . . . . . . | 8,966 | 100.0 | 39.1 | 51.3 | 61.7 | 67.2 | 69.9 | 84.8 | 15.2 |
| 75 years and over . . . . . . . . . . . | 6,054 | 100.0 | 38.4 | 47.3 | 56.1 | 59.4 | 62.3 | 76.7 | 23.3 |
| **Race** | | | | | | | | | |
| White . . . . . . . . . . . . . . . . . . | 76,564 | 100.0 | 50.9 | 66.3 | 75.6 | 80.1 | 82.3 | 90.5 | 9.5 |
| Black . . . . . . . . . . . . . . . . . . | 10,028 | 100.0 | 56.6 | 72.6 | 80.6 | 83.8 | 85.4 | 90.1 | 9.9 |
| Other . . . . . . . . . . . . . . . . . . | 2,321 | 100.0 | 46.5 | 59.8 | 68.2 | 71.7 | 73.9 | 80.8 | 19.2 |
| **Hispanic origin** | | | | | | | | | |
| Non-Hispanic . . . . . . . . . . . . . . | 83,590 | 100.0 | 51.5 | 67.0 | 76.2 | 80.5 | 82.6 | 90.5 | 9.5 |
| Hispanic . . . . . . . . . . . . . . . . . | 5,324 | 100.0 | 50.2 | 64.7 | 73.5 | 77.3 | 79.6 | 84.8 | 15.2 |
| Mexican-American . . . . . . . . . . | 2,755 | 100.0 | 47.8 | 60.9 | 69.3 | 72.8 | 75.3 | 81.5 | 18.5 |
| **Income** | | | | | | | | | |
| Less than $10,000 . . . . . . . . . . . | 19,233 | 100.0 | 46.0 | 59.3 | 67.8 | 72.2 | 74.6 | 84.7 | 15.3 |
| $10,000–$19,999 . . . . . . . . . . . | 22,317 | 100.0 | 50.3 | 66.1 | 75.5 | 80.4 | 82.6 | 90.9 | 9.1 |
| $20,000–$34,999 . . . . . . . . . . . | 23,213 | 100.0 | 54.6 | 70.5 | 79.9 | 83.8 | 85.9 | 92.4 | 7.6 |
| $35,000 or more . . . . . . . . . . . | 14,526 | 100.0 | 57.4 | 74.4 | 82.9 | 86.9 | 88.9 | 93.9 | 6.1 |
| **Education of individual** | | | | | | | | | |
| Less than 12 years . . . . . . . . . . . | 25,532 | 100.0 | 41.3 | 54.1 | 63.3 | 68.3 | 70.7 | 81.8 | 18.2 |
| 12 years . . . . . . . . . . . . . . . . | 36,366 | 100.0 | 52.6 | 69.0 | 78.6 | 83.0 | 85.3 | 92.6 | 7.4 |
| 13 years or more . . . . . . . . . . . . | 26,105 | 100.0 | 59.7 | 76.3 | 84.7 | 88.1 | 90.0 | 95.1 | 4.9 |
| **Geographic region** | | | | | | | | | |
| Northeast . . . . . . . . . . . . . . . . | 20,050 | 100.0 | 51.8 | 65.1 | 74.7 | 78.8 | 81.0 | 89.2 | 10.8 |
| North Central . . . . . . . . . . . . . . | 22,949 | 100.0 | 49.7 | 65.9 | 75.2 | 79.7 | 81.9 | 89.8 | 10.2 |
| South . . . . . . . . . . . . . . . . . . | 28,917 | 100.0 | 51.9 | 67.7 | 76.3 | 80.8 | 82.9 | 90.5 | 9.5 |
| West . . . . . . . . . . . . . . . . . . | 16,998 | 100.0 | 52.4 | 68.7 | 78.1 | 82.0 | 84.2 | 91.4 | 8.6 |
| **Place of residence** | | | | | | | | | |
| SMSA . . . . . . . . . . . . . . . . . . | 61,244 | 100.0 | 53.8 | 69.1 | 78.1 | 82.2 | 84.3 | 91.2 | 8.8 |
| Cental city . . . . . . . . . . . . . . | 25,275 | 100.0 | 54.2 | 69.2 | 78.1 | 82.0 | 84.0 | 90.6 | 9.4 |
| Not central . . . . . . . . . . . . . . | 35,969 | 100.0 | 53.5 | 69.1 | 78.2 | 82.4 | 84.5 | 91.6 | 8.4 |
| Outside SMSA . . . . . . . . . . . . . | 27,670 | 100.0 | 46.3 | 61.9 | 71.3 | 76.0 | 78.5 | 87.9 | 12.1 |
| **Health status** | | | | | | | | | |
| Excellent, very good, good . . . . . . . . | 74,547 | 100.0 | 52.1 | 67.9 | 77.2 | 81.4 | 83.5 | 90.6 | 9.4 |
| Fair or poor . . . . . . . . . . . . . . . | 13,716 | 100.0 | 48.1 | 61.8 | 69.7 | 74.5 | 77.2 | 88.0 | 12.0 |

[1]Includes unknown interval.
[2]Excludes unknown interval.
[3]Total includes unknown income, education, and health status not shown separately

NOTES: The relative standard errors (RSE's) can be found in appendix I, figures I, II. Estimates for which the numerator has an RSE of more than 30 percent are indicated with an asterisk.

**Table 6.   Number and percent of population and cumulative percent of females 17 years of age and over having a pap smear, and percent never having an examination, by interval since last pap smear and selected characteristics: United States, 1982**

[Data are based on household interviews of the civilian noninstitutionalized population  The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

| Characteristic | All females 17 years and over | | Interval since last pap smear | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Less than 1 year | Less than 2 years | Less than 3 years | Less than 4 years | Less than 5 years | Ever | Never |
| | Number in thousands[1] | Percent[2] | Cumulative percent | | | | | Percent | |
| All persons[3] . . . . . . . . . . . . . . . | 88,914 | 100.0 | 45.8 | 61.3 | 71.0 | 75.7 | 78.1 | 89.2 | 10.8 |
| **Age** | | | | | | | | | |
| 17–24 years . . . . . . . . .    . . . . | 16,746 | 100.0 | 55.3 | 67.6 | 71.7 | 73.0 | 73.6 | 74.1 | 25.9 |
| 25–44 years . . . . . . . . .    . . . . | 33,912 | 100.0 | 56.0 | 75.2 | 84.8 | 89.2 | 91.4 | 97.5 | 2.5 |
| 25–34 years . . . . . . . . . . | 19,710 | 100.0 | 61.7 | 80.5 | 89.0 | 92.5 | 94.2 | 97.2 | 2.8 |
| 35–44 years . . . . . . . . . . | 14,202 | 100.0 | 48.1 | 67.8 | 79.1 | 84.6 | 87.6 | 97.9 | 2.1 |
| 45–64 years . . . . . . . . . . | 23,235 | 100.0 | 37.0 | 52.7 | 65.5 | 72.4 | 76.0 | 94.4 | 5.6 |
| 45–54 years . . . . .    . . . . . . | 11,540 | 100.0 | 41.3 | 58.5 | 70.7 | 77.2 | 80.5 | 96.0 | 4.0 |
| 55–64 years . . . . . . . . . . | 11,696 | 100.0 | 32.8 | 46.9 | 60.4 | 67.7 | 71.4 | 92.8 | 7.2 |
| 65–74 years . . . . . . . . . . | 8,966 | 100.0 | 26.8 | 38.9 | 50.8 | 57.1 | 60.4 | 83.9 | 16.1 |
| 75 years and over . . . . . . . . . . | 6,054 | 100.0 | 21.8 | 30.0 | 40.3 | 44.9 | 48.0 | 70.8 | 29.2 |
| **Race** | | | | | | | | | |
| White . . . . . . . . . . . . . . . . . | 76,564 | 100.0 | 44.9 | 60.3 | 70.1 | 75.0 | 77.5 | 89.3 | 10.7 |
| Black . . . . . . . . . . . . . . . . | 10,028 | 100.0 | 52.5 | 70.0 | 79.2 | 82.7 | 84.6 | 90.9 | 9.1 |
| Other . . . . . . . . . . . . . . . . . | 2,321 | 100.0 | 44.7 | 57.5 | 65.6 | 69.1 | 71.7 | 79.6 | 20.4 |
| **Hispanic origin** | | | | | | | | | |
| Non-Hispanic . . . .   . . . . . . . . . | 83,590 | 100.0 | 45.7 | 61.3 | 71.1 | 75.8 | 78.3 | 89.6 | 10.4 |
| Hispanic. . . .   . . . . . . . . . .   . . | 5,324 | 100.0 | 47.2 | 61.7 | 70.2 | 74.1 | 76.2 | 82.9 | 17.1 |
| Mexican-American . . . . . . . . . . | 2,755 | 100.0 | 45.9 | 59.3 | 67.7 | 71.8 | 74.1 | 81.2 | 18.8 |
| **Income** | | | | | | | | | |
| Less than $10,000 . . . . . . . . . . . | 19,233 | 100.0 | 39.1 | 52.6 | 62.2 | 66.9 | 69.6 | 84.0 | 15.9 |
| $10,000–$19,999 . . . . . . . . . . . | 22,317 | 100.0 | 45.2 | 60.9 | 70.6 | 75.8 | 78.3 | 90.1 | 9.9 |
| $20,000–$34,999    . . . . . . . . . . | 23,213 | 100.0 | 49.5 | 66.0 | 75.7 | 80.0 | 82.3 | 91.6 | 8.4 |
| $35,000 or more    . . . . . . . . .  . . | 14,526 | 100.0 | 52.4 | 69.1 | 78.3 | 82.6 | 84.7 | 92.2 | 7.8 |
| **Education of individual** | | | | | | | | | |
| Less than 12 years . . . . . . . . . . . | 25,532 | 100.0 | 34.0 | 47.0 | 56.8 | 62.3 | 65.1 | 81.3 | 18.7 |
| 12 years . . . . . . . . . . . . . . . | 36,366 | 100.0 | 47.7 | 64.1 | 74.3 | 79.0 | 81.5 | 92.0 | 8.0 |
| 13 years or more . . . . . . . . . . . | 26,105 | 100.0 | 54.5 | 71.5 | 80.4 | 84.2 | 86.1 | 93.2 | 6.8 |
| **Geographic region** | | | | | | | | | |
| Northeast . . . . . . . . . . . . . . . | 20,050 | 100 0 | 44.0 | 57.4 | 67.3 | 72.0 | 74.5 | 86.2 | 13.8 |
| North Central . . . . . . . . . . . . . | 22,949 | 100.0 | 44.5 | 60.5 | 70.5 | 75.1 | 77.6 | 89.1 | 10.9 |
| South . . . . . . . . . . . . .    . . . . | 28,917 | 100.0 | 46.6 | 62.7 | 72.0 | 77.0 | 79.4 | 90.2 | 9.8 |
| West . . . . . .   . . . . . . . . . . . | 16,998 | 100.0 | 48.3 | 64.7 | 74.5 | 78.7 | 81.0 | 91.4 | 8.6 |
| **Place of residence** | | | | | | | | | |
| SMSA   . . . . . . . . . . . . . . . . . | 61,244 | 100.0 | 47.7 | 63.2 | 72.8 | 77.3 | 79.6 | 89.8 | 10.2 |
| Cental city  . . . . . . . . . . . . . | 25,275 | 100.0 | 47.9 | 63.2 | 72.6 | 77.2 | 79.5 | 89.2 | 10.8 |
| Not central . . . . . . . . . .   . . . . | 35,969 | 100.0 | 47.6 | 63.2 | 73.0 | 77.3 | 79.8 | 90.3 | 9.7 |
| Outside SMSA . . . . . . . .    . . . . | 27,670 | 100.0 | 41.5 | 57.1 | 67.1 | 72.3 | 74.8 | 87.9 | 12.1 |
| **Health status** | | | | | | | | | |
| Excellent, very good, good . . . . . . . . | 74,547 | 100.0 | 47.5 | 63.4 | 72.9 | 77.4 | 79.7 | 89.5 | 10.5 |
| Fair or poor . . . . . . . .    . .  . . . | 13,716 | 100.0 | 36.6 | 50.4 | 61.0 | 66.7 | 70.1 | 87.8 | 12.2 |

[1]Includes unknown interval.
[2]Excludes unknown interval.
[3]Total includes unknown income, education, and health status not shown separately

NOTES·  The relative standard errors (RSE's) can be found in appendix I, figures I, II. Estimates for which the numerator has an RSE of more than 30 percent are indicated with an asterisk.

**Table 7.   Number and percent of females 17 years of age and over having a pap smear in the past 2 years with total age adjusted, by race and education: United States, 1982**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

| Race and education | All females 17 years and over | Age | | | | | | Total age adjusted |
|---|---|---|---|---|---|---|---|---|
| | | 17–24 years | 25–34 years | 35–44 years | 45–54 years | 55–64 years | 65 years and over | |
| **All races[1]** | Number in thousands | Percent | | | | | | |
| All education . . . . . . . . . . . . . . . . | 52,370 | 64.5 | 78.4 | 65.9 | 56.5 | 45.0 | 33.2 | 58.9 |
| *Education of individual* | | | | | | | | |
| Less than 12 years . . . . . . . . . . . . . | 11,416 | 53.9 | 67.8 | 56.0 | 49.4 | 40.0 | 28.7 | 44.7 |
| 12 years . . . . . . . . . . . . . . . . . . | 22,567 | 68.8 | 78.2 | 64.7 | 57.0 | 46.1 | 38.6 | 62.1 |
| 13 years or more . . . . . . . . . . . . . . | 18,110 | 68.3 | 82.7 | 73.1 | 64.0 | 53.0 | 40.1 | 69.4 |
| *White* | | | | | | | | |
| All education . . . . . . . . . . . . . . . . | 44,470 | 63.3 | 78.6 | 65.3 | 56.2 | 44.4 | 33.1 | 58.1 |
| *Education of individual* | | | | | | | | |
| Less than 12 years . . . . . . . . . . . . . | 8,892 | 51.1 | 66.2 | 54.4 | 47.6 | 38.3 | 28.0 | 42.6 |
| 12 years . . . . . . . . . . . . . . . . . . | 19,531 | 67.9 | 78.1 | 64.1 | 56.8 | 45.5 | 38.9 | 61.1 |
| 13 years or more . . . . . . . . . . . . . . | 15,840 | 67.7 | 83.2 | 72.7 | 64.1 | 53.3 | 40.1 | 69.0 |
| *Black* | | | | | | | | |
| All education . . . . . . . . . . . . . . . . | 6,657 | 74.7 | 81.4 | 70.9 | 61.1 | 50.8 | 34.7 | 66.4 |
| *Education of individual* | | | | | | | | |
| Less than 12 years . . . . . . . . . . . . . | 2,159 | 68.1 | 76.1 | 62.2 | 57.4 | 49.8 | 33.7 | 54.9 |
| 12 years . . . . . . . . . . . . . . . . . . | 2,684 | 76.8 | 80.2 | 71.7 | 63.7 | 55.1 | 40.1 | 72.3 |
| 13 years or more . . . . . . . . . . . . . . | 1,767 | 79.7 | 87.2 | 78.8 | 66.3 | 50.3 | *40.9 | 77.8 |

[1]Includes unknown races, not shown separately.

NOTES:   The relative standard errors (RSE's) can be found in appendix I, figures I, II. Estimates for which the numerator has an RSE of more than 30 percent are indicated with an asterisk.

**Table 8.** Number and percent of population and cumulative percent of persons 17 years of age and over having an eye examination, and percent never having an examination, by interval since last eye examination and selected characteristics: United States, 1982

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

| Characteristic | All persons 17 years and over | | Interval since last eye examination | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Less than 1 year | Less than 2 years | Less than 3 years | Less than 4 years | Less than 5 years | Ever | Never |
| | Number in thousands[1] | Percent[2] | Cumulative percent | | | | | Percent | |
| All persons[3] . . . . . . . . . . . . . . . | 168,525 | 100.0 | 34.5 | 52.5 | 70.3 | 78.4 | 82.6 | 96.7 | 3.3 |
| **Age** | | | | | | | | | |
| 17–24 years . . . . . . . . . . . . . . | 32,845 | 100.0 | 35.1 | 53.8 | 69.8 | 77.8 | 82.6 | 96.3 | 3.7 |
| 25–44 years . . . . . . . . . . . . . . | 66,112 | 100.0 | 30.0 | 47.3 | 64.2 | 72.2 | 76.4 | 95.7 | 4.3 |
| 25–34 years . . . . . . . . . . . . . | 38,499 | 100.0 | 29.6 | 47.4 | 64.0 | 72.0 | 76.4 | 96.0 | 4.0 |
| 35–44 years . . . . . . . . . . . . . | 27,613 | 100.0 | 30.6 | 47.3 | 64.5 | 72.5 | 76.4 | 95.3 | 4.7 |
| 45–64 years . . . . . . . . . . . . . . | 44,177 | 100.0 | 36.7 | 56.5 | 77.1 | 85.6 | 89.5 | 97.7 | 2.3 |
| 45–54 years . . . . . . . . . . . . . | 22,266 | 100.0 | 37.0 | 57.4 | 77.6 | 85.6 | 89.3 | 97.0 | 3.0 |
| 55–64 years . . . . . . . . . . . . . | 21,910 | 100.0 | 36.4 | 55.6 | 76.6 | 85.5 | 89.6 | 98.5 | 1.6 |
| 65–74 years . . . . . . . . . . . . . . | 15,832 | 100.0 | 40.1 | 57.4 | 75.5 | 83.5 | 87.5 | 98.4 | 1.6 |
| 75 years and over . . . . . . . . . . . | 9,559 | 100.0 | 43.5 | 57.8 | 73.5 | 81.4 | 85.3 | 98.0 | 2.0 |
| **Sex** | | | | | | | | | |
| Male . . . . . . . . . . . . . . . . . . . . | 79,611 | 100.0 | 34.4 | 52.5 | 69.5 | 77.3 | 81.3 | 96.3 | 3.7 |
| Female . . . . . . . . . . . . . . . . . | 88,914 | 100.0 | 34.6 | 52.6 | 71.0 | 79.4 | 83.8 | 97.2 | 2.8 |
| **Race** | | | | | | | | | |
| White . . . . . . . . . . . . . . . . . . | 146,162 | 100.0 | 34.5 | 52.6 | 70.4 | 78.6 | 82.9 | 97.2 | 2.8 |
| Black . . . . . . . . . . . . . . . . . . | 18,041 | 100.0 | 34.7 | 53.0 | 69.8 | 77.3 | 81.2 | 94.5 | 5.6 |
| Other . . . . . . . . . . . . . . . . . . | 4,322 | 100.0 | 33.9 | 50.3 | 67.1 | 74.3 | 77.7 | 89.3 | 10.7 |
| **Hispanic origin** | | | | | | | | | |
| Non-Hispanic . . . . . . . . . . . . . . | 158,536 | 100.0 | 34.6 | 52.7 | 70.6 | 78.8 | 83.0 | 97.3 | 2.7 |
| Hispanic . . . . . . . . . . . . . . . . . | 9,989 | 100.0 | 32.2 | 49.3 | 64.5 | 72.0 | 75.7 | 87.8 | 12.2 |
| Mexican-American . . . . . . . . . . | 5,311 | 100.0 | 30.3 | 45.9 | 61.2 | 68.3 | 71.5 | 84.1 | 15.9 |
| **Income** | | | | | | | | | |
| Less than $10,000 . . . . . . . . . . . | 31,805 | 100.0 | 32.4 | 49.4 | 66.1 | 74.6 | 79.2 | 95.3 | 4.7 |
| $10,000–$19,999 . . . . . . . . . . . . | 41,686 | 100.0 | 32.2 | 49.6 | 67.2 | 75.9 | 80.7 | 96.2 | 3.8 |
| $20,000–$34,999 . . . . . . . . . . . . | 46,737 | 100.0 | 35.1 | 53.9 | 72.0 | 79.6 | 83.7 | 97.5 | 2.5 |
| $35,000 or more . . . . . . . . . . . . | 30,239 | 100.0 | 37.8 | 57.1 | 75.5 | 83.2 | 86.5 | 98.4 | 1.6 |
| **Education of individual** | | | | | | | | | |
| Less than 12 years . . . . . . . . . . . | 48,664 | 100.0 | 33.0 | 49.1 | 66.4 | 74.6 | 78.8 | 93.9 | 6.1 |
| 12 years . . . . . . . . . . . . . . . . . | 63,783 | 100.0 | 33.6 | 52.2 | 70.2 | 78.4 | 82.9 | 97.4 | 2.6 |
| 13 years or more . . . . . . . . . . . . | 54,308 | 100.0 | 36.9 | 56.0 | 73.8 | 81.8 | 85.7 | 98.6 | 1.4 |
| **Geographic region** | | | | | | | | | |
| Northeast . . . . . . . . . . . . . . . . | 37,576 | 100.0 | 38.2 | 55.9 | 73.7 | 81.5 | 85.3 | 97.8 | 2.2 |
| North Central . . . . . . . . . . . . . . | 43,633 | 100.0 | 33.5 | 52.2 | 71.1 | 79.7 | 84.3 | 98.0 | 2.0 |
| South . . . . . . . . . . . . . . . . . . | 54,965 | 100.0 | 32.6 | 50.8 | 68.0 | 76.0 | 80.4 | 95.6 | 4.4 |
| West . . . . . . . . . . . . . . . . . . . | 32,351 | 100.0 | 34.8 | 52.0 | 69.1 | 77.0 | 80.9 | 95.7 | 4.3 |
| **Place of residence** | | | | | | | | | |
| SMSA . . . . . . . . . . . . . . . . . . | 115,716 | 100.0 | 35.8 | 54.1 | 71.5 | 79.4 | 83.4 | 96.9 | 3.1 |
| Central city . . . . . . . . . . . . . . | 46,693 | 100.0 | 36.1 | 54.3 | 71.2 | 79.0 | 83.0 | 96.3 | 3.7 |
| Not central . . . . . . . . . . . . . . | 69,022 | 100.0 | 35.6 | 54.0 | 71.8 | 79.8 | 83.7 | 97.3 | 2.7 |
| Outside SMSA . . . . . . . . . . . . . | 52,809 | 100.0 | 31.5 | 49.0 | 67.6 | 76.1 | 80.8 | 96.4 | 3.6 |
| **Health status** | | | | | | | | | |
| Excellent, very good, good . . . . . . . | 143,191 | 100.0 | 34.1 | 52.3 | 70.2 | 78.4 | 82.6 | 96.8 | 3.2 |
| Fair or poor . . . . . . . . . . . . . . . | 24,186 | 100.0 | 36.7 | 53.7 | 71.0 | 78.3 | 82.4 | 96.4 | 3.6 |

[1]Includes unknown interval.
[2]Excludes unknown interval.
[3]Total includes unknown income, education, and health status not shown separately

NOTES: The relative standard errors (RSE's) can be found in appendix I, figures I, II Estimates for which the numerator has an RSE of more than 30 percent are indicated with an asterisk.

**Table 9. Number and percent of population and cumulative percent of persons 40 years of age and over having a glaucoma test, and percent never having a test, by interval since last glaucoma test and selected characteristics: United States, 1982**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

| Characteristic | All persons 40 years and over | | Interval since last glaucoma test | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Number in thousands[1] | Percent[2] | Less than 1 year | Less than 2 years | Less than 3 years | Less than 4 years | Less than 5 years | Ever | Never |
| | | | Cumulative percent | | | | | Percent | |
| All persons[3] . . . . . . . . . . . . . . . . | 81,814 | 100.0 | 34.2 | 48.8 | 64.2 | 70.8 | 73.8 | 80.7 | 19.3 |
| *Age* | | | | | | | | | |
| 40–44 years . . . . . . . . . . . . . . | 12,246 | 100.0 | 25.5 | 37.4 | 49.6 | 54.8 | 57.1 | 64.6 | 35.4 |
| 45–64 years . . . . . . . . . . . . . . | 44,177 | 100.0 | 33.7 | 49.7 | 67.0 | 74.2 | 77.4 | 83.6 | 16.4 |
| 45–54 years . . . . . . . . . . . . | 22,266 | 100.0 | 32.9 | 49.1 | 65.6 | 72.4 | 75.4 | 80.9 | 19.1 |
| 55–64 years . . . . . . . . . . . . | 21,910 | 100.0 | 34.5 | 50.3 | 68.3 | 75.9 | 79.4 | 86.4 | 13.6 |
| 65–74 years . . . . . . . . . . . . . . | 15,832 | 100.0 | 38.5 | 53.1 | 67.7 | 74.0 | 77.1 | 84.4 | 15.6 |
| 75 years and over . . . . . . . . . . . | 9,559 | 100.0 | 40.6 | 51.8 | 64.1 | 69.6 | 72.4 | 80.6 | 19.4 |
| *Sex* | | | | | | | | | |
| Male . . . . . . . . . . . . . . . . . . . | 37,302 | 100.0 | 32.9 | 47.0 | 61.4 | 67.5 | 70.3 | 77.7 | 22.3 |
| Female . . . . . . . . . . . . . . . . . | 44,512 | 100.0 | 35.3 | 50.3 | 66.6 | 73.5 | 76.7 | 83.1 | 16.9 |
| *Race* | | | | | | | | | |
| White . . . . . . . . . . . . . . . . . . | 72,486 | 100.0 | 34.5 | 49.5 | 65.2 | 72.0 | 75.0 | 82.1 | 17.9 |
| Black . . . . . . . . . . . . . . . . . . | 7,661 | 100.0 | 32.5 | 44.9 | 58.3 | 63.1 | 65.7 | 71.1 | 28.9 |
| Other . . . . . . . . . . . . . . . . . . | 1,667 | 100.0 | 29.4 | 38.5 | 48.2 | 52.8 | 54.7 | 62.0 | 38.1 |
| *Hispanic origin* | | | | | | | | | |
| Non-Hispanic . . . . . . . . . . . . . . | 78,203 | 100.0 | 34.4 | 49.1 | 64.7 | 71.3 | 74.3 | 81.3 | 18.7 |
| Hispanic . . . . . . . . . . . . . . . . . | 3,611 | 100.0 | 30.5 | 42.3 | 53.6 | 59.5 | 61.7 | 67.3 | 32.7 |
| Mexican-American . . . . . . . . . . | 1,876 | 100.0 | 28.0 | 39.6 | 51.0 | 55.9 | 57.2 | 62.9 | 37.1 |
| *Income* | | | | | | | | | |
| Less than $10,000 . . . . . . . . . . . | 17,283 | 100.0 | 30.7 | 43.3 | 56.6 | 62.8 | 66.1 | 74.3 | 25.7 |
| $10,000–$19,999 . . . . . . . . . . . . | 19,022 | 100.0 | 33.5 | 47.0 | 62.5 | 69.2 | 72.5 | 79.9 | 20.1 |
| $20,000–$34,999 . . . . . . . . . . . . | 19,932 | 100.0 | 34.7 | 50.0 | 66.3 | 73.2 | 76.2 | 82.5 | 17.5 |
| $35,000 or more . . . . . . . . . . . . | 14,793 | 100.0 | 37.6 | 55.0 | 71.8 | 78.4 | 81.0 | 87.1 | 12.9 |
| *Education of individual* | | | | | | | | | |
| Less than 12 years . . . . . . . . . . . | 31,193 | 100.0 | 30.6 | 43.1 | 57.3 | 63.2 | 66.2 | 73.5 | 26.5 |
| 12 years . . . . . . . . . . . . . . . . . | 28,670 | 100.0 | 34.6 | 50.6 | 67.2 | 74.1 | 77.4 | 83.9 | 16.1 |
| 13 years or more . . . . . . . . . . . . | 20,703 | 100.0 | 39.2 | 55.1 | 70.8 | 77.6 | 80.2 | 87.1 | 12.9 |
| *Geographic region* | | | | | | | | | |
| Northeast . . . . . . . . . . . . . . . . | 19,028 | 100.0 | 37.7 | 51.9 | 67.4 | 74.2 | 77.1 | 82.8 | 17.1 |
| North Central . . . . . . . . . . . . . . | 20,934 | 100.0 | 32.6 | 48.0 | 64.3 | 71.1 | 74.4 | 81.9 | 18.1 |
| South . . . . . . . . . . . . . . . . . . | 26,711 | 100.0 | 32.7 | 47.3 | 62.2 | 68.5 | 71.3 | 78.4 | 21.6 |
| West . . . . . . . . . . . . . . . . . . . | 15,142 | 100.0 | 34.7 | 48.7 | 63.7 | 70.0 | 73.1 | 80.3 | 19.7 |
| *Place of residence* | | | | | | | | | |
| SMSA . . . . . . . . . . . . . . . . . . | 54,686 | 100.0 | 35.9 | 51.0 | 66.5 | 72.9 | 75.8 | 82.5 | 17.5 |
| Central city . . . . . . . . . . . . . | 21,713 | 100.0 | 36.3 | 50.3 | 64.4 | 70.6 | 73.3 | 80.3 | 19.7 |
| Not central . . . . . . . . . . . . . | 32,973 | 100.0 | 35.7 | 51.5 | 67.8 | 74.3 | 77.4 | 84.0 | 16.0 |
| Outside SMSA . . . . . . . . . . . . . | 27,128 | 100.0 | 30.8 | 44.4 | 59.8 | 66.6 | 69.7 | 76.9 | 23.1 |
| *Health status* | | | | | | | | | |
| Excellent, very good, good . . . . . . . | 61,810 | 100.0 | 33.6 | 48.6 | 64.6 | 71.4 | 74.4 | 81.1 | 18.9 |
| Fair or poor . . . . . . . . . . . . . . . | 19,395 | 100.0 | 36.1 | 49.5 | 63.2 | 68.7 | 71.9 | 79.2 | 20.8 |

[1]Includes unknown interval.
[2]Excludes unknown interval.
[3]Total includes unknown income, education, and health status not shown separately

NOTES: The relative standard errors (RSE's) can be found in appendix I, figures I, II. Estimates for which the numerator has an RSE of more than 30 percent are indicated with an asterisk

**Table 10. Number and percent of persons 40 years of age and over having a glaucoma test in the past 2 years with total age adjusted, by race and education: United States, 1982**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

| Race and education | All persons 40 years and over | Age | | | | | Total age adjusted |
|---|---|---|---|---|---|---|---|
| | | 40–44 years | 45–54 years | 55–64 years | 65–74 years | 75 years and over | |
| **All races[1]** | Number in thousands | Percent | | | | | |
| All education | 38,199 | 34.7 | 46.8 | 48.4 | 51.5 | 49.8 | 46.7 |
| *Education of individual* | | | | | | | |
| Less than 12 years | 12,936 | 26.7 | 38.5 | 41.1 | 46.3 | 45.3 | 41.5 |
| 12 years | 13,973 | 35.3 | 49.4 | 50.8 | 55.0 | 58.2 | 48.7 |
| 13 years or more | 10,939 | 39.5 | 52.3 | 57.4 | 61.8 | 60.1 | 52.8 |
| **White** | | | | | | | |
| All education | 34,410 | 35.0 | 48.0 | 48.7 | 52.4 | 50.6 | 47.5 |
| *Education of individual* | | | | | | | |
| Less than 12 years | 10,948 | 25.9 | 39.1 | 40.8 | 47.0 | 46.0 | 41.9 |
| 12 years | 12,903 | 35.0 | 50.2 | 50.6 | 55.3 | 58.5 | 49.1 |
| 13 years or more | 10,257 | 40.6 | 53.4 | 57.7 | 62.5 | 60.2 | 53.8 |
| **Black** | | | | | | | |
| All education | 3,187 | 33.1 | 40.2 | 46.7 | 45.0 | 42.0 | 41.6 |
| *Education of individual* | | | | | | | |
| Less than 12 years | 1,795 | 30.7 | 37.8 | 43.1 | 44.4 | 42.1 | 40.7 |
| 12 years | 870 | 37.4 | 42.9 | 55.1 | 51.7 | *44.6 | 44.9 |
| 13 years or more | 482 | 29.7 | 44.7 | 54.4 | 41.7 | *57.1 | 42.9 |

[1]Includes other races not shown separately

NOTES· The relative standard errors (RSE's) can be found in appendix I, figures I, II. Estimates for which the numerator has an RSE of more than 30 percent are indicated with an asterisk.

**Table 11.** Number and percent of population and cumulative percent of persons 40 years of age and over having an electrocardiogram, and percent never having an electrocardiogram, by interval since last electrocardiogram and selected characteristics: United States, 1982

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

| Characteristic | All persons 40 years and over | | Interval since last electrocardiogram | | | | | | |
| | | | Less than 1 year | Less than 2 years | Less than 3 years | Less than 4 years | Less than 5 years | Ever | Never |
| | Number in thousands[1] | Percent[2] | Cumulative percent | | | | | Percent | |
| All persons[3] . . . . . . . . . . . . . . . | 81,814 | 100.0 | 30.6 | 40.9 | 50.6 | 56.7 | 60.4 | 76.4 | 23.6 |
| *Age* | | | | | | | | | |
| 40–44 years . . . . . . . . . . . . . . | 12,246 | 100.0 | 20.6 | 30.1 | 39.2 | 45.5 | 49.2 | 64.4 | 35.5 |
| 45–64 years . . . . . . . . . . . . . | 44,177 | 100.0 | 29.1 | 39.8 | 49.9 | 56.2 | 59.9 | 76.6 | 23.4 |
| 45–54 years . . . . . . . . . . . . | 22,266 | 100.0 | 26.2 | 36.6 | 46.8 | 53.3 | 56.8 | 73.0 | 27.0 |
| 55–64 years . . . . . . . . . . . . | 21,910 | 100.0 | 32.2 | 43.1 | 52.9 | 59.2 | 63.1 | 80.2 | 19.8 |
| 65–74 years . . . . . . . . . . . . . | 15,832 | 100.0 | 35.7 | 46.2 | 55.9 | 61.6 | 65.2 | 82.0 | 18.0 |
| 75 years and over . . . . . . . . . . | 9,559 | 100.0 | 41.2 | 50.8 | 59.2 | 64.5 | 67.9 | 81.3 | 18.7 |
| *Sex* | | | | | | | | | |
| Male . . . . . . . . . . . . . . . . . . . | 37,302 | 100.0 | 32.5 | 43.2 | 53.2 | 59.4 | 63.0 | 79.1 | 20.9 |
| Female . . . . . . . . . . . . . . . . . | 44,512 | 100.0 | 29.0 | 39.1 | 48.4 | 54.5 | 58.2 | 74.2 | 25.8 |
| *Race* | | | | | | | | | |
| White . . . . . . . . . . . . . . . . . . | 72,486 | 100.0 | 30.4 | 40.6 | 50.3 | 56.6 | 60.2 | 76.9 | 23.1 |
| Black . . . . . . . . . . . . . . . . . | 7,661 | 100.0 | 34.2 | 46.7 | 56.1 | 60.8` | 64.3 | 75.6 | 24.4 |
| Other . . . . . . . . . . . . . . . . . | 1,667 | 100.0 | 24.4 | 30.9 | 38.8 | 43.7 | 47.7 | 60.8 | 39.2 |
| *Hispanic origin* | | | | | | | | | |
| Non-Hispanic . . . . . . . . . . . . . . | 78,203 | 100.0 | 30.7 | 41.1 | 50.8 | 57.0 | 60.6 | 76.9 | 23.1 |
| Hispanic . . . . . . . . . . . . . . . . . | 3,611 | 100.0 | 28.4 | 37.7 | 46.2 | 50.9 | 53.9 | 67.3 | 32.7 |
| Mexican-American . . . . . . . . . . | 1,876 | 100.0 | 24.1 | 32.0 | 39.1 | 44.0 | 46.7 | 58.5 | 41.5 |
| *Income* | | | | | | | | | |
| Less than $10,000 . . . . . . . . . . . | 17,283 | 100.0 | 33.2 | 43.2 | 51.8 | 57.4 | 60.8 | 76.3 | 23.7 |
| $10,000–$19,999 . . . ,. . . . . . . . . | 19,022 | 100.0 | 29.3 | 38.4 | 47.8 | 54.2 | 58.1 | 75.4 | 24.6 |
| $20,000–$34,999 . . . . . . . . . . . . | 19,932 | 100.0 | 27.6 | 38.0 | 48.7 | 54.7 | 58.8 | 75.6 | 24.4 |
| $35,000 or more . . . . . . . . . . . . | 14,793 | 100.0 | 31.9 | 43.9 | 54.8 | 61.4 | 64.8 | 79.8 | 20.2 |
| *Education of individual* | | | | | | | | | |
| Less than 12 years . . . . . . . . . . . | 31,193 | 100.0 | 31.2 | 40.8 | 49.7 | 55.0 | 58.6 | 73.9 | 26.1 |
| 12 years . . . . . . . . . . . . . . . . . | 28,670 | 100.0 | 28.1 | 38.4 | 48.3 | 54.9 | 58.7 | 75.9 | 24.1 |
| 13 years or more . . . . . . . . . . . . | 20,703 | 100.0 | 33.0 | 44.5 | 55.0 | 61.6 | 65.2 | 81.1 | 18.9 |
| *Geographic region* | | | | | | | | | |
| Northeast . . . . . . . . . . . . . . . . | 19,028 | 100.0 | 34.5 | 45.0 | 54.7 | 60.7 | 64.2 | 79.8 | 20.2 |
| North Central . . . . . . . . . . . . . . | 20,934 | 100.0 | 26.7 | 37.2 | 46.5 | 52.4 | 56.1 | 73.7 | 26.3 |
| South . . . . . . . . . . . . . . . . . . | 26,711 | 100.0 | 31.4 | 41.7 | 51.5 | 57.5 | 61.2 | 76.6 | 23.4 |
| West . . . . . . . . . . . . . . . . . . | 15,142 | 100.0 | 29.6 | 39.7 | 49.4 | 56.0 | 59.8 | 75.7 | 24.3 |
| *Place of residence* | | | | | | | | | |
| SMSA . . . . . . . . . . . . . . . . . . | 54,686 | 100.0 | 32.5 | 43.3 | 53.2 | 59.5 | 63.0 | 78.6 | 21.4 |
| Central city . . . . . . . . . . . . . . | 21,713 | 100.0 | 33.9 | 45.2 | 54.8 | 60.7 | 64.2 | 78.8 | 21.2 |
| Not central . . . . . . . . . . . . . . | 32,973 | 100.0 | 31.6 | 42.0 | 52.2 | 58.6 | 62.3 | 78.4 | 21.6 |
| Outside SMSA . . . . . . . . . . . . . | 27,128 | 100.0 | 26.9 | 36.3 | 45.3 | 51.2 | 55.0 | 72.2 | 27.8 |
| *Health status* | | | | | | | | | |
| Excellent, very good, good . . . . . . . . | 61,810 | 100.0 | 25.8 | 35.8 | 45.7 | 52.2 | 55.9 | 73.4 | 26.6 |
| Fair or poor . . . . . . . . . . . . . . . . | 19,395 | 100.0 | 46.0 | 57.2 | 66.0 | 71.0 | 74.3 | 86.0 | 14.0 |

[1]Includes unknown interval.
[2]Excludes unknown interval.
[3]Total includes unknown income, education, and health status not shown separately.

NOTES: The relative standard errors (RSE's) can be found in appendix I, figures I, II. Estimates for which the numerator has an RSE of more than 30 percent are indicated with an asterisk.

**Table 12. Number and percent of population and cumulative percent of persons 17 years of age and over having a chest x ray, and percent never having an x ray, by interval since last chest x ray and selected characteristics: United States, 1982**

[Data are based on household interviews of the civilian noninstitutionalized population The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

| Characteristic | All persons 17 years and over | | Interval since last chest x ray | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Less than 1 year | Less than 2 years | Less than 3 years | Less than 4 years | Less than 5 years | Ever | Never |
| | Number in thousands[1] | Percent[2] | Cumulative percent | | | | | Percent | |
| All persons[3] . . . . . . . . . . . . . . . | 168,525 | 100.0 | 28.2 | 39.9 | 52.1 | 59.5 | 64.1 | 85.8 | 14.2 |
| **Age** | | | | | | | | | |
| 17–24 years . . . . . . . . . . . . . . | 32,845 | 100.0 | 21.5 | 31.9 | 42.4 | 48.7 | 52.6 | 64.8 | 35.3 |
| 25–44 years . . . . . . . . . . . . . | 66,112 | 100.0 | 23.2 | 34.8 | 48.0 | 56.3 | 61.5 | 87.5 | 12.5 |
| 25–34 years . . . . . . . . . . . . | 38,499 | 100.0 | 21.4 | 32.5 | 45.4 | 53.5 | 58.9 | 84.0 | 16.0 |
| 35–44 years . . . . . . . . . . . | 27,613 | 100.0 | 25.6 | 38.1 | 51.6 | 60.3 | 65.1 | 92.5 | 7.5 |
| 45–64 years . . . . . . . . . . . . . | 44,177 | 100.0 | 33.9 | 46.5 | 59.2 | 67.0 | 71.4 | 95.0 | 5.0 |
| 45–54 years . . . . . . . . . . . | 22,266 | 100.0 | 31.5 | 44.0 | 57.5 | 65.6 | 70.1 | 94.9 | 5.1 |
| 55–64 years . . . . . . . . . . . | 21,910 | 100.0 | 36.3 | 49.0 | 61.0 | 68.4 | 72.8 | 95.2 | 4.8 |
| 65–74 years . . . . . . . . . . . . | 15,832 | 100.0 | 38.2 | 50.8 | 61.9 | 68.2 | 72.1 | 92.8 | 7.2 |
| 75 years and over . . . . . . . . . . | 9,559 | 100.0 | 43.5 | 54.1 | 64.2 | 70.0 | 73.4 | 90.2 | 9.8 |
| **Sex** | | | | | | | | | |
| Male . . . . . . . . . . . . . . . . . | 79,611 | 100.0 | 28.0 | 39.9 | 52.3 | 59.9 | 64.5 | 86.8 | 13.2 |
| Female . . . . . . . . . . . . . . . . | 88,914 | 100.0 | 28.4 | 39.9 | 51.9 | 59.2 | 63.7 | 84.9 | 15.1 |
| **Race** | | | | | | | | | |
| White . . . . . . . . . . . . | 146,162 | 100.0 | 27.1 | 38.2 | 50.3 | 57.9 | 62.5 | 85.3 | 14.7 |
| Black . . . . . . . . . . . . . . . | 18,041 | 100.0 | 37.1 | 53.3 | 65.8 | 72.4 | 76.1 | 89.3 | 10.7 |
| Other . . . . . . . . . . . . . . . . | 4,322 | 100.0 | 29.6 | 41.7 | 55.5 | 63.2 | 68.4 | 87.6 | 12.4 |
| **Hispanic origin** | | | | | | | | | |
| Non-Hispanic . . . . . . . . . . . . . | 158,536 | 100.0 | 28.3 | 40.0 | 52.2 | 59.7 | 64.3 | 86.2 | 13.8 |
| Hispanic . . . . . . . . . . . . . | 9,989 | 100.0 | 27.9 | 39.2 | 50.6 | 57.1 | 61.1 | 78.4 | 21.6 |
| Mexican-American . . . . . . . . . . | 5,311 | 100.0 | 26.5 | 36.8 | 47.5 | 54.0 | 57.4 | 73.7 | 26 3 |
| **Income** | | | | | | | | | |
| Less than $10,000 . . . . . . . . . . . . . | 31,805 | 100.0 | 31.7 | 43.5 | 54.6 | 61.3 | 65.6 | 84.2 | 15.8 |
| $10,000–$19,999 . . . . . . . . . . . | 41,686 | 100.0 | 27.5 | 38.9 | 50.8 | 58.3 | 62.7 | 84.7 | 15.3 |
| $20,000–$34,999 . . . . . . . . . . . | 46,737 | 100.0 | 25.8 | 37.2 | 49.8 | 57.7 | 62.7 | 86.5 | 13.5 |
| $35,000 or more . . . . . . . . . . . | 30,239 | 100 0 | 27 8 | 40.1 | 53.3 | 61.2 | 65.7 | 88.4 | 11.6 |
| **Education of individual** | | | | | | | | | |
| Less than 12 years . . . . . . . . . . . | 48,664 | 100.0 | 31.3 | 42.4 | 53.6 | 60.1 | 64.2 | 83.0 | 17.0 |
| 12 years . . . . . . . . . . . . . . . . | 63,783 | 100.0 | 26.9 | 38.6 | 50.8 | 58.3 | 62.9 | 85.2 | 14.8 |
| 13 years or more . . . . . . . . . . | 54,308 | 100.0 | 26.9 | 39.0 | 52.2 | 60.3 | 65.2 | 89.0 | 11.0 |
| **Geographic region** | | | | | | | | | |
| Northeast . . . . . . . . . . . . . . . . | 37,576 | 100.0 | 28 5 | 39.6 | 51.2 | 58.6 | 63.1 | 85.7 | 14.3 |
| North Central . . . . . . . . . . . . . . | 43,633 | 100.0 | 26.4 | 37.7 | 50.1 | 57.9 | 62.7 | 85.9 | 14.1 |
| South . . . . . . . . . . . . . . . . | 54,965 | 100.0 | 30.0 | 42.8 | 54.9 | 62.1 | 66.3 | 86.0 | 14.0 |
| West . . . . . . . . . . . . . . . . | 32,351 | 100.0 | 27.4 | 38 5 | 51.1 | 58.6 | 63.3 | 85.2 | 14.8 |
| **Place of residence** | | | | | | | | | |
| SMSA . . . . . . . . . . . . . . . | 115,716 | 100.0 | 29.2 | 41.4 | 53.9 | 61.4 | 65.9 | 86.9 | 13.1 |
| Central city . . . . . . . . . . . . . | 46,693 | 100.0 | 31.1 | 44.4 | 56.8 | 64.2 | 68.4 | 87.8 | 12.2 |
| Not central . . . . . . . . . . . . . . | 69,022 | 100.0 | 27.9 | 39.3 | 51.9 | 59.5 | 64.3 | 86.3 | 13.7 |
| Outside SMSA . . . . . . . . . . . . . | 52,809 | 100.0 | 26.2 | 36 8 | 48.2 | 55.5 | 60.0 | 83.3 | 16.7 |
| **Health status** | | | | | | | | | |
| Excellent, very good, good . . . . . . . | 143,191 | 100.0 | 24.7 | 36.3 | 48.8 | 56.5 | 61.2 | 84.4 | 15.6 |
| Fair or poor . . . . . . . . . . . | 24,186 | 100.0 | 48.7 | 60.9 | 71.3 | 77.2 | 80.7 | 93.8 | 6.3 |

[1] Includes unknown interval
[2] Excludes unknown interval
[3] Total includes unknown income, education, and health status not shown separately

NOTES: The relative standard errors (RSE's) can be found in appendix I, figures I, II. Estimates for which the numerator has an RSE of more than 30 percent are indicated with an asterisk

**Table 13. Number and percent of population and cumulative percent of persons 17 years of age and over having a blood pressure test, and percent never having a test, by interval since last blood pressure test and selected characteristics: United States, 1982**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

| Characteristic | All persons 17 years and over | | Interval since last blood pressure test | | | | | | |
| | | | Less than 1 year | Less than 2 years | Less than 3 years | Less than 4 years | Less than 5 years | Ever | Never |
| | Number in thousands[1] | Percent[2] | Cumulative percent | | | | | Percent | |
| All persons[3] . . . . . . . . . . . . . . . | 168,525 | 100.0 | 75.0 | 84.9 | 91.1 | 93.9 | 95.1 | 98.8 | 1.2 |
| **Age** | | | | | | | | | |
| 17–24 years . . . . . . . . . . . . . . | 32,845 | 100.0 | 71.0 | 83.0 | 90.2 | 93.1 | 94.6 | 97.0 | 3.0 |
| 25–44 years . . . . . . . . . . . . . | 66,112 | 100.0 | 72.1 | 83.7 | 90.6 | 93.8 | 95.2 | 99.2 | 0.8 |
| 25–34 years . . . . . . . . . . . . | 38,499 | 100.0 | 72.4 | 84.0 | 91.0 | 94.0 | 95.3 | 99.1 | 0.9 |
| 35–44 years . . . . . . . . . . . . | 27,613 | 100.0 | 71.8 | 83.3 | 90.2 | 93.5 | 94.9 | 99.4 | 0.6 |
| 45–64 years . . . . . . . . . . . . . | 44,177 | 100.0 | 77.2 | 85.8 | 91.5 | 94.1 | 95.2 | 99.4 | 0.6 |
| 45–54 years . . . . . . . . . . . . | 22,266 | 100.0 | 75.2 | 84.4 | 90.6 | 93.6 | 94.6 | 99.3 | 0.7 |
| 55–64 years . . . . . . . . . . . . | 21,910 | 100.0 | 79.3 | 87.2 | 92.4 | 94.7 | 95.8 | 99.5 | 0.5 |
| 65–74 years . . . . . . . . . . . . . | 15,832 | 100.0 | 82.5 | 88.5 | 92.5 | 94.3 | 95.3 | 99.2 | 0.8 |
| 75 years and over . . . . . . . . . . . | 9,559 | 100.0 | 86.0 | 90.2 | 93.6 | 95.3 | 96.1 | 99.3 | 0.8 |
| **Sex** | | | | | | | | | |
| Male . . . . . . . . . . . . . . . . . . | 79,611 | 100.0 | 69.8 | 81.0 | 88.6 | 91.9 | 93.6 | 98.5 | 1.5 |
| Female . . . . . . . . . . . . . . . . | 88,914 | 100.0 | 79.7 | 88.4 | 93.4 | 95.6 | 96.4 | 99.1 | 0.9 |
| **Race** | | | | | | | | | |
| White . . . . . . . . . . . . . . . . . | 146,162 | 100.0 | 74.9 | 84.8 | 91.1 | 93.9 | 95.1 | 98.9 | 1.1 |
| Black . . . . . . . . . . . . . . . . . | 18,041 | 100.0 | 77.9 | 87.5 | 92.7 | 94.7 | 95.9 | 98.5 | 1.5 |
| Other . . . . . . . . . . . . . . . . . | 4,322 | 100.0 | 68.1 | 78.8 | 87.3 | 90.7 | 92.3 | 96.9 | 3.1 |
| **Hispanic origin** | | | | | | | | | |
| Non-Hispanic . . . . . . . . . . . . . . | 158,536 | 100.0 | 75.5 | 85.3 | 91.5 | 94.1 | 95.4 | 99.0 | 1.0 |
| Hispanic . . . . . . . . . . . . . . . . | 9,989 | 100.0 | 68.0 | 79.3 | 86.3 | 89.6 | 91.4 | 95.3 | 4.7 |
| Mexican-American . . . . . . . . . . . | 5,311 | 100.0 | 65.3 | 76.5 | 83.5 | 87.3 | 88.9 | 93.1 | 6.9 |
| **Income** | | | | | | | | | |
| Less than $10,000 . . . . . . . . . . . | 31,805 | 100.0 | 76.1 | 84.9 | 90.4 | 93.0 | 94.4 | 98.5 | 1.5 |
| $10,000–$19,999 . . . . . . . . . . . | 41,686 | 100.0 | 74.0 | 83.4 | 90.1 | 93.0 | 94.4 | 98.6 | 1.4 |
| $20,000–$34,999 . . . . . . . . . . . | 46,737 | 100.0 | 74.7 | 85.4 | 92.0 | 94.5 | 95.8 | 99.3 | 0.7 |
| $35,000 or more . . . . . . . . . . . | 30,239 | 100.0 | 76.1 | 86.6 | 92.5 | 95.4 | 96.5 | 99.4 | 0.6 |
| **Education of individual** | | | | | | | | | |
| Less than 12 years . . . . . . . . . . . | 48,664 | 100.0 | 74.1 | 82.7 | 88.7 | 91.5 | 93.0 | 97.6 | 2.4 |
| 12 years . . . . . . . . . . . . . . . . | 63,783 | 100.0 | 74.5 | 84.8 | 91.3 | 94.1 | 95.3 | 99.1 | 0.9 |
| 13 years or more . . . . . . . . . . . . | 54,308 | 100.0 | 76.6 | 87.1 | 93.1 | 95.7 | 96.8 | 99.6 | 0.4 |
| **Geographic region** | | | | | | | | | |
| Northeast . . . . . . . . . . . . . . . | 37,576 | 100.0 | 75.8 | 85.5 | 91.7 | 94.2 | 95.5 | 99.1 | 0.9 |
| North Central . . . . . . . . . . . . . | 43,633 | 100.0 | 73.3 | 83.9 | 90.4 | 93.3 | 94.7 | 99.0 | 1.0 |
| South . . . . . . . . . . . . . . . . . | 54,965 | 100.0 | 76.9 | 86.0 | 91.7 | 94.3 | 95.5 | 98.7 | 1.3 |
| West . . . . . . . . . . . . . . . . . | 32,351 | 100.0 | 73.5 | 84.0 | 90.6 | 93.5 | 94.7 | 98.5 | 1.5 |
| **Place of residence** | | | | | | | | | |
| SMSA . . . . . . . . . . . . . . . . . | 115,716 | 100.0 | 75.1 | 85.4 | 91.5 | 94.2 | 95.4 | 98.9 | 1.1 |
| Central city . . . . . . . . . . . . . | 46,693 | 100.0 | 75.2 | 85.2 | 91.1 | 93.8 | 95.1 | 98.7 | 1.3 |
| Not central . . . . . . . . . . . . . | 69,022 | 100.0 | 75.1 | 85.5 | 91.8 | 94.5 | 95.7 | 99.0 | 1.0 |
| Outside SMSA . . . . . . . . . . . . . | 52,809 | 100.0 | 74.9 | 84.0 | 90.3 | 93.2 | 94.4 | 98.7 | 1.3 |
| **Health status** | | | | | | | | | |
| Excellent, very good, good . . . . . . . . | 143,191 | 100.0 | 73.0 | 83.8 | 90.5 | 93.4 | 94.8 | 98.7 | 1.3 |
| Fair or poor . . . . . . . . . . . . . . | 24,186 | 100.0 | 86.9 | 91.9 | 95.1 | 96.6 | 97.2 | 99.5 | 0.5 |

[1]Includes unknown interval.
[2]Excludes unknown interval.
[3]Total includes unknown income, education, and health status not shown separately.

NOTES: The relative standard errors (RSE's) can be found in appendix I, figures I, II. Estimates for which the numerator has an RSE of more than 30 percent are indicated with an asterisk.

**Table 14. Number and percent of persons 17 years of age and over having a blood pressure test in the past 2 years with total age adjusted, by race and education: United States, 1982**

[Data are based on household interviews of the civilian noninstitutionalized population The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

| Race and education | Total population 17 years and over | Age | | | | | | Total age adjusted |
|---|---|---|---|---|---|---|---|---|
| | | 17–24 years | 25–34 years | 35–44 years | 45–54 years | 55–64 years | 65 years and over | |
| All races[1] | Number in thousands | | | | Percent | | | |
| All education . . . . . . . . . . . . . . . . | 138,555 | 79.4 | 81.4 | 80.6 | 81.6 | 84.5 | 87.4 | 82.2 |
| Education of individual | | | | | | | | |
| Less than 12 years . . . . . . . . . . . . | 38,990 | 74.3 | 73.6 | 75.0 | 79.4 | 83.5 | 86.9 | 80.1 |
| 12 years . . . . . . . . . . . . . . . . . . . | 52,464 | 83.4 | 80.5 | 80.8 | 82.5 | 85.4 | 88.5 | 82.3 |
| 13 years or more . . . . . . . . . . . . . . | 46,080 | 83.4 | 85.1 | 83.6 | 83.9 | 86.5 | 89.6 | 84.8 |
| White | | | | | | | | |
| All education . . . . . . . . . . . . . . . . | 120,254 | 79.5 | 81.7 | 80.4 | 81.4 | 84.2 | 87.4 | 82.3 |
| Education of individual | | | | | | | | |
| Less than 12 years . . . . . . . . . . . . | 31,951 | 74.1 | 72.8 | 74.1 | 78.9 | 83.2 | 86.8 | 80.0 |
| 12 years . . . . . . . . . . . . . . . . . . . | 46,293 | 80.3 | 80.6 | 80.6 | 82.2 | 85.1 | 88.5 | 82.2 |
| 13 years or more . . . . . . . . . . . . . . | 41,215 | 83.8 | 85.5 | 83.6 | 83.5 | 86.1 | 89.6 | 85.0 |
| Black | | | | | | | | |
| All education . . . . . . . . . . . . . . . . | 15,021 | 80.8 | 81.5 | 83.1 | 84.3 | 87.0 | 87.9 | 83.3 |
| Education of individual | | | | | | | | |
| Less than 12 years . . . . . . . . . . . . | 6,039 | 75.3 | 77.2 | 79.9 | 81.6 | 85.6 | 88.3 | 81.6 |
| 12 years . . . . . . . . . . . . . . . . . . . | 5,282 | 83.3 | 80.8 | 83.4 | 88.3 | 91.2 | 87.3 | 83.8 |
| 13 years or more . . . . . . . . . . . . . . | 3,530 | 85.7 | 85.6 | 87.4 | 87.7 | 91.3 | 89.0 | 86.7 |

[1]Includes unknown races not shown separately.

NOTES· The relative standard errors (RSE's) can be found in appendix I, figures I, II. Estimates for which the numerator has an RSE of more than 30 percent are indicated with an asterisk.

**Table 15. Number and percent of children and youths 3–16 years of age who used preventive care services in the past 2 years, by race and education: United States, 1982**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

| Race and education | Total children 3–16 years | Frequent user | Occasional user | Infrequent or nonuser |
|---|---|---|---|---|
| **All races[1]** | Number in thousands | | Percent distribution | |
| All education . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 47,809 | 100.0 | 53.3 | 34.9 | 11.8 |
| *Education of family reference person* | | | | |
| Less than 12 years . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 12,780 | 100.0 | 47.8 | 36.6 | 15.5 |
| 12 years . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 17,870 | 100.0 | 53.1 | 35.4 | 11.5 |
| 13 years or more . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 16,832 | 100.0 | 57.9 | 33.3 | 8.8 |
| **White** | | | | |
| All education . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 39,090 | 100.0 | 52.8 | 35.8 | 11.5 |
| *Education of family reference person* | | | | |
| Less than 12 years . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 9,363 | 100.0 | 46.6 | 37.8 | 15.6 |
| 12 years . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 14,714 | 100.0 | 51.9 | 36.8 | 11.3 |
| 13 years or more . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 14,772 | 100.0 | 57.8 | 33.6 | 8.6 |
| **Black** | | | | |
| All education . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 7,176 | 100.0 | 56.9 | 30.3 | 12.8 |
| *Education of family reference person* | | | | |
| Less than 12 years . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 3,061 | 100.0 | 51.9 | 32.5 | 15.5 |
| 12 years . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 2,699 | 100.0 | 60.4 | 28.2 | 11.5 |
| 13 years or more . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 1,361 | 100.0 | 61.2 | 30.1 | 8.7 |

[1]Includes other races not shown separately.

NOTES: The relative standard errors (RSE's) can be found in appendix I, figures I, II. Estimates for which the numerator has an RSE of more than 30 percent are indicated with an asterisk.

**Table 16. Number and percent of women in the child bearing ages of 17–39 years who used preventive care services in the past 2 years, by race and education: United States, 1982**

[Data are based on household interviews of the civilian noninstitutionalized population The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

| Race and education | Total children 3–16 years | Frequent user | Occasional user | Infrequent or nonuser |
|---|---|---|---|---|
| All races[1] | Number in thousands | Percent distribution | | |
| All education | 44,402 | 100.0 | 36.3 | 44.4 | 19.3 |
| Education of individual | | | | | |
| Less than 12 years | 8,581 | 100.0 | 26.8 | 44.5 | 28.7 |
| 12 years | 19,192 | 100.0 | 35.4 | 45.9 | 18.8 |
| 13 years or more | 16,381 | 100.0 | 42.7 | 42.9 | 14.4 |
| White | | | | | |
| All education | 37,325 | 100.0 | 35.6 | 44.9 | 19.5 |
| Education of individual | | | | | |
| Less than 12 years | 6,768 | 100.0 | 24.8 | 44.9 | 30.3 |
| 12 years | 16,266 | 100.0 | 34.6 | 46.3 | 19.1 |
| 13 years or more | 14,097 | 100.0 | 42.1 | 43.6 | 14.3 |
| Black | | | | | |
| All education | 5,661 | 100.0 | 42.6 | 41.9 | 15.5 |
| Education of individual | | | | | |
| Less than 12 years | 1,466 | 100.0 | 36.0 | 43.0 | 20.9 |
| 12 years | 2,515 | 100.0 | 41.6 | 43.1 | 15.3 |
| 13 years or more | 1,654 | 100.0 | 50.4 | 39.2 | 10.4 |

[1]Includes other races not shown separately

NOTES· The relative standard errors (RSE's) can be found in appendix I, figures I, II Estimates for which the numerator has an RSE of more than 30 percent are indicated with an asterisk.

**Table 17. Number and percent of adults 40 years of age and over at risk of chronic disease and who used preventive care in the past 2 years, by race and education: United States, 1982**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

| Race and education | Total population 40 years and over | | Frequent user | Occasional user | Infrequent or nonuser |
|---|---|---|---|---|---|
| **All races[1]** | Number in thousands | | Percent distribution | | |
| All education . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 81,814 | 100.0 | 52.4 | 37.3 | 10.3 |
| Education of individual | | | | | |
| Less than 12 years . . . . . . . . . . . . . . . . . . . . . . . . . . . | 31,193 | 100.0 | 48.8 | 40.1 | 11.1 |
| 12 years . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 28,670 | 100.0 | 53.0 | 37.5 | 9.5 |
| 13 years or more . . . . . . . . . . . . . . . . . . . . . . . . . . . | 20,703 | 100.0 | 58.0 | 33.3 | 8.7 |
| **White** | | | | | |
| All education . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 72,486 | 100.0 | 52.3 | 37.5 | 10.3 |
| Education of individual | | | | | |
| Less than 12 years . . . . . . . . . . . . . . . . . . . . . . . . . . . | 26,130 | 100.0 | 48.4 | 40.6 | 11.0 |
| 12 years . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 26,262 | 100.0 | 52.6 | 37.9 | 9.6 |
| 13 years or more . . . . . . . . . . . . . . . . . . . . . . . . . . . | 19,065 | 100.0 | 58.1 | 33.1 | 8.8 |
| **Black** | | | | | |
| All education . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 7,661 | 100.0 | 53.5 | 36.2 | 10.2 |
| Education of individual | | | | | |
| Less than 12 years . . . . . . . . . . . . . . . . . . . . . . . . . . . | 4,414 | 100.0 | 51 8 | 37.4 | 10.8 |
| 12 years . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | 1,939 | 100.0 | 58.5 | 33.5 | 8.0 |
| 13 years or more . . . . . . . . . . . . . . . . . . . . . . . . . . . | 1,121 | 100.0 | 56.2 | 36.2 | 7.6 |

[1]Includes other races not shown separately.

NOTES: The relative standard errors (RSE's) can be found in appendix I, figures I, II. Estimates for which the numerator has an RSE of more than 30 percent are indicated with an asterisk

**Table 18. Number and percent of population and cumulative percent of persons of recommended age groups having an examination, and percent never having an examination, by interval since last examination: United States, 1982**

[Data are based on household interviews of the civilian noninstitutionalized population. The survey design, general qualifications, and information on the reliability of the estimates are given in appendix I. Definitions of terms are given in appendix II]

| Examination and age group | All persons | | Interval since last exam | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Less than 1 year | Less than 2 years | Less than 3 years | Less than 4 years | Less than 5 years | Ever | Never |
| | Number in thousands | Percent | Cumulative percent | | | | | Percent | |
| Total . . . . . . . . . . . . . . . . . . | 216,334 | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . |
| **Routine physical (children)** | | | | | | | | | |
| 3–5 years . . . . . . . . . . . . . . . . . . | 9,883 | 100.0 | 69.0 | 82.2 | 91.6 | 94.8 | 96.2 | 96.3 | 3.7 |
| 6–11 years . . . . . . . . . . . . . . . | 19,756 | 100.0 | 56.6 | 69.3 | 83.1 | 88.1 | 91.1 | 96.4 | 3.6 |
| 12–17 years . . . . . . . . . . . . . . | 18,170 | 100.0 | 59.8 | 70.5 | 81.9 | 86.6 | 88.5 | 96.2 | 3.8 |
| **Eye exam (children)** | | | | | | | | | |
| 3–5 years . . . . . . . . . . . . . . . . . . | 9,883 | 100.0 | 37 6 | 44.7 | 46.7 | 47.1 | 47.2 | 47.2 | 52.8 |
| 6–11 years . . . . . . . . . . . . . . | 19,756 | 100.0 | 72.2 | 86 5 | 92.4 | 93.8 | 94.4 | 94.8 | 5.2 |
| 12–17 years . . . . . . . . . . . . . . | 22,243 | 100.0 | 60.4 | 76.7 | 88.2 | 91.8 | 93.6 | 96.9 | 3.1 |
| **Breast exam** | | | | | | | | | |
| 18–24 years . . . . . . . . . . . . . . . | 14,813 | 100.0 | 60.1 | 74.1 | 79.3 | 81.3 | 82.3 | 83.4 | 16.6 |
| 25–39 years . . . . . . . . . . . . . . . | 27,656 | 100.0 | 60.5 | 78.8 | 87.7 | 91.3 | 93.2 | 97.1 | 2.9 |
| 40–59 years . . . . . . . . . . . . . . . | 23,935 | 100.0 | 47.2 | 64.2 | 75.3 | 81.3 | 84.0 | 95.1 | 4.9 |
| 60–74 years . . . . . . . . . . . . . | 14,522 | 100.0 | 39.6 | 52.2 | 63.2 | 69.2 | 72.2 | 86.7 | 13.3 |
| 75 years and over . . . . . . . . . . . . | 6,054 | 100.0 | 38.4 | 47.3 | 56.1 | 59.4 | 62.3 | 76.7 | 23.3 |
| **Pap smear** | | | | | | | | | |
| 18–24 years . . . . . . . . . . . . . . . | 14,813 | 100.0 | 58.8 | 72.0 | 76.5 | 77.9 | 78.5 | 79.1 | 20.9 |
| 25–39 years . . . . . . . . . . . . . . . | 27,656 | 100.0 | 58.7 | 77.9 | 87.2 | 91.1 | 93.1 | 97.5 | 2.5 |
| 40–59 years . . . . . . . . . . . . . . . | 23,935 | 100.0 | 40.2 | 57.6 | 69.8 | 76.6 | 79.9 | 95.9 | 4.1 |
| 60–74 years . . . . . . . . . . . . . | 14,522 | 100.0 | 28.4 | 40.6 | 53.1 | 59.6 | 63.4 | 86.8 | 13.2 |
| **Eye exam (adults)** | | | | | | | | | |
| 40–59 years . . . . . . . . . . . . . . . | 46,024 | 100.0 | 35.8 | 55.3 | 74.8 | 82.9 | 86.5 | 96.6 | 3.4 |
| 60–74 years . . . . . . . . . . . . . . | 26,232 | 100.0 | 38.7 | 56.3 | 75.5 | 83.9 | 88.0 | 98.5 | 1.5 |
| 75 years and over . . . . . . . . . . . | 9,559 | 100.0 | 43.5 | 57.8 | 73.5 | 81.4 | 85.3 | 98.0 | 2.0 |
| **Blood pressure** | | | | | | | | | |
| 18–24 years . . . . . . . . . . . . . . . | 28,772 | 100 0 | 71.3 | 83.5 | 90.7 | 93.5 | 95.1 | 97.4 | 2.6 |
| 25–39 years . . . . . . . . . . . . . . . | 53,866 | 100.0 | 72.4 | 84.0 | 91.0 | 94.0 | 95.3 | 99.2 | 0.8 |
| 40–59 years . . . . . . . . . . . . . . . | 46,024 | 100.0 | 74.7 | 84.5 | 90.6 | 93.6 | 94.8 | 99.3 | 0.7 |
| 60–74 years . . . . . . . . . . . . . | 26,232 | 100.0 | 81.8 | 88.2 | 92.6 | 94.6 | 95.6 | 99.3 | 0.7 |
| 75 years and over . . . . . . . . . . . | 9,559 | 100.0 | 86.0 | 90.2 | 93.6 | 95.3 | 96.1 | 99.3 | 0.8 |
| **Electrocardiogram** | | | | | | | | | |
| 40–59 years . . . . . . . . . . . . . . . | 46,024 | 100.0 | 26.0 | 36.4 | 46.2 | 52.6 | 56.2 | 72.3 | 27.7 |

NOTES· The relative standard errors (RSE's) can be found in appendix I, figures I, II. Estimates for which the numerator has an RSE of more than 30 percent are indicated with an asterisk.

# Appendixes

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## List of appendix figures

# Appendix I
# Technical notes on methods

## Background of this report

This report is one of a series of statistical reports prepared by the National Center for Health Statistics. It is based on information collected in a continuing nationwide sample of households in the National Health Interview Survey (NHIS).

The National Health Interview Survey utilizes a questionnaire for obtaining information on personal and demographic characteristics, illnesses, injuries, impairments, chronic conditions, and other health topics. As data relating to each of these various broad topics are tabulated and analyzed, separate reports are issued that cover one or more of the specific topics.

The population covered by the sample for NHIS is the civilian noninstitutionalized population of the United States living at the time of the interview. The sample does not include members of the Armed Forces or U.S. nationals living in foreign countries. It should also be noted that the estimates shown do not represent a complete measure of any given topic during the specified calendar period because data are not collected in the interview for persons who died during the reference period. For many types of statistics collected in the survey, the reference period covers the 2 weeks prior to the interview week. For such a short period, the contribution by decedents to a total inventory of conditions or services should be very small. However, the contribution by decedents during a long reference period (such as 1 year) might be sizable, especially for older persons.

## Statistical design of the National Health Interview Survey

### General plan

The sampling plan of the survey follows a multistage probability design that permits a continuous sampling of the civilian noninstitutionalized population of the United States. The sample is designed in such a way that the sample of households interviewed each week is representative of the target population and that weekly samples are additive over time. This feature of the design permits continuous measurement of characteristics of samples by aggregating weeks of data. It also permits more detailed analysis of less common characteristics and smaller categories of health-related items. The continuous collection also has administrative and operational advantages because fieldwork can be handled on a continuing basis with an experienced, stable staff.

The overall sample was designed so that tabulations can be provided for each of the four major geographic regions and for selected standard metropolitan stastistical areas in the United States.

The first stage of the sample design consists of drawing a sample of 376 primary sampling units (PSU's) from approximately 1,900 geographically defined PSU's. A PSU consists of a county, a small group of contiguous counties, or a standard metropolitan statistical area. The PSU's collectively cover the 50 States and the District of Columbia.

With no loss in general understanding, the remaining stages can be combined and treated in this discussion as an ultimate stage. Within PSU's, then, ultimate stage units called segments are defined in such a manner that each segment contains an expected four households. Three main types of segments are used:

- Area segments, which are defined geographically.
- List segments, using 1980 census registers as the frame.
- Permit segments, using updated lists of building permits issued in sample PSU's since 1980.

Census address listings were used for all areas of the country where addresses were well defined and could be used to locate housing units. In general the list frame included the larger urban areas of the United States, from which about two-thirds of the NHIS sample was selected.

The usual NHIS sample consists of approximately 12,000 segments containing about 51,000 assigned households, of which 9,000 are vacant, demolished, or occupied by persons not in the scope of the survey. The 42,000 eligible occupied households yield a probability sample of about 111,000 persons.

Descriptive material on data collection, field procedures, and questionnaire development in NHIS have been published[12,13] as well as a detailed description of the sample design and estimation procedure.[14,15]

### Collection of data

Field operations for the survey are performed by the U.S. Bureau of the Census under specifications established by the National Center for Health Statistics (NCHS). In accordance with these specifications, the U.S. Bureau of the Census participates in survey planning, selects the sample, and conducts the field interviewing as an agent of NCHS. The data are coded, edited, and tabulated by NCHS.

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NOTE: A list of references follows the text.

## Estimating procedures

Because the design of NHIS is a complex multistage probability sample, it is necessary to use complex procedures in the derivation of estimates. Four basic operations are involved:

1. *Inflation by the reciprocal of the probability of selection*—The probability of selection is the product of the probabilities of selection from each step of selection in the design (PSU, segment, and household).
2. *Nonresponse adjustment*—The estimates are inflated by a multiplication factor that has as its numerator the number of sample households in a given segment and as its denominator the number of households interviewed in that segment.
3. *First-stage ratio adjustment*—Sampling theory indicates that the use of auxiliary information which is highly correlated with the variables being estimated improves the reliability of the estimates. To reduce the variability among PSU's within a region, the estimates are ratio adjusted to the 1980 populations within race-residence classes.
4. *Poststratification by age-sex-race*—The estimates are ratio adjusted within each of 60 age-sex-race cells to an independent estimate of the population of each cell for the survey period. These independent estimates are prepared by the U.S. Bureau of the Census. Both the first-stage and poststratified ratio adjustments take the form of multiplication factors applied to the weight of each elementary unit (person, household, condition, and hospitalization).

The effect of the ratio-estimating process is to make the sample more closely representative of the civilian noninstitutionalized population by age, sex, race, and residence, which thereby reduces sampling variance.

As noted, each week's sample represents the population living during that week and characteristics of the population. Consolidation of samples over a time period, such as a calendar quarter, produces estimates of average characteristics of the U.S. population for the calendar quarter. Similarly, population data for a year are averages of the four quarterly figures.

For prevalence statistics, such as number of persons with speech impairments or number of persons classified by time interval since last physician visit, figures are first calculated for each calendar quarter by averaging estimates for all weeks of interviewing in the quarter. Prevalence data for a year are then obtained by averaging the four quarterly figures.

For other types of statistics—those measuring the number of occurrences during a specified time period, such as incidence of acute conditions, number of disability days, or number of visits to a doctor—a similar computational procedure is used, but the statistics are interpreted differently. For these items, the interviewer asks for the respondent's experience over the 2 calendar weeks prior to the week of interview. In such instances, the estimated quarterly total for the statistic is 6.5 times the average 2-week estimate produced by the 13 successive samples taken during the period. The annual total is the sum of the four quarters. Thus the experience of persons interviewed during a year—experience which actually occurred for each person in a 2-calendar-week interval prior to week of interview—is treated as though it measured the total of such experience during the year. Such interpretation leads to no significant bias.

## General qualifications

### Nonresponse

Data were adjusted for nonresponse by a procedure that imputes to persons in a household whose members were not interviewed the characteristics of persons in households in the same segment who were interviewed. Interviews were completed in 97.0 percent of the sample households.

### The interview process

The statistics presented in this report are based on replies obtained in interviews with persons in the sample households. Each person 19 years of age and over present at the time of interview was interviewed individually. For children and for adults not present in the home at the time of the interview, the information was obtained from a related household member such as a spouse or the mother of a child.

There are limitations to the accuracy of diagnostic and other information collected in household interviews. For diagnostic information, the household respondent can usually pass on to the interviewer only the information the physician has given to the family. For conditions not medically attended, diagnostic information is often no more than a description of symptoms. However, other facts, such as the number of disability days caused by the condition, can be obtained more accurately from household members than from any other source because only the persons concerned are in a position to report this information. Regarding this and other types of information, a respondent may not answer a question in the intended manner because he or she has not properly understood the question, has forgotten the event, or does not wish to divulge the answer.

### Rounding of numbers

The original tabulations on which the data in this report are based show all estimates to the nearest whole unit. All consolidations were made from the original tabulations using the estimates to the nearest unit. In the final published tables, the figures are rounded to the nearest thousand, although they are not necessarily accurate to that detail. Devised statistics such as rates and percent distributions are computed after the estimates on which these are based have been rounded to the nearest thousand.

### Population figures

Some of the published tables include population figures for specified categories. Except for certain overall totals by age, sex, and race, which are adjusted to independent estimates, these figures are based on the sample of households in NHIS. They are given primarily to provide denominators for rate computation, and for this purpose they are more appropriate for use with the accompanying measures of health characteristics than other population data that may be available.

With the exception of the overall totals by age, sex, and race mentioned above, the population figures differ from figures (which are derived from different sources) published in reports of the U.S. Bureau of the Census. Official population estimates are presented in Bureau of the Census reports in Series P–20, P–25, and P–60.

## Bias

As in any survey, results are subject to reporting and processing errors and errors due to nonresponse. To the extent possible, these types of errors were kept to a minimum by methods built into survey procedures.[16] Although it is very difficult to measure the extent of bias in NHIS, a number of studies have been conducted to examine this problem. The results have been published in several reports.[17–20]

## Reliability of estimates

Because the statistics presented in this report are based on a sample, they will differ somewhat from the figures that would have been obtained if a complete census had been taken using the same schedules, instructions, and interviewing personnel and procedures.

The standard error is primarily a measure of sampling variability, that is, the variations that might occur by chance because only a sample of the population is surveyed. The chances are about 68 of every 100 that an estimate from the sample would differ from a complete census by less than the standard error. The chances are about 95 of every 100 that the difference would be less than twice the standard error and about 99 of every 100 that it would be less than 2 1/2 times as large. The standard errors shown in this report were computed using the balanced half-sample replication procedure.

## Standard error charts

The relative standard error of an estimate is obtained by dividing the standard error of the estimate by the estimate itself and is expressed as a percent of the estimate. For this report, asterisks are shown for any rate or percent with more than a 30-percent relative standard error. Included in this appendix are charts from which the relative standard errors for estimates shown in the report can be determined.

## General rules for determining relative standard errors

The following rules will enable the reader to determine approximate relative standard errors from the charts for estimates presented in this report:

Rule 1. *Estimates of aggregates*—Approximate relative standard errors for estimates of aggregates, such as the number of persons with a given characteristic, are obtained from the curve in figure I. The number of

persons in the total U.S. population or in an age-sex-race class of the total population is adjusted to official U.S. Bureau of the Census figures and is not subject to sampling error.

Rule 2. *Estimates of percents in a percent distribution*—Relative standard errors for percents in a percent distribution of a total are obtained from appropriate curves in figure II. For values that do not fall on one of the curves presented in the chart, visual interpolation will provide a satisfactory approximation.

Rule 3. *Estimates of rates where the numerator is a subclass of the denominator*—This rule applies for prevalence rates or where a unit of the numerator occurs, with few exceptions, only once in the year for any one unit in the denominator. For example, in computing the rate of visual impairments per 1,000 population, the numerator consisting of persons with the impairment is a subclass of the denominator, which includes all persons in the population. Such rates, if converted to rates per 100, may be treated as though they were percents, and the relative standard errors obtained from the percent charts for population estimates.

Rule 4. *Estimates of rates where the numerator is not a subclass of the denominator*—This rule applies where a unit of the numerator often occurs more than once for any one unit in the denominator. For example, for the number of persons injured per 100 currently employed persons per year, it is possible that a person in the denominator could have sustained more than one of the injuries included in the numerator. Approximate relative standard errors for rates of this kind may be computed as follows:

a. Where the denominator is the total U.S. population or includes all persons in one or more of the age-sex-race groups of the total population, the relative error of the rate is equivalent to the relative error of the numerator, which can be obtained directly from the appropriate chart.

b. In other cases the relative standard error of the numerator and of the denominator can be obtained from the appropriate curve. Square each of these relative errors, add the resulting values, and extract the square root of the sum. This procedure will result in an upper bound on the standard error and will overstate the error to the extent that the correlation between numerator and denominator is greater than zero.

Rule 5. *Estimates of difference between two statistics (mean, rate, total, etc.)*—The standard error of a difference is approximately the square root of the sum of the squares of each standard error considered separately. A formula for the standard error of a difference,

$$d = X_1 - X_2$$

is

$$\sigma_d = \sqrt{(X_1 V_{x_1})^2 + (X_2 V_{x_2})^2}$$

where $X_1$ is the estimate for class 1, $X_2$ is the estimate for class 2, and $V_{X_1}$ and $V_{X_2}$ are the relative errors of $X_1$ and $X_2$, respectively. This formula will represent the actual standard error quite accurately for the difference between separate and uncorrelated characteristics, although it is only a rough approximation in most other cases. The relative standard error of each estimate involved in such a difference can be determined by one of the four rules above, whichever is appropriate.

**Figure I. Relative standard errors for population characteristics**
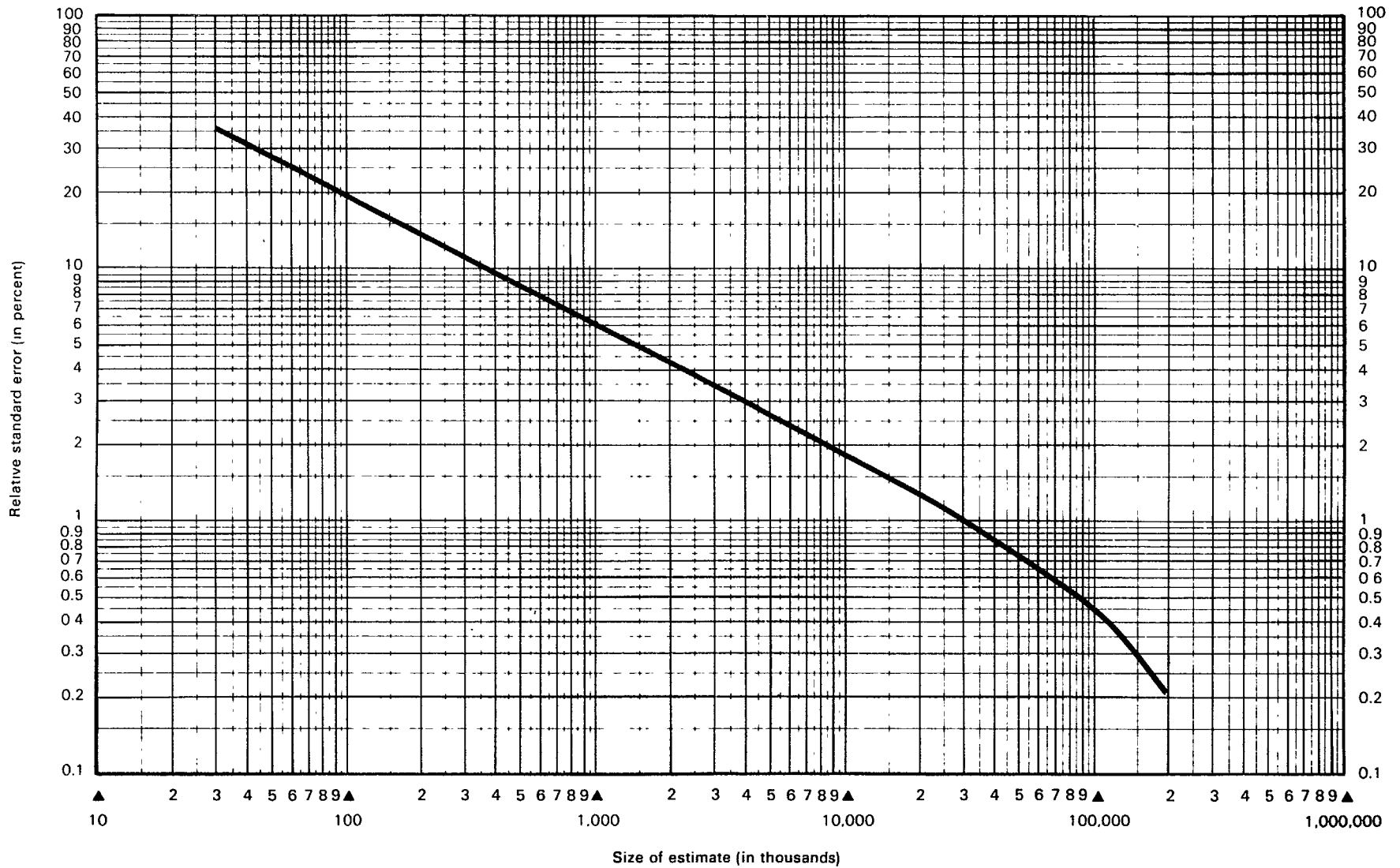
NOTE: This curve represents estimates of relative standard errors based on 4 quarters of data collection for estimates of aggregates.

EXAMPLE OF USE OF CHART. An estimate of 10,000,000 persons (on scale at bottom of chart) has a relative standard error of 1.9 percent (read from scale at left side of chart), or a standard error of 190,000 (1.9 percent of 10,000,000).
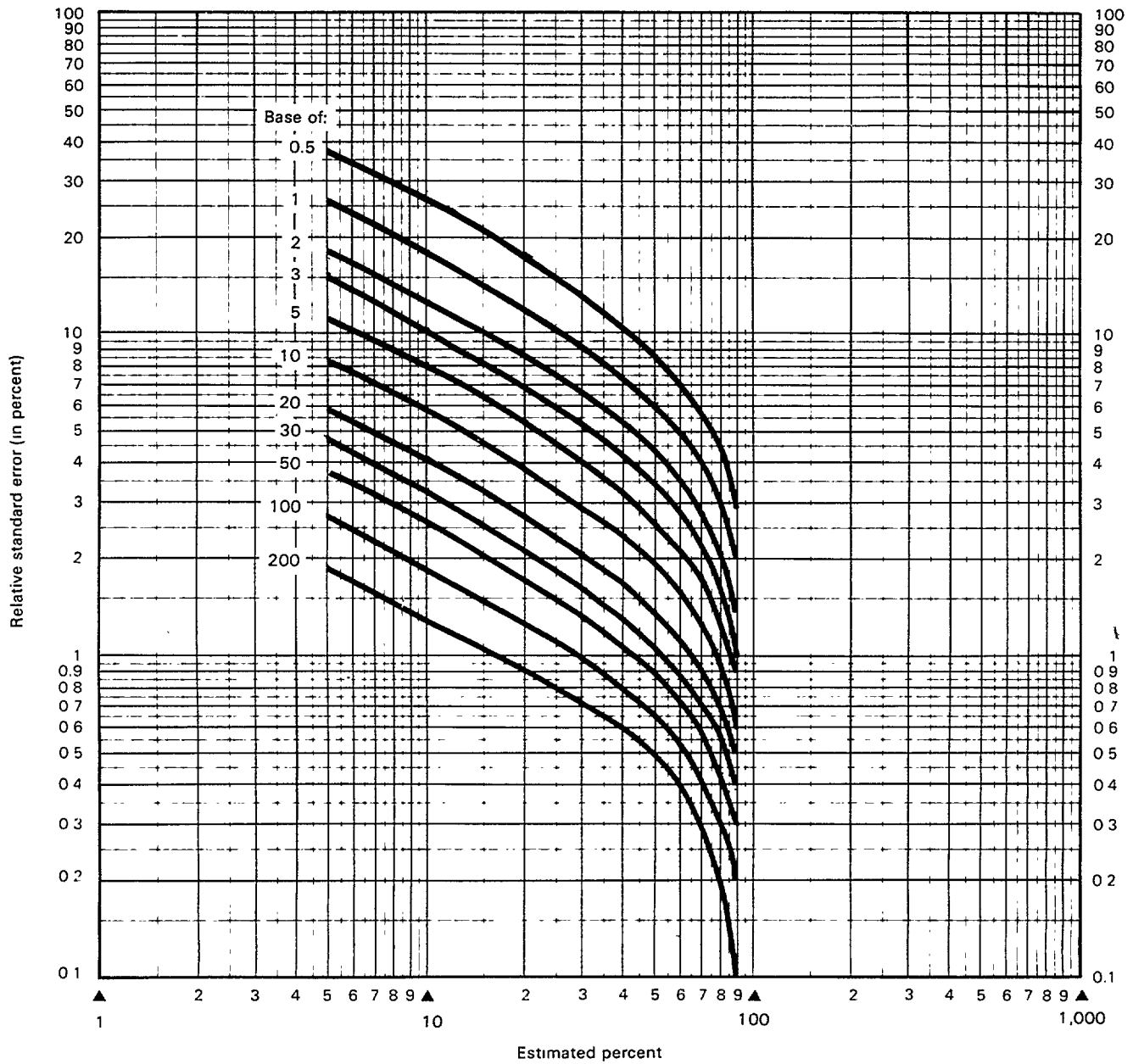
NOTE: Base of percent shown on curves in millions. These curves represent estimates of relative standard errors of percents of population characteristics based on 4 quarters of data collection.

EXAMPLE OF USE OF CHART: An estimate of 20 percent (on scale at bottom of chart) based on an estimate of 10,000,000 has a relative standard error of 3.8 percent (read from scale at left side of chart), the point at which the curve for a base of 10,000,000 intersects the vertical line for 20 percent. The standard error in percentage points is equal to 20 percent × 3.8 percent, or 0.76 percentage points.

**Figure II. Relative standard errors of percents of population characteristics**

# Appendix II
# Definitions of certain
# terms used in this report

## Demographic terms

*Age*—The age recorded for each person is the age at last birthday. Age is recorded in single years and grouped in a variety of distributions depending on the purpose of the table.

*Geographic region*—For the purpose of classifying the population by geographic area, the States are grouped into four regions. These regions, which correspond to those used by the U.S. Bureau of the Census, are as follows:

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

*Place of residence*—The place of residence of a member of the civilian noninstitutionalized population is classified as inside a standard metropolitan statistical area (SMSA) or outside an SMSA. Place of residence inside an SMSA is further classified as either central city or not central city.

*Standard metropolitan statistical area*—The definitions and titles of SMSA's are established by the U.S. Office of Management and Budget with the advice of the Federal Committee on Standard Metropolitan Statistical Areas. Generally speaking, an SMSA consists of a county or group of counties containing at least one city (or twin cities) having a population of 50,000 or more plus adjacent counties that are metropolitan in character and are economically and socially integrated with the central city. In New England, towns and cities rather than counties are the units used in defining SMSA's. There is no limit to the number of adjacent counties included in the SMSA as long as they are integrated with the central city, nor is an SMSA limited to a single State; boundaries may cross State lines. The metropolitan population in this report is based on SMSA's as defined in the 1970 census and does not include any subsequent additions or changes.

*Central city of an SMSA*—The largest city in an SMSA is always a central city. One or two additional cities may be secondary central cities in the SMSA on the basis of one of the following criteria:

1. The additional city or cities must have a population one-third or more of that of the largest city and a minimum population of 25,000.
2. The additional city or cities must have at least 250,000 inhabitants.

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

*Not in SMSA*—This includes all other places in the country.

*Race*—The population is divided into three racial groups, "white," "black," and "all other." "All other" includes Aleut, Eskimo or American Indian, Asian or Pacific Islander, and any other races. Race characterization is based on the respondent's description of his racial background.

*Income of family or of unrelated individuals*—Each member of a family is classified according to the total income of the family of which he or she is a member. Within the household, all persons related to each other by blood, marriage, or adoption constitute a family. Unrelated individuals are classified according to their own incomes.

The income recorded is the total of all income received by members of the family (or by an unrelated individual) in the 12-month period preceding the week of interview. Income from all sources—for example, wages, salaries, rents from property, pensions, and help from relatives—is included.

*Education of individual*—Each person aged 17 years or older is classified by education in terms of the highest grade of school completed.

*Education of family reference person*—Each member of the family is classified according to the education of the family reference person who is an eligible adult (17 years and over), and who owns or rents the home. In this report, this variable is used as a measure of socioeconomic status for children 16 years of age and under.

## Terms relating to selected medical procedures associated with preventive care

Except as indicated, the interviewer used only the terms for procedures that are given in the standard questions shown in appendix III, and did not provide any additional explanation to the respondent.

*Breast examination*—This includes examinations by midwives and nurse practitioners.

*Eye examination*—The term "glasses" includes any device

to aid defective vision, and does not refer to nonprescription sunglasses or safety glasses that are not used to correct vision problems. Examinations include eye exams given during the test for a driver's license.

*Routine physical examination or general checkup (under 17 years of age)*—This term refers to a visit to the doctor for the purpose of determining the general state of the person's health. This includes checkups for specific purposes, such as periodic (yearly) checkups, visits to the well-baby clinic, examinations at school for athletics, and for other similar purposes.

A visit to a doctor for a checkup or examination for a specific condition, such as when a person goes for a checkup for tuberculosis or a heart condition, is not considered a routine exam. Likewise, a visit to a doctor solely for the purpose of receiving immunizations, allergy shots, or other specific treatments is not included in the definition.

*First dental visit*—The first contact with a dentist, regardless of the reason for the visit, is considered a first dental visit. For example, this includes contacts to simply prepare children for future examinations, such as visits where the child sits in the dental chair and allows the dentist to count his or her teeth. Dental services given on a mass basis, such as examinations given to a group of children at school, are not included.

A dentist is a person who has been trained in the prevention, diagnosis, and treatment of diseases of the teeth and adjacent tissues. Some examples are: oral surgeons, orthodontists, periodontists, and oral hygienists.

## Terms relating to frequency of use

To measure use of preventive medical services in general, a summary measure was calculated for each person. The summary was calculated by counting the number of different types of service the person had had in the 2 years before the interview. For the purposes of this report, a "type" of service is one or more different categories of tests used to detect illness in a particular body system. Because data were collected on different categories of tests depending on the age and sex of the sample person, the types of service also differ by age and sex, as follows:

| Age and sex | Types of service |
|---|---|
| Children and youth, 3–16 years of age | 1. Routine physical exam<br>2. Eye exam |
| Women of reproductive age, 17–39 years of age | 1. Breast exam or pap smear<br>2. Eye exam<br>3. Blood pressure test or chest x ray |
| Adults at risk of chronic disease, 40 years of age or over | 1. Eye exam or glaucoma test<br>2. Blood pressure test or chest x ray |

To calculate the summary measure for a person, the number of types of service used by that person in the 2 years before interview was determined. (Note that a type of service may include one or two categories of tests.) If the person had used all types of service appropriate to his or her age and sex group, he or she was classified as a "frequent" user of preventive medical services. If a child or youth, or an adult 40 years of age or over, had used only one of the two appropriate types of service, he or she was classified as an "occasional" user; if a woman of reproductive age had used any two of the three appropriate types of service, she was classified as an "occasional" user. Persons who had used fewer or no types of service in the past 2 years were classified as "infrequent uses" or "nonusers."

If should be noted that the survey was designed to measure use of selected individual tests; it was not designed to measure general patterns in the use of preventive medical services. The above defined measure of frequency of use was developed after-the-fact, and is limited by the nature of the data collected.

# Appendix III
# Questionnaire

| | N. PREVENTIVE CARE PAGE | | |
|---|---|---|---|
| **N1** | Refer to age. | N1 | 0 ☐ 17–39, available *(3)*<br>1 ☐ 40 and over, available *(1)*<br>2 ☐ 17 and over, callback required *(NP)*<br>3 ☐ Other *(NP)* |
| 1. | About how long has it been since you had an electrocardiogram, or EKG, which involves placing wires on the chest and arms? | 1. | 00 ☐ Never<br>98 ☐ Less than 1 year<br>———— Years |
| 2. | About how long has it been since you had a test for glaucoma, sometimes referred to as an eye pressure test? | 2. | 00 ☐ Never<br>98 ☐ Less than 1 year<br>———— Years |
| 3. | About how long has it been since you had a chest x-ray? | 3. | 00 ☐ Never<br>98 ☐ Less than 1 year<br>———— Years |
| 4. | About how long has it been since you had your blood pressure taken? | 4. | 00 ☐ Never<br>98 ☐ Less than 1 year<br>———— Years |
| 5a. | Have you EVER been told by a doctor that you had high blood pressure? | 5a. | 1 ☐ Yes *(6)*<br>2 ☐ No |
| b. | Have you EVER been told by a doctor that you had hypertension? | b. | 1 ☐ Yes<br>2 ☐ No *(N2)* |
| 6. | Are you NOW taking any medicine prescribed by a doctor for your [high blood pressure/hypertension]? | 6. | 1 ☐ Yes *(N2)*<br>2 ☐ No |
| 7a. | Do you still have [high blood pressure/hypertension]? | 7a. | 1 ☐ Yes *(N2)*<br>☐ No<br>☐ DK |
| b. | Is this condition completely cured or is it under control? | b. | 2 ☐ Cured<br>3 ☐ Under control |
| **N2** | Refer to sex. | N2 | 2 ☐ Female *(8)*<br>1 ☐ Male *(10)* |
| 8. | About how long has it been since you had a Pap smear test? | 8. | 00 ☐ Never<br>98 ☐ Less than 1 year<br>———— Years |
| 9. | About how long has it been since you had a breast examination by a medical doctor? | 9. | 00 ☐ Never<br>98 ☐ Less than 1 year<br>———— Years |
| 10a. | Do you have eyeglasses or contact lenses? | 10a. | 1 ☐ Yes<br>2 ☐ No |
| b. | About how long has it been since you had your eyes examined to see if you needed glasses (or new glasses)? *Read if age 17. Include any eye exams given in school.* | b. | 00 ☐ Never<br>98 ☐ Less than 1 year<br>———— Years |
| **RS1** | | RS1 | ————<br>Pers. No.<br>of Resp. ⎰ 1 ☐ Self Resp.<br>⎱ 2 ☐ Proxy *(Reason)* |

| N3 | Refer to age. | N3 | 0 ☐ Under 3 *(12)*<br>1 ☐ 3—16 *(11)*<br>2 ☐ Other *(NP)* |
|---|---|---|---|
| 11a. | Does ── have eyeglasses or contact lenses? | 11a. | 1 ☐ Yes<br>2 ☐ No |
| b. | About how long has it been since ── had ── eyes examined to see if ── needed glasses (or new glasses)?<br>*Read if age 5—16:* Include any eye exams given in school. | b. | 00 ☐ Never<br>98 ☐ Less than 1 year<br><br>_____ Years |
| 12a. | During the past 12 months, {that is, since (*12 month date*) a year ago} was ── taken to a doctor for a ROUTINE physical examination, that is, not for a particular illness but for a general checkup?<br>*Read if age 5—16:* Include routine physical examinations given in school. | 12a. | 1 ☐ Yes *(13)*<br>2 ☐ No |
| b. | About how long has it been since ── was taken to a doctor for a routine physical examination or general checkup?<br>*Read if age 5—16:* Include routine physical examinations given in school. | b. | 00 ☐ Never<br><br>_____ Years |
| 13. | About how old was ── when ── FIRST went to a dentist? | 13. | 00 ☐ Never<br><br>_____ Years old |
| RS2 | | RS2 | _____ Pers. No. of Resp. |

FOOTNOTES

43

# Health of the Low Income Child...

# Report Profiles Health Care of Poor Children

Medicaid coverage does affect the health care of children from low-income families, according to *Insurance Coverage and Ambulatory Medical Care of Low-Income Children; United States, 1980.* The publication provides a profile of these children, their insurance coverage, use of health services, and expenditures for physician visits. The report also presents data on potential access to medical care, such as the presence and convenience of regular sources of care.

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