Technical Notes for Interactive Summary Health Statistics for Adults, by Detailed Race and Ethnicity

Introduction

Interactive Summary Health Statistics for Adults, by Detailed Race and Ethnicity are based on the National Health Interview Survey (NHIS) and provide selected point estimates of health outcomes and their variance estimates. Three-year averages for adults are presented in a data query system in table and chart format for selected diseases and conditions, mental health, health status, difficulties in functioning, health behaviors, health insurance coverage, cost-related problems accessing health care in the past 12 months, health care use in the past 12 months, and other health care.

The Interactive Summary Health Statistics for Adults, by Detailed Race and Ethnicity summarize data from the NHIS, a multipurpose health survey conducted by the National Center for Health Statistics (NCHS). National estimates are provided for a broad range of health measures for the U.S. civilian noninstitutionalized population. Estimates are shown for U.S. adults aged 18 years and over.

Data used to produce the majority of the detailed race and Hispanic origin estimates cannot be made available on the public use NHIS files due to potential disclosure of confidential information. In addition, the variance estimates are produced using sample design information that is more detailed than available on the public use files. Analysts should be aware that variances may differ depending on the sample design information used.

Annual Interactive Summary Health Statistics are provided for less detailed race and Hispanic origin groupings as well as other demographic, socioeconomic, and geographic characteristics for both adults and children (https://wwwn.cdc.gov/NHISDataQueryTool/SHS_adult/index.html, https://wwwn.cdc.gov/NHISDataQueryTool/SHS_child/index.html). More information on the annual products can be found in their Technical Notes (https://wwwn.cdc.gov/NHISDataQueryTool/SHS_adult/SHS_Tech_Notes.pdf).

For the Interactive Summary Health Statistics for Adults, by Detailed Race and Ethnicity, estimates are based on data from the Sample Adult file, which is derived from the Household Roster and Sample Adult components of the NHIS. Unadjusted (crude) percentages are shown by selected race and Hispanic origin subgroups.

Methods

Data Source

The NHIS is the principal source of information on the health of the civilian noninstitutionalized population of the United States and is one of the major data collection programs of NCHS which is part of the Centers for Disease Control and Prevention (CDC). The National Health Survey Act of 1956 provided for a continuing survey and special studies to secure accurate and current statistical information on the amount, distribution, and effects of illness and disability in the United States and the services rendered for or because of such conditions. The survey referred to in the Act, now called the National Health Interview Survey, was initiated in July 1957.

Since 1960, the survey has been conducted by NCHS, which was formed when the National Health Survey and the National Vital Statistics Division were combined.

A major strength of the NHIS lies in the ability to categorize these health characteristics by many demographic and socioeconomic characteristics. NHIS data are used widely throughout the Department of Health and Human Services (HHS) to monitor trends in illness and disability and to track progress toward achieving national health objectives. The data are also used by the public health research community for epidemiologic and policy analysis of such timely issues as characterizing those with various health problems, determining barriers to accessing and using appropriate health care, and evaluating Federal health programs.

While the NHIS has been conducted continuously since 1957, the content of the survey has been updated about every 15–20 years to incorporate advances in survey methodology and coverage of health topics. In January 2019, NHIS launched a redesigned content and structure that differs from its previous questionnaire design (1997–2018) to better meet the needs of data users. The aims of the redesign were to improve the measurement of covered health topics, reduce respondent burden by shortening the length of the questionnaire, harmonize overlapping content with other federal surveys, establish a long-term structure of ongoing and periodic topics, and incorporate advances in survey methodology and measurement. For more information about the redesigned NHIS visit the website at: https://www.cdc.gov/nchs/nhis/2019_quest_redesign.htm. Following the redesign, the original set of Summary Health Statistics indicators published based on the 1997–2018 NHIS were reevaluated, and a new set was chosen. A previous redesign occurred in 1997. Comparisons of the 2019 and beyond NHIS data with data from earlier survey designs should not be undertaken without a careful examination of the changes across survey instruments.

The revised NHIS questionnaire, which is administered annually, consists of three main components: Household Roster, Sample Adult, and Sample Child. The Household Roster of the questionnaire collects some basic demographic and family identification information about all persons in the household. An adult aged 18 years and over living in the household provides this information. The Sample Adult questionnaire obtains information on the health of one randomly selected adult aged 18 years and over (the “sample adult”) in the household. The sample adult responds for himself or herself, but in rare instances when the sample adult is mentally or physically incapable of responding, proxy responses are accepted. The Sample Adult questionnaire collects information on health status and conditions, functioning and disability, pain and pain management, health-related behaviors, access to and use of health care services, mental health, preventive care, and additional demographic information. The Sample Child questionnaire obtains information on the health of one randomly selected child aged 17 years or younger (the “sample child”) in the household.

NHIS is a cross-sectional household interview survey. The target population for the NHIS is the civilian noninstitutionalized population residing within the 50 states and the District of Columbia at the time of the interview. The NHIS universe includes residents of households and noninstitutional group quarters (e.g., homeless shelters, rooming houses, and group homes). Persons residing temporarily in student dormitories or temporary housing are sampled within the households that they reside in permanently. Persons excluded from the universe are those with no fixed household address (e.g., homeless and/or transient persons not residing in shelters), active duty military personnel and civilians living on military bases, persons in long-term care institutions (e.g., nursing homes for the elderly, hospitals for the chronically ill or physically or intellectually

disabled, and wards for abused or neglected children), persons in correctional facilities (e.g., prisons or jails, juvenile detention centers, and halfway houses), and U.S. nationals living in foreign countries. While active-duty Armed Forces personnel cannot be sampled for inclusion in the survey, any civilians residing with Armed Forces personnel in non-military housing are eligible to be sampled.

Because the NHIS is conducted in a face-to-face interview format, the costs of interviewing a large simple random sample of households and noninstitutional group quarters would be prohibitive; randomly sampled dwelling units would be too dispersed throughout the nation for cost-effective interviewing. To keep survey operations manageable, cost-effective, and timely, the NHIS uses geographically clustered sampling techniques to select the sample of dwelling units for the NHIS. The sample is designed in such a way that each month's sample is nationally representative. Data collection on the NHIS is continuous, i.e., from January to December each year.

The sampling plan is redesigned after every decennial census. A new sampling plan for the 2016–2025 NHIS was designed with results of the 2010 decennial census. Commercial address lists are used as the main source of addresses, supplemented by field listing. Beginning in 2019, the sample is expected to yield 30,000 sample adult and 9,000 sample child completed interviews. The annual sample size can be reduced for budgetary reasons or increased when supplementary funding is available.

The U.S. Census Bureau, under a contractual agreement, is the data collection agent for the National Health Interview Survey. NHIS data are collected continuously throughout the year by Census interviewers. Nationally, about 750 interviewers (also called "Field Representatives" or "FRs") are trained and directed by health survey supervisors in the U.S. Census Bureau Regional Offices to conduct interviews for NHIS.

The NHIS is conducted using computer-assisted personal interviewing. Face-to-face interviews are conducted in respondents' homes, but follow-ups to complete interviews may be conducted over the telephone. A telephone interview may also be conducted when the respondent requests a telephone interview or when road conditions or travel distances would make it difficult to schedule a personal visit before the required completion date. In 2019, 34.3% of the Sample Adult interviews were conducted at least partially by telephone. Due to the COVID-19 pandemic, NHIS data collection switched to a telephone-only mode beginning March 19, 2020. Personal visits resumed in all areas in September 2020, but cases were still attempted by telephone first. As a result, in 2020, 70.7% of the Sample Adult interviews were conducted at least partially by telephone. In 2021, due to ongoing data collection difficulties posed by the COVID-19 pandemic, NHIS cases continued to be attempted by telephone first from January to April 2021. Personal visits were used only to follow-up on nonresponse, deliver recruitment materials, and conduct interviews when telephone numbers were unknown. Starting in May 2021, interviewers were instructed to return to regular survey interviewing procedures, whereby first contact attempts to households were made in person, with follow-up allowed by telephone. Interviewers were given flexibility to continue using telephone first contact attempts based on local COVID-19 conditions. In 2021, 62.8% of the Sample Adult interviews were conducted at least partially by telephone.

Estimation Procedures

NHIS is a sample survey. That is, only a sample (subset) of the civilian noninstitutionalized population is selected to participate in the survey. Additionally, not everyone selected to participate agrees to participate, which can affect the representativeness of the sample. In order to account for these two factors, sampling weights are created. These sampling weights are used to produce representative national estimates. The data must be

weighted to obtain population estimates for survey outcomes in the population represented by the NHIS. The value of the weight for a given respondent can be interpreted as the number of persons in the NHIS target population represented by that respondent. The sum of the weights over all respondents is used to estimate the size of the total target population. The weights reflect several steps of adjustments starting with a base weight, which is inverse to the probability of selection. Households and persons that are more likely to be selected are given lower weights so that the final estimates are not biased by their increased likelihood of being selected. The base weights are then adjusted for nonresponse patterns, that is, the different response rates among different household and person-level subgroups.

The 2019 questionnaire redesign provided an opportunity to evaluate the adjustment approach that had been in place since 1997. For 1997–2018, the adjustment approach was based on geography; the weights for households and persons in geographic areas with lower response rates were increased more than for those in areas with higher response rates. That way, final estimates were not biased by the latter group's increased likelihood of participation. More sophisticated methods to decrease potential nonresponse bias are now available (1,2), and based on the evaluation, the weighting process for 2019 and beyond was updated. The updated approach for nonresponse adjustment uses multilevel regression models that include paradata variables that are predictive of both survey response and selected key health outcomes, the key criteria for effective bias reduction.

Finally, the nonresponse adjusted weights are typically calibrated to U.S. Census Bureau population projections and American Community Survey (ACS) one-year estimates for age, sex, race and ethnicity, educational attainment, Census division, and MSA status. In 2020, housing tenure was added to the calibration step. For the 2021 survey year, the U.S. Census Bureau did not release single-year ACS estimates by housing tenure, education level, and MSA by Division. Therefore, substitute calibration totals for these variables were obtained from the 2021 Current Population Survey (CPS) March Annual Social and Economic (ASEC) Supplement. Prior to 2019, calibration was only to age, sex, and race and ethnicity population projections. These changes to the nonresponse adjustment approach and the calibration methods have the potential to impact comparisons of the weighted survey estimates over time.

The Sample Adult weights, divided by three in order to obtain an average over the three-year period, were used to produce the national estimates contained in tables and charts. Reports with further information about NHIS sampling weights is available on the 2019, 2020 and 2021 data release pages at https://www.cdc.gov/nchs/nhis/2019nhis.htm, https://www.cdc.gov/nchs/nhis/2020nhis.htm and https://www.cdc.gov/nchs/nhis/2021nhis.htm, respectively. Counts for persons of unknown status (responses coded as "refused," "don't know," or "not ascertained") with respect to health characteristics of interest are not included in the calculation of percentages (as part of either the denominator or the numerator), to provide a more straightforward presentation of the data. For most health measures in these tables, the percentages with unknown values are typically small (generally less than 1%) and would not support disaggregation by the demographic characteristics included in the table. Estimates based on health characteristics with unknown percentages ranging from 2% to 5% include obesity and receipt of influenza vaccination.

In addition, some of the sociodemographic variables that are used to delineate various population subgroups have unknown values. For most of these variables, the percentage unknown is small (generally less than 1%).

Data Limitations that Impact Comparisons across Years

Although three-year averages were not provided in Summary Health Statistics products prior to 2019, annual products do contain estimates for larger race and Hispanic origin groups. Interpretation of estimates and comparisons across years should only be made after reviewing the methods used to obtain the estimates, changes in the survey instrument, and measurement issues currently being evaluated. Listed below are some important considerations.

In 2019, the content and weighting methodology were changed relative to earlier versions of the survey. These changes can make it complex to compare NHIS estimates for 2019 and beyond with those from earlier years. A working paper entitled "Preliminary Evaluation of the Impact of the 2019 National Health Interview Survey Questionnaire Redesign and Weighting Adjustments on Early Release Program Estimates," available from https://www.cdc.gov/nchs/nhis/releases.htm, discusses these issues in greater detail for several of the health outcomes included in Interactive Summary Health Statistics — 2019–2021.

In 1997, the content, format, and mode of data collection were changed relative to earlier versions of the survey. These changes can make it complex to compare NHIS estimates from 1997–2018 with those from other survey designs.

Changes in the sample design were implemented in 2006 and 2016 and should also be considered when comparing estimates across different sample designs (1997–2005, 2006–2015, and 2016 and later).

From 2003–2011, NHIS used weights derived from 2000 Census-based population estimates and beginning in 2012 NHIS weights were derived from 2010 Census-based population estimates. Analysts who compare estimates from 2012 and beyond with estimates from 2003–2011 need to recognize that some of the observed differences may be due to underlying changes in population estimates.

Summary Health Statistics reports of 1997–2001 and Interactive Summary Health Statistics — 2019–2021 do not contain age-adjusted estimates. The crude (or unadjusted) estimates from those reports should not be compared with age-adjusted estimates in tables from reports and tables from 2002–2018 unless it can be demonstrated that the effect of age adjustment is minimal.

As previously described, due to the COVID-19 pandemic, NHIS data collection switched to a telephone-only mode beginning March 19, 2020. Personal visits resumed in all areas in September 2020, but cases were still attempted by telephone first. These changes resulted in lower response rates and differences in respondent characteristics for April–December 2020. Response rates were lower and respondent characteristics were different in April–December 2020 as compared to January–March 2020. Survey weights were adjusted to account for these changes in respondent characteristics. An evaluation of nonresponse bias following survey weighting is available online (https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/NHIS/2020/nonresponse-report508.pdf). This report showed that the weighted sample still underrepresented adults living alone and adults with family income below the federal poverty level. Although survey weighting accounted for most of the difference in the change in sample characteristics, it is possible that some residual effects of the sample change remain. Additionally, for August–December 2020, a subsample of adult respondents who completed the NHIS in 2019 were recontacted by telephone and asked to participate again, completing the 2020 NHIS questionnaire.

Three-year averages do not include 2020 records for the subsample, so as not to double-count those respondents in both 2019 and 2020.

Variance Estimation, Statistical Reliability, and Hypothesis Tests

All estimates shown meet the NCHS standards of reliability as specified in *National Center for Health Statistics Data Presentation Standards for Proportions* (3). Unreliable estimates are indicated with an asterisk (*) and are not shown. Reliable estimates with an unreliable complement are shown but are indicated with two asterisks (**). Complements are calculated as 100 minus the percentage. The standards are applied directly for percentages. Two-sided 95% confidence intervals are calculated using the Clopper-Pearson method adapted for complex surveys by Korn and Graubard (3). Standard errors used in this calculation were obtained using SUDAAN software, which takes into account the complex sampling design of NHIS. The Taylor series linearization method was used for variance estimation in SUDAAN (4).

Definitions of Selected Terms

Demographic Characteristics

Asian detailed groups—Federal surveys give respondents the option of reporting more than one race. Asian adults may be of only Asian race or Asian race in combination with another race(s). Similarly, they may be of only one Asian detailed group or multiple Asian detailed groups. Detailed groups shown include Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, and other Asian. Groups are not mutually exclusive.

Hispanic or Latino origin—"Hispanic or Latino" and "Not Hispanic or Latino" are total categories. Adults in these categories may be of any race or combination of races. "Hispanic" indicates Hispanic or Latino origin. Hispanic includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central and South American, or other Hispanic, Latino, or Spanish origins.

Hispanic or Latino origin and race—"Hispanic" indicates Hispanic or Latino origin. Hispanic origin and race are two separate and distinct concepts. Thus, Hispanic persons may be of any race or combination of races. Hispanic includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central and South American, or other Hispanic, Latino, or Spanish origins. Race is based on a respondent's description of their own racial background, regardless of Hispanic or Latino origin. Federal surveys give respondents the option of reporting more than one race. Therefore, two basic ways of defining a race group are possible. A group may be defined as those who reported one race and no other race (single race concept) or as those who reported that race regardless of whether they also reported another race (single or multiple races concept). The “Hispanic or Latino origin and race” grouping shows data using the single race approach. The use of this approach does not imply that it is the preferred method of presenting or analyzing data.

Hispanic or Latino origin detailed groups—Adults of Hispanic or Latino origin may be of any race or combination of races. Hispanic adults may be of only one Hispanic detailed group or multiple Hispanic detailed groups. Detailed groups shown include Mexican or Mexican American, Central American, South American, Puerto Rican, Cuban, Dominican, and other Hispanic, Latino, or Spanish. Groups are not mutually exclusive.

Race—Race is based on a respondent's description of their own racial background, regardless of Hispanic or Latino origin. Federal surveys give respondents the option of reporting more than one race.

Therefore, two basic ways of defining a race group are possible. A group may be defined as those who reported one race and no other race (single race concept) or as those who reported that race regardless of whether they also reported another race (single or multiple races concept). Estimates using both approaches are available ("Single race" and "Single or multiple races"). Groups in the "Single or multiples races" grouping are not mutually exclusive. Race is based on a respondent's description of the respondent's racial background, regardless of Hispanic or Latino origin. Race groups shown include White, Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, Black or African American and White, and American Indian or Alaska Native and White. Other combinations are not shown separately due to statistical unreliability.

Adult Health Outcomes

Selected Circulatory Conditions:

Angina/angina pectoris—Respondents were asked if they had ever been told by a doctor or other health professional that they had angina (or angina pectoris).

Coronary heart disease—Respondents were asked if they had ever been told by a doctor or other health professional that they had coronary heart disease.

High cholesterol—In separate questions, respondents were asked if they had ever been told by a doctor or other health professional that they had high cholesterol. Respondents who answered affirmatively were asked in separate questions if they had been told by a doctor or other health professional that they had high cholesterol during the past 12 months, and if they were taking prescribed medicine to help lower their cholesterol. Respondents had to have been taking those medications or had high cholesterol during the past 12 months to be classified as having high cholesterol.

Diagnosed hypertension—Respondents were asked if they had ever been told by a doctor or other health professional that they had hypertension (or high blood pressure), and if so, if they had been told on two or more different visits. Respondents who answered affirmatively were asked if they had been told they had hypertension (or high blood pressure) during the past 12 months. Respondents who ever had hypertension were also asked if they were taking prescribed medication for high blood pressure. Respondents had to have been taking those medications or had hypertension or high blood pressure during the past 12 months to be classified as having diagnosed hypertension.

Heart attack/myocardial infarction—Respondents were asked if they had ever been told by a doctor or other health professional that they had a heart attack (or myocardial infarction).

Selected Respiratory Conditions:

COPD, emphysema, chronic bronchitis—Respondents were asked if they had ever been told by a doctor or other health professional that they had chronic obstructive pulmonary disease, COPD, emphysema, or chronic bronchitis.

Asthma episode/attack—Respondents were asked if they had ever been told by a doctor or other health professional that they had asthma. Respondents who had been told they had asthma were asked if they had an episode of asthma or an asthma attack during the past 12 months.

Current asthma—Respondents were asked if they had ever been told by a doctor or other health professional that they had asthma. Respondents who had been told they had asthma were asked if they still had asthma.

Cancer:

Any type of cancer—Respondents were asked if they had ever been told by a doctor or other health professional that they had a cancer or malignancy of any kind.

Breast cancer—Respondents were asked if they had ever been told by a doctor or other health professional that they had a cancer or malignancy of any kind. They were then asked to name the kind of cancer they had.

Cervical cancer—Respondents were asked if they had ever been told by a doctor or other health professional that they had a cancer or malignancy of any kind. They were then asked to name the kind of cancer they had.

Prostate cancer—Respondents were asked if they had ever been told by a doctor or other health professional that they had a cancer or malignancy of any kind. They were then asked to name the kind of cancer they had.

Any skin cancer—Respondents were asked if they had ever been told by a doctor or other health professional that they had a cancer or malignancy of any kind. They were then asked to name the kind of cancer they had. Respondents who had skin (melanoma), skin (non-melanoma), or skin cancer (unknown kind) where classified as having any skin cancer.

Selected Diseases and Conditions:

Arthritis diagnosis—Respondents were asked if they had ever been told by a doctor or other health professional that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia. Those who answered yes were classified as having an arthritis diagnosis.

Regularly experienced pain—Respondents were asked how often they had pain in the past three months. Respondents who reported having pain on most days or every day were classified as regularly experiencing chronic pain.

Diagnosed diabetes—Respondents were asked if they had ever been told by a doctor or other health professional that they had diabetes. Respondents who had reported having prediabetes, borderline diabetes or gestational diabetes in previous questions were instructed not to include these conditions.

Obesity—Calculated from information that respondents supplied in response to survey questions regarding height and weight. For both men and women, obesity is indicated by body mass index (BMI) of 30.0 or higher. Note that self-reported height and weight may differ from actual measurements.

Mental Health:

Regularly had feelings of worry, nervousness, or anxiety—In separate questions, respondents were asked how often they feel worried, nervous, or anxious and then, thinking about the last time they felt that way, to describe the level of those feelings. Respondents who reported a) feeling worried, nervous, or anxious daily and described the level of those feelings as "somewhere in between a little and a lot" or "a lot" or b) feeling worried, nervous, or anxious weekly and described the level of those feelings as "a lot" were classified as regularly had feelings of worry, nervousness, or anxiety.

Taking prescription medication for feelings of worry, nervousness, or anxiety—Respondents were asked if they take prescription medication for feelings of worry, nervousness, or anxiety.

Regularly had feelings of depression—In separate questions, respondents were asked how often they feel depressed and then, thinking about the last time they felt that way, to describe the level of those feelings. Respondents who reported a) feeling depressed daily and described the level of those feelings as "somewhere in between a little and a lot" or "a lot" or b) feeling depressed weekly and described the level of those feelings as "a lot" were classified as regularly had feelings of depression.

Taking prescription medication for feelings of depression—Respondents were asked if they take prescription medication for feelings of depression.

Counseled by a mental health professional—Respondents were asked if they received counseling or therapy from a mental health professional such as a psychiatrist, psychologist, psychiatric nurse, or clinical social worker during the past 12 months.

Health Status:

Fair or poor health status—Respondents were asked if they would say their health was in general excellent, very good, good, fair, or poor.

Six or more workdays missed due to illness, injury, or disability—Respondents who a) worked for pay in the week prior to the interview, b) had a job or business in the week prior to the interview, but were temporarily absent, c) had seasonal or contract work for at least a few days in the past 12 months, or d) worked at a job or business but not for pay for at least a few days in the past 12 months were asked how many days during the past 12 months they missed because of illness, injury, or disability.

Difficulties in Functioning:

Disability status (composite)— Disability is defined by the reported level of difficulty (no difficulty, some difficulty, a lot of difficulty, or cannot do at all) in six functioning domains: seeing (even if wearing glasses), hearing (even if wearing hearing aids), mobility (walking or climbing stairs), communication (understanding or being understood by others), cognition (remembering or concentrating), and self-care (such as washing all over or dressing). Adults who responded "a lot of difficulty" or "cannot do at all" to at least one question were considered to have a disability.

Difficulty hearing—Respondents were asked if they had difficulty hearing (even with hearing aids, for those who use them). Respondents who reported "some" or "a lot" of difficulty or who could not hear at all were classified as having hearing difficulty.

Difficulty seeing—Respondents were asked if they had difficulty seeing (even when wearing glasses or contact lenses, for those who use them). Respondents who reported "some" or "a lot" of difficulty or who could not hear at all were classified as having vision difficulty.

Difficulty walking or climbing steps—Respondents were asked if they had difficulty walking or climbing steps. Respondents who had "some" or "a lot" of difficulty or could not walk or climb steps at all were classified as having difficulty walking or climbing steps.

Difficulty communicating—Respondents were asked if using their usual language, they had difficulty communicating, for example, understanding or being understood. Respondents who had "some" or "a lot" difficulty or could not communicate at all were classified as having difficulty communicating.

Difficulty with self care—Respondents were asked if they had difficulty with self care, such as washing all over or dressing. Respondents who had "some" or "a lot" of difficulty or could not do these tasks at all were classified as having difficulty with self care.

Difficulty remembering or concentrating—Respondents were asked if they had difficulty remembering or concentrating. Respondents who had "some" or "a lot" of difficulty or could not remember or concentrate at all were classified as having difficulty with remembering or concentrating.

Health Behaviors:

Current cigarette smoking—In separate questions, respondents were asked if they had ever smoked at least 100 cigarettes in their entire life, and if so, do they now smoke every day, some days, or not at all. Respondents who smoke every day or some days were classified as current cigarette smokers.

Current electronic cigarette use—In separate questions, respondents were asked if they had used an e-cigarette or other electronic vaping product, even just one time in their entire life, and if so, do they now use those products every day, some days, or not at all. Respondents who use e-cigarettes or electronic vaping products every day or some days are classified as current electronic cigarette users.

Health Insurance Coverage:

Uninsured at time of interview—A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as dental or vision care.

Private health insurance coverage at time of interview—Private health insurance coverage includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange.

Private coverage excludes plans that pay for only one type of service, such dental or vision care. A small number of persons were covered by both public and private plans and were included in both categories.

Public health plan coverage at time of interview—Public health plan coverage includes Medicaid, CHIP, state-sponsored or other government-sponsored health plan, Medicare, and military plans. A small number of persons were covered by both public and private plans and were included in both categories.

Uninsured for more than one year—A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, CHIP, state-sponsored or other government-sponsored health plan, or military plan. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as dental or vision care. "Year" is defined as the 12 months prior to interview.

Uninsured for at least part of the past year—A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, CHIP, state-sponsored or other government-sponsored health plan, or military plan. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as dental or vision care. "Year" is defined as the 12 months prior to interview.

Exchange-based health insurance coverage - Exchange-based coverage is a private plan purchased through the federal Health Insurance Marketplace or state-based exchanges that were established as part of the ACA (Affordable Care Act of 2010. Pub L No 111–148, Pub L No 111–152.).

Cost-Related Problems Accessing Care in the Past 12 Months:

Did not get needed medical care due to cost—Respondents were asked if there was any time during the past 12 months when they needed medical care but did not get it because of the cost.

Delayed medical care due to cost—Respondents were asked if there was any time during the past 12 months when medical care was delayed because of the cost.

Did not get needed mental health care due to cost—Respondents were asked if there was any time during the past 12 months when they needed mental health care but did not get it because of the cost.

Did not take medication as prescribed to save money—Respondents who reported taking prescribed medicine in the past 12 months were asked in separate questions if during the past 12 months any of the following were true: they skipped medication doses to save money, they took less medication to save money, they delayed filling a prescription to save money.

Health Care Use in the Past 12 Months:

Doctor visit—Respondents were asked how long it had been since they last saw a doctor or other health care professional about their health.

Wellness visit—Based on questions that ascertain among those with a doctor visit in the past 12 months, "Was this a wellness visit, physical, or general purpose check-up? " or a response of "within the past year" to the

question "About how long has it been since you last saw a doctor or other health professional for a wellness visit, physical, or general purpose check-up?"

Hospital emergency department visit—Respondents were asked how many times during the past 12 months had they gone to a hospital emergency room about their health. This includes emergency room visits that resulted in a hospital admission.

Urgent care center or retail health clinic visit—Respondents were asked how many times they went to an urgent care center or a clinic in a drug store or grocery store about their health during the past 12 months.

Receipt of influenza vaccination—Respondents were asked if they had a flu vaccination in the past 12 months.

Prescription medication use—Respondents were asked if they took prescription medication at any time in the past 12 months.

Other Health Care:

Has a usual place of care—In separate questions, respondents were asked if there is a place that they usually go if they are sick and need health care, and if so (or if more than one place), to indicate the kind of place. Respondents who indicated their place of usual care was a hospital emergency room were not classified as having a usual place of care.

Ever received a pneumococcal vaccine—Respondents were asked if they ever had a pneumonia shot.

Further Information

Data users can obtain the latest information about NHIS by periodically checking the website https://www.cdc.gov/nchs/nhis.htm. This website features downloadable public use data and documentation for NHIS, as well as important information about any modifications or updates to the data or documentation.

Analysts may also wish to join the NHIS electronic mailing list. To do so, go to https://www.cdc.gov/subscribe.html. Complete the appropriate information and click the “National Health Interview Survey (NHIS) researchers” box, followed by the “Subscribe” button at the bottom of the page. The list consists of NHIS data users worldwide who receive e-news about NHIS surveys (e.g., new releases of data or modifications to existing data), publications, conferences, and workshops.

Suggested Citations

Recommended citations for specific tables and charts are included in the notes at the end of each page. The citation for the Technical Notes is as follows but should also include the date accessed as it may be edited periodically when new tables are added.

NCHS. Technical Notes for Interactive Summary Health Statistics for Adults, by Detailed Race and Ethnicity. Available from: https://www.cdc.gov/nchs/data/nhis/SHS-Tech-Notes-508.pdf.

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