## 2019

## Mississippi Behavioral Risk Factor Surveillance System (BRFSS)

## Annual Prevalence Report

December 7, 2021

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## INTRODUCTION

Among health care professionals, there is a general consensus that certain health conditions and behavior patterns have a strong correlation with disease, injury and death. Examples include cigarette smoking and lung disease, overweight/obesity and hypertension, and alcohol consumption and various cancers. The Behavioral Risk Factor Surveillance System (BRFSS) is a telephone surveillance system designed to estimate the prevalence of these, along with other health risk factors, in every state and some territories in the United States (U.S.). The results provide a tool for evaluating health trends, assessing the risk of chronic diseases, and measuring the effectiveness of policies, programs, intervention strategies and awareness campaigns.

The BRFSS is a cooperative agreement between the Centers for Disease Control and Prevention (CDC) and the Mississippi State Department of Health (MSDH). The first survey was conducted in 1984 when the data were collected at one given point in time. The survey was repeated in 1988 using the same methodology. Beginning from 1990, states have completed an annual survey with the data being collected monthly.

The BRFSS survey contains a set of core questions provided by the CDC to gather comprehensive standard information nationwide. The questions are related to health status, access to health care, health awareness, lifestyles, and preventive health. The CDC provides states with opportunities to also include questions addressing specific risk factors that are of particular concern and/or interest to that state.

## A. 2019 Sampling Design, Data Collection, and Weighting

The Mississippi BRFSS is a randomly sampled telephone survey that utilizes a disproportionate stratified sample (DSS) design with random digit dialing (RDD) and a Computer Assisted Telephone Interviewing (CATI) system. Until the 2011 survey, the BRFSS relied exclusively on interviews of households with only landline phones; however, the number of households having only cell phones has increased. The CDC reports that as of December 2019, $61.3 \%$ of adults in the U.S. lived in wirelessonly households. ${ }^{1}$ Estimates for Mississippi household telephone status revealed that $71.3 \%$ of adult households were wireless-only in $2019 .{ }^{2}$

In 2019, all Mississippi BRFSS interviews were conducted according to BRFSS protocols by a private survey research company on behalf of MSDH. To be eligible to participate in the survey, the respondent must have been a non-institutionalized adult aged 18 years or older at the time of the interview. For landline surveys, interviewers contacted the residences and randomly selected one adult to be interviewed from all adults residing in the household. For cell phone surveys, the interviewer established that the person answering the phone was at least 18 years of age; however, no adult was randomly selected for cell phone surveys.

The data collected during the 12-month survey period were edited and weighted by the CDC. Since 2011 the BRFSS has utilized a weighting method called iterative proportional fitting, also known as "raking." The procedure, while not new, has been made feasible through the development of ultrafast computer processors. In addition to the standard age, sex, race and ethnicity variables, the use of raking allows for consideration of demographic variables such as education level, marital status, renter or owner status, and phone source. By including these additional variables into the weighting process, the survey will more accurately reflect Mississippi's adult population.

## B. Questionnaire

The BRFSS questionnaire, designed through cooperative agreements with the CDC, is divided into two main parts. The first part contains the Core Section topics related to health conditions and behavior. The Core Section topics are chosen by the CDC, and these questions must be asked by every state and territory administering the survey. The second part contains the Optional Modules. The CDC provides a list of Optional Modules on varying topics to states and territories so that they can choose to include any that are of interest. The 2019 BRFSS Questionnaire contained 14 Core Sections and 31 Optional Modules from which the states could choose. States also have the option to include stateadded questions, which are designed by the state rather than the CDC. In 2019, Mississippi included 13 BRFSS Optional Modules in addition to the 14 Core Sections. Mississippi did not include any stateadded questions in its 2019 survey.

## C. Data Analysis

After the CDC completed data editing, weighting procedures, and analysis, it sent each state an initial descriptive analysis report which includes weights, confidence intervals, percentages, and N counts in documents called the Codebook Report and the Calculated Variable Data Report. Weighted counts were based on the 2019 Nielsen and ACS Adult Population Report for Mississippi population estimates to accurately reflect the state's demographics. According to the report, Mississippi's population count was $2,286,776$ for 2019 . The results presented in this report were produced by epidemiologists at the MSDH and are weighted according to population characteristics. Tables
containing the weighted prevalence estimates and associated 95\% confidence intervals for each of the selected topics in this report are located at the end of each topic's section.

For additional information about sampling, collecting, weighting, and analyzing BRFSS data, please refer to the 2019 BRFSS Overview and the 2013 BRFSS Data User Guide, both of which were produced by the CDC.

## D. Limitations of Data

All data collection systems are subject to error, and records may be incomplete and/or contain inaccurate information. Additionally, all data collected via the BRFSS program are self-reported. It is not always possible to measure the magnitude of these errors or their impact on the data. The user must be the final arbiter in evaluating the accuracy of the data. In addition, respondents who did not answer and/or refused to respond are not included in the counts or percentages listed in this report.

## E. Sample Size

In the 2019 BRFSS, 5,126 people were sampled; of these, $28.1 \%$ responded to the survey using a landline, and $71.9 \%$ responded using a cell phone. Tables containing the demographic group characteristics, definitions, and statistics for the entire sample is included on pages 6 and 7 of this report. The reader should note that sample sizes by question and response category may vary because of non-response and skip patterns within the survey instrument.

Overall estimates generally have relatively small sampling errors; however, estimates for certain population subgroups may be based on small numbers and have relatively large sampling errors. When the number of events is small and the probability of such an event is small, considerable caution should be observed in interpreting the estimates or differences among groups. The BRFSS recommends not interpreting percentages where the denominator is based upon fewer than 50 nonweighted respondents. In the tables of the present report, results marked with an asterisk (*) indicate a sample size of less than 50 .

In the 2019 MS BRFSS, the numbers of responses for individual races and ethnicities contained in the "Other Races/Ethnicities" demographic group (Table B, p.7) were too low to allow for meaningful estimates. Therefore, MSDH will publish a supplement that will combine multiple years of BRFSS data in order to achieve sample sizes large enough to provide precise estimates of health indicators for racial and ethnic minority groups.

NOTE: Only select Mississippi BRFSS health indicators are included in this report. If you would like to request additional data, please submit a data request using MSDH's online form. For other information about the MS BRFSS, contact the MSDH BRFSS Coordinator at Stephanie.McLeod@msdh.ms.gov or by phone at 601-576-7533.

Table A. 2019 MS BRFSS Demographic Group Characteristics: Definitions and Statistics

| Demographic Group | Definition of Demographic Group | TOTAL 2019 SURVEY SAMPLE |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Unweighted Total | Weighted Total | Weighted Percent |
| TOTAL | All respondents who provided a valid answer to the question of interest; excludes respondents who replied 'do not know' to the question, refused to answer the question, or skipped the question. | 5,126 | 2,286,776 | 100.0\% |
| Male | Respondents who reported their sex as male | 2,056 | 1,093,258 | 47.8\% |
| Female | Respondents who reported their sex as female | 3,070 | 1,193,518 | 52.2\% |
| White/Non-Hisp. | Respondents who reported their race/ethnicity as White and Non-Hispanic (Non-Hisp.) | 2,947 | 1,324,753 | 57.9\% |
| Black or Afr. Am./ Non-Hisp. | Respondents who reported their race/ethnicity as Black or African American (Afr. Am.) and Non-Hispanic | 1,959 | 807,433 | 35.3\% |
| Other Races/Ethnicities | Respondents who reported their race/ethnicity as anything other than White or Black and Non-Hispanic or any race and Hispanic. Note: Other races and ethnicities are grouped together due to low individual sample sizes. Refer to Table B for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group. | 165 | 127,735 | 5.6\% |
| Missing | Respondents who replied 'do not know' to the question, refused to answer the question, or skipped the question | 55 | 26,855 | 1.2\% |
| 18-24 years | Respondents who reported their age as 18-24 years | 284 | 302,883 | 13.2\% |
| 25-34 years | Respondents who reported their age as 25-34 years | 540 | 386,835 | 16.9\% |
| 35-44 years | Respondents who reported their age as 35-44 years | 641 | 364,179 | 15.9\% |
| 45-54 years | Respondents who reported their age as 45-54 years | 740 | 343,015 | 15.0\% |
| 55-64 years | Respondents who reported their age as 55-64 years | 1,047 | 376,210 | 16.5\% |
| 65+ years | Respondents who reported their age as 65 years or older | 1,825 | 488,116 | 21.3\% |
| Missing | Respondents who replied 'do not know' to the question, refused to answer the question, or skipped the question | 49 | 25,538 | 1.1\% |
| Less than H.S. | Respondents who reported never attending school or not completing Grade 12 in high school (H.S.) or a General Educational Development (G.E.D.) test | 663 | 364,287 | 15.9\% |
| H.S. or G.E.D. | Respondents who reported completing Grade 12 or G.E.D. | 1,545 | 692,038 | 30.3\% |


| Some Post-H.S. | Respondents who reported completing 1 to 3 years of <br> college or technical school after high school | 1,449 | 773,080 | $33.8 \%$ |
| :---: | :--- | :---: | :---: | :---: |
| College Graduate | Respondents who reported completing 4 or more years of <br> college or graduating college | 1,448 | 448,151 | $19.6 \%$ |
| Missing | Respondents who replied 'do not know' to the question, <br> refused to answer the question, or skipped the question | 21 | 9,220 | $0.4 \%$ |
| Less than $\$ 15,000$ | Respondents who reported their annual household income <br> as less than $\$ 15,000$ | 622 | 242,422 | $10.6 \%$ |
| $\$ 15,000-\$ 24,999$ | Respondents who reported their annual household income <br> as between $\$ 15,000-\$ 24,999$ | 966 | 433,488 | $19.0 \%$ |
| $\$ 25,000-\$ 34,999$ | Respondents who reported their annual household income <br> as between $\$ 25,000-\$ 34,999$ | 480 | 216,598 | $9.5 \%$ |
| $\$ 35,000-\$ 49,999$ | Respondents who reported their annual household income <br> as between $\$ 35,000-\$ 49,999$ | 578 | 265,080 | $11.6 \%$ |
| $\$ 50,000-\$ 74,999$ | Respondents who reported their annual household income <br> as between $\$ 50,000-\$ 74,999$ | 541 | 263,906 | $11.5 \%$ |
| $\$ 75,000+$ | Respondents who reported their annual household income <br> as $\$ 75,000$ or more | 908 | 428,550 | $18.7 \%$ |
| Missing | Respondents who replied 'do not know' to the question, <br> refused to answer the question, or skipped the question | 1,031 | 436,732 | $19.1 \%$ |

Table B. Races and Ethnicities Included in the "Other Races/Ethnicities" Demographic Group

| Race/Ethnicity | TOTAL 2019 SURVEY SAMPLE |  |  |
| :---: | :---: | :---: | :---: |
|  | Unweighted Total | Weighted Total | Weighted Percent |
| American Indian or Alaskan Native, Non-Hispanic | 46 | 28,726 | $1.26 \%$ |
| Asian, Non-Hispanic | 14 | 12,212 | $0.53 \%$ |
| Any race, Hispanic | 43 | 35,307 | $1.54 \%$ |
| Multiracial, Non-Hispanic | 33 | 23,592 | $1.03 \%$ |
| Native Hawaiian or Pacific Islander, Non-Hispanic | 4 | 1,804 | $0.08 \%$ |
| Other race, Non-Hispanic | 25 | 26,094 | $1.14 \%$ |
| Total "Other Races/Ethnicities" Demographic Group | 165 | 127,735 | $5.58 \%$ |

## MS BRFSS <br> Data Briefs

## Core Section Questions

## Health Status

Health status is an indicator that attempts to determine how adults look at their personal health and how well they function physically, psychologically, and socially while engaged in normal, daily activities. The questions related to health status are important because they may indicate dysfunction and disability not measured in standard morbidity and mortality data.

Overall, $23.6 \%$ of respondents reported their health to be fair or poor. Men and women each had a rate of fair or poor health of $23.6 \%$. Black respondents and those of other races reported worse health than White respondents, with rates of $25.5 \%$ and $25.2 \%$, respectively, compared to $22.0 \%$. With respect to race and gender, females of other races (33.0\%) and Black females (27.0\%) had the highest rates of fair or poor health. (Fig. 1). Overall, the reported rates of fair or poor health increased with age; those in the 18 to 24 years age group reported the lowest rate at $7.6 \%$, while those aged 65 years and older reported the highest rate at $37.3 \%$ (Fig. 2).

In regard to fair or poor health by education, those with higher education levels reported a lower rate of fair or poor health compared to those with lower education levels (Fig. 3). Females who did not graduate from high school had the highest rate (51.2\%), while females who graduated from college or a technical school had the lowest ( $10.4 \%$ ). Respondents with higher annual household incomes reported lower rates of fair or poor health (Fig. 4), with males who earned less than \$15,000 having the highest rate of fair or poor health (53.3\%), and females who earned $\$ 75,000$ or more having the lowest (6.1\%).



Figure 3. Percentage of Respondents with Fair or Poor Health by Education Level \& Sex


| TABLE 1-A. Health Status <br> Q: Would you say that in general your health is... |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC GROUPS | RESPONDENTS |  | Good or Better Health |  |  | Fair or Poor Health |  |  |
|  | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 5,113 | 2,281,241 | 3,691 | 76.4 | 75.0-77.9 | 1,422 | 23.6 | 22.1-25.0 |
| Male | 2,052 | 1,091,694 | 1,478 | 76.4 | 74.2-78.7 | 574 | 23.6 | 21.3-25.8 |
| Female | 3,061 | 1,189,548 | 2,213 | 76.4 | 74.5-78.3 | 848 | 23.6 | 21.7-25.5 |
| White/Non-Hisp. | 2,939 | 1,322,248 | 2,227 | 78.0 | 76.2-79.8 | 712 | 22.0 | 20.2-23.8 |
| Black or Afr. Am./Non-Hisp. | 1,954 | 804,403 | 1,316 | 74.5 | 72.1-77.0 | 638 | 25.5 | 23.0-27.9 |
| Other Races/Ethnicities** | 165 | 127,735 | 112 | 74.8 | 66.2-83.3 | 53 | 25.2 | 16.7-33.8 |
| 18-24 years | 283 | 302,453 | 263 | 92.4 | 88.6-96.1 | 20 | 7.6 | 3.9-11.4 |
| 25-34 years | 539 | 385,583 | 468 | 88.2 | 85.2-91.2 | 71 | 11.8 | 8.8-14.8 |
| 35-44 years | 641 | 364,179 | 520 | 82.5 | 79.1-85.9 | 121 | 17.5 | 14.1-20.9 |
| 45-54 years | 738 | 341,806 | 551 | 74.0 | 69.9-78.1 | 187 | 26.0 | 21.9-30.1 |
| 55-64 years | 1,045 | 375,710 | 680 | 66.1 | 62.5-69.7 | 365 | 33.9 | 30.3-37.5 |
| 65+ years | 1,820 | 486,913 | 1,177 | 62.7 | 59.9-65.5 | 643 | 37.3 | 34.5-40.1 |
| Less than H.S. | 661 | 363,415 | 305 | 54.6 | 49.5-59.7 | 356 | 45.4 | 40.3-50.5 |
| H.S. or G.E.D. | 1,541 | 689,503 | 1,033 | 74.5 | 71.9-77.1 | 508 | 25.5 | 22.9-28.1 |
| Some Post-H.S. | 1,446 | 771,868 | 1,101 | 81.0 | 78.6-83.5 | 345 | 19.0 | 16.5-21.4 |
| College Graduate | 1,445 | 447,380 | 1,240 | 89.2 | 87.4-91.0 | 205 | 10.8 | 9.0-12.6 |
| Less than \$15,000 | 620 | 241,507 | 287 | 50.9 | 45.5-56.4 | 333 | 49.1 | 43.6-54.5 |
| \$15,000-\$24,999 | 960 | 430,458 | 599 | 66.7 | 62.8-70.5 | 361 | 33.3 | 29.5-37.2 |
| \$25,000-\$34,999 | 478 | 215,756 | 377 | 82.1 | 78.0-86.2 | 101 | 17.9 | 13.8-22.0 |
| \$35,000-\$49,999 | 578 | 265,080 | 450 | 81.6 | 77.7-85.4 | 128 | 18.4 | 14.6-22.3 |
| \$50,000-\$74,999 | 541 | 263,906 | 464 | 88.6 | 85.4-91.8 | 77 | 11.4 | 8.2-14.6 |
| \$75,000+ | 907 | 428,325 | 826 | 92.3 | 90.2-94.3 | 81 | 7.7 | 5.7-9.8 |
| (1) Unweighted number of respondents <br> (2) Weighted percent <br> C.I. $=$ Confidence Interval <br> **Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group. <br> Note: Denominator excludes respondents who replied 'do not know' to the question, refused to answer the question, or skipped the question |  |  |  |  |  |  |  |  |

Table 1-B. Fair or Poor Health Status by Sex

| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 402 | 20.2 | 18.0-22.5 | 310 | 23.8 | 21.0-26.7 | 712 | 20.2 | 18.0-22.5 |
| Black or Afr. Am./Non-Hisp. | 406 | 27.0 | 23.8-30.2 | 232 | 23.6 | 19.8-27.4 | 638 | 25.5 | 23.0-27.9 |
| Other Races/Ethnicities** | 28 | 33.0 | 19.2-46.7 | 25 | 20.3 | 10.2-30.4 | 53 | 25.2 | 16.7-33.8 |
| 18-24 years | 7 | 4.7 | 0.8-8.5 | 13 | 10.4 | 4.2-16.7 | 20 | 7.6 | 3.9-11.4 |
| 25-34 years | 48 | 15.2 | 10.5-19.9 | 23 | 8.4 | 4.8-11.9 | 71 | 11.8 | 8.8-14.8 |
| 35-44 years | 72 | 17.2 | 12.9-21.5 | 49 | 17.9 | 12.6-23.2 | 121 | 17.5 | 14.1-20.9 |
| 45-54 years | 114 | 28.4 | 22.7-34.1 | 73 | 23.4 | 17.5-29.2 | 187 | 26.0 | 21.9-30.1 |
| 55-64 years | 210 | 32.4 | 27.8-37.0 | 155 | 35.5 | 30.0-41.1 | 365 | 33.9 | 30.3-37.5 |
| 65+ years | 387 | 34.0 | 30.6-37.5 | 256 | 41.5 | 36.9-46.1 | 643 | 37.3 | 34.5-40.1 |
| Less than H.S. | 213 | 51.2 | 44.4-57.9 | 143 | 40.2 | 32.9-47.4 | 356 | 45.4 | 40.3-50.5 |
| H.S. or G.E.D. | 296 | 26.9 | 23.4-30.4 | 212 | 24.3 | 20.5-28.0 | 508 | 25.5 | 22.9-28.1 |
| Some Post-H.S. | 200 | 17.7 | 14.8-20.6 | 145 | 20.6 | 16.5-24.6 | 345 | 19.0 | 16.5-21.4 |
| College Graduate | 134 | 10.4 | 8.2-12.6 | 71 | 11.3 | 8.3-14.3 | 205 | 10.8 | 9.0-12.6 |
| Less than \$15,000 | 215 | 46.1 | 39.9-52.4 | 118 | 53.3 | 43.6-63.0 | 333 | 49.1 | 43.6-54.5 |
| \$15,000-\$24,999 | 218 | 31.8 | 27.0-36.6 | 143 | 35.4 | 29.0-41.8 | 361 | 33.3 | 29.5-37.2 |
| \$25,000-\$34,999 | 62 | 17.0 | 11.8-22.1 | 39 | 19.1 | 12.4-25.9 | 101 | 17.9 | 13.8-22.0 |
| \$35,000-\$49,999 | 66 | 16.0 | 11.4-20.5 | 62 | 21.0 | 14.7-27.3 | 128 | 18.4 | 14.6-22.3 |
| \$50,000-\$74,999 | 41 | 12.6 | 7.9-17.3 | 36 | 10.6 | 6.3-15.0 | 77 | 11.4 | 8.2-14.6 |
| \$75,000+ | 36 | 6.1 | 3.5-8.7 | 45 | 9.0 | 6.0-12.1 | 81 | 7.7 | 5.7-9.8 |

(1) Unweighted number of cases
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group.
Note: Denominator excludes respondents with do not know/refused/missing responses

## Health Care Coverage

The healthcare coverage question is designed to estimate the number of people in the state who cannot obtain the health care they need because they are not covered by a health care plan or other

Health Care Coverage Question:
Do you have any kind of health care coverage, including health
insurance, prepaid plans such as HMOs, or
government plans such
as Medicare, or Indian Health Service? health insurance. People who do not have any coverage and/or are unable to afford coverage are at higher risk of adverse health conditions.

Overall, $17.5 \%$ of respondents reported that they did not have any health care coverage. Men had a higher rate of not having coverage (20.8\%) compared to women (14.5\%). Respondents of other races had the highest rate of non-coverage at $30.5 \%$, followed by Black respondents (22.0\%) (Fig. 5). Males of other races had the highest rate of non-coverage at 39.5\%, followed by Black males (26.7\%). White females had the lowest rate at $12.2 \%$. Among both males and females, those aged 18-24 years had the highest rates of non-coverage ( $44.1 \%$ for males, $27.5 \%$ for females), while the lowest rate was among those aged 65 years and older (1.9\% for males, $1.2 \%$ for females) (Fig. 6).

The rate of non-coverage was lower among respondents with higher levels of education (Fig. 7) and higher annual household incomes (Fig. 8). In regard to education, the rate was highest among males with less than a high school diploma (33.0\%) and lowest for females who graduated from college or a technical school (6.4\%). In terms of income, the non-coverage rate was highest among males with an annual household income of less than \$15,000 (35.0\%) and lowest among females whose household income was $\$ 75,000$ or more (1.9\%).



Figure 7. Percentage of Respondents with No Health Care Coverage by Education Level \& Sex



| TABLE 2-A. Health Care Coverage <br> Q: Do you have any kind of healthcare coverage? |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC | RESPONDENTS |  | Yes |  |  | No |  |  |
| GROUPS | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 5,107 | 2,270,721 | 4,469 | 82.5 | 80.9-84.1 | 638 | 17.5 | 15.9-19.1 |
| Male | 2,047 | 1,081,717 | 1,738 | 79.2 | 76.6-81.8 | 309 | 20.8 | 18.2-23.4 |
| Female | 3,060 | 1,189,004 | 2,731 | 85.5 | 83.6-87.3 | 329 | 14.5 | 12.7-16.4 |
| White/Non-Hisp. | 2,940 | 1,319,620 | 2,657 | 86.2 | 84.5-88.0 | 283 | 13.8 | 12.0-15.5 |
| Black or Afr. Am./Non-Hisp. | 1,951 | 802,195 | 1,643 | 78.0 | 75.2-80.8 | 308 | 22.0 | 19.2-24.8 |
| Other Races/Ethnicities** | 163 | 122,675 | 120 | 69.5 | 58.7-80.2 | 43 | 30.5 | 19.8-41.3 |
| 18-24 years | 278 | 292,653 | 193 | 64.1 | 57.3-70.9 | 85 | 35.9 | 29.1-42.7 |
| 25-34 years | 540 | 386,835 | 410 | 74.1 | 69.5-78.6 | 130 | 25.9 | 21.4-30.5 |
| 35-44 years | 639 | 363,117 | 525 | 81.1 | 77.3-84.8 | 114 | 18.9 | 15.2-22.7 |
| 45-54 years | 737 | 341,285 | 600 | 81.2 | 77.6-84.8 | 137 | 18.8 | 15.2-22.4 |
| 55-64 years | 1,046 | 375,205 | 904 | 86.5 | 84.0-89.0 | 142 | 13.5 | 11.0-16.0 |
| 65+ years | 1,819 | 486,578 | 1,791 | 98.5 | 97.9-99.2 | 28 | 1.5 | 0.8-2.1 |
| Less than H.S. | 661 | 363,528 | 538 | 74.7 | 69.7-79.6 | 123 | 25.3 | 20.4-30.3 |
| H.S. or G.E.D. | 1,538 | 684,481 | 1,301 | 79.0 | 76.1-81.9 | 237 | 21.0 | 18.1-23.9 |
| Some Post-H.S. | 1,443 | 766,840 | 1,265 | 83.6 | 80.8-86.4 | 178 | 16.4 | 13.6-19.2 |
| College Graduate | 1,446 | 447,275 | 1,348 | 92.0 | 90.2-93.8 | 98 | 8.0 | 6.2-9.8 |
| Less than \$15,000 | 620 | 241,492 | 477 | 69.0 | 63.6-74.4 | 143 | 31.0 | 25.6-36.4 |
| \$15,000-\$24,999 | 965 | 432,753 | 789 | 75.2 | 71.2-79.2 | 176 | 24.8 | 20.8-28.8 |
| \$25,000-\$34,999 | 478 | 213,455 | 409 | 80.5 | 75.6-85.4 | 69 | 19.5 | 14.6-24.4 |
| \$35,000-\$49,999 | 578 | 265,080 | 516 | 83.5 | 78.5-88.4 | 62 | 16.5 | 11.6-21.5 |
| \$50,000-\$74,999 | 541 | 263,906 | 503 | 90.7 | 87.3-94.1 | 38 | 9.3 | 5.9-12.7 |
| \$75,000+ | 907 | 428,224 | 866 | 92.9 | 89.8-95.9 | 41 | 7.1 | 4.1-10.2 |
| (1) Unweighted number <br> (2) Weighted percent <br> **Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group. <br> Note: Denominator excludes respondents with do not know/refused/missing responses |  |  |  |  |  |  |  |  |


| Table 2-B. No Health Care Coverage by Sex |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathbf{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathbf{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 145 | 12.2 | 10.0-4.4 | 14.4 | 15.5 | 12.6-18.3 | 283 | 13.8 | 12.0-15.5 |
| Black or Afr. Am./Non-Hisp. | 163 | 18.2 | 14.9-21.5 | 145 | 26.7 | 21.9-31.4 | 308 | 22.0 | 19.2-24.8 |
| Other Races/Ethnicities** | 19 | 16.9 | 8.2-25.7 | 24 | 39.5 | 23.7-55.4 | 43 | 30.5 | 19.8-41.3 |
| 18-24 years | 36 | 27.5 | 19.1-35.9 | 49 | 44.1 | 33.8-54.5 | 85 | 35.9 | 29.1-42.7 |
| 25-34 years | 66 | 21.4 | 16.2-26.6 | 64 | 30.4 | 23.1-37.8 | 130 | 25.9 | 21.4-30.5 |
| 35-44 years | 68 | 17.9 | 13.2-22.6 | 46 | 20.0 | 14.1-25.9 | 114 | 18.9 | 15.2-22.7 |
| 45-54 years | 70 | 16.6 | 12.1-21.0 | 67 | 21.2 | 15.5-27.0 | 137 | 18.8 | 15.2-22.4 |
| 55-64 years | 77 | 13.0 | 9.7-16.3 | 65 | 14.0 | 10.2-17.9 | 142 | 13.5 | 11.0-16.0 |
| 65+ years | 12 | 1.2 | 0.4-2.0 | 16 | 1.9 | 0.8-2.9 | 28 | 1.5 | 0.8-2.1 |
| Less than H.S. | 52 | 16.9 | 11.5-22.3 | 71 | 33.0 | 25.2-40.8 | 123 | 25.3 | 20.4-30.3 |
| H.S. or G.E.D. | 116 | 19.5 | 15.6-23.5 | 121 | 22.3 | 18-26.6 | 237 | 21.0 | 18.1-23.9 |
| Some Post-H.S. | 107 | 14.7 | 11.6-17.7 | 71 | 18.6 | 13.7-23.5 | 178 | 16.4 | 13.6-19.2 |
| College Graduate | 54 | 6.4 | 4.4-8.3 | 44 | 10.1 | 6.8-13.4 | 98 | 8.0 | 6.2-9.8 |
| Less than \$15,000 | 94 | 28.2 | 22.2-34.2 | 49 | 35.0 | 25.1-44.8 | 143 | 31.0 | 25.6-36.4 |
| \$15,000-\$24,999 | 104 | 22.4 | 17.8-27 | 72 | 28.1 | 21.1-35.1 | 176 | 24.8 | 20.8-28.8 |
| \$25,000-\$34,999 | 35 | 16.1 | 9.9-22.3 | 34 | 24.2 | 16.1-32.3 | 69 | 19.5 | 14.6-24.4 |
| \$35,000-\$49,999 | 26 | 11.0 | 5.9-16 | 36 | 22.1 | 13.9-30.4 | 62 | 16.5 | 11.6-21.5 |
| \$50,000-\$74,999 | 14 | 7.1 | 3.1-11.1 | 24 | 10.8 | 5.7-15.9 | 38 | 9.3 | 5.9-12.7 |
| \$75,000+ | 8 | 1.9 | 0.3-3.4 | 33 | 11.5 | 6.3-16.7 | 41 | 7.1 | 4.1-10.2 |
| (1) Unweighted number of cases <br> (2) Weighted percent <br> **Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group. <br> Note: Denominator excludes respondents with do not know/refused/missing responses |  |  |  |  |  |  |  |  |  |

## Health care Access

Non-affordability of health care services can have a negative impact on its utilization. ${ }^{3}$ Results of the 2019 National Health Interview Survey showed that, due to cost, in the preceding 12 months, $8.3 \%$ of

Health Care Access Question:
Was there a time in the past 12 months when you needed to see a doctor but could not because of cost? adults in the United States did not get medical care they needed, $4.3 \%$ did not get mental health care they needed, and 9.7\% did not take their medication as prescribed. ${ }^{4}$ The 2019 BRFSS's national estimate was higher, with $13.4 \%$ of respondents reporting not seeing a doctor in the last 12 months due to cost. ${ }^{5}$

Overall, $17.2 \%$ of respondents reported that they had forgone seeing a doctor due to costs in the last 12 months. Women had a higher rate (19.1\%) than men ( $15.2 \%$ ). Respondents of other races had the highest rate of not seeing a doctor due to costs at $23.4 \%$, followed by Black respondents (19.0\%), and White respondents (15.5\%) (Fig. 9). In terms of race and sex, females of other races had the highest rate at $36.6 \%$, while White males had the lowest (13.8\%). Overall, there was little fluctuation among age groups, with the exception of the 65+ age group having a considerably lower rate than younger age groups (Fig. 10).

The rate of not seeing a doctor due to costs increased as level of education (Fig. 11) and annual household income (Fig. 12) decreased. In regard to education, the rate was highest among males with less than a high school diploma (29.9\%) and lowest for males who graduated from college or a technical school (8.6\%). In terms of income, the rate was highest among females with an annual household income of $\$ 15,000$ to $\$ 24,999$ (29.9\%) and lowest among males whose household income was $\$ 75,000$ or more ( $4.3 \%$ ).



Figure 11. Percentage of Respondents Who Could Not See A Doctor Due to Cost by Education Level \& Sex



TABLE 3-A. Health Care Access
Q: Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?

| DEMOGRAPHIC GROUPS | RESPONDENTS |  | Yes |  |  | No |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 5,117 | 2,284,016 | 757 | 17.2 | 15.8-18.7 | 4,360 | 82.8 | 81.3-84.2 |
| Male | 2,051 | 1,090,896 | 266 | 15.2 | 13.1-17.4 | 1,785 | 84.8 | 82.6-86.9 |
| Female | 3,066 | 1,193,120 | 491 | 19.1 | 17.1-21.0 | 2,575 | 80.9 | 79.0-82.9 |
| White/Non-Hisp. | 2,943 | 1,323,394 | 360 | 15.5 | 13.7-17.2 | 2,583 | 84.5 | 82.8-86.3 |
| Black or Afr. Am./Non-Hisp. | 1,955 | 806,164 | 348 | 19.0 | 16.5-21.4 | 1,607 | 81.0 | 78.6-83.5 |
| Other Races/Ethnicities** | 165 | 127,735 | 41 | 23.4 | 14.6-32.3 | 124 | 76.6 | 67.7-85.4 |
| 18-24 years | 284 | 302,883 | 59 | 18.6 | 13.7-23.6 | 225 | 81.4 | 76.4-86.3 |
| 25-34 years | 539 | 386,002 | 112 | 21.9 | 17.6-26.3 | 427 | 78.1 | 73.7-82.4 |
| 35-44 years | 641 | 364,179 | 127 | 19.0 | 15.4-22.6 | 514 | 81.0 | 77.4-84.6 |
| 45-54 years | 739 | 342,920 | 154 | 21.0 | 17.3-24.8 | 585 | 79.0 | 75.2-82.7 |
| 55-64 years | 1,046 | 376,143 | 190 | 19.0 | 16.0-22.1 | 856 | 81.0 | 77.9-84.0 |
| $65+$ years | 1,820 | 487,259 | 110 | 7.1 | 5.5-8.7 | 1,710 | 92.9 | 91.3-94.5 |
| Less than H.S. | 662 | 363,378 | 156 | 28.3 | 23.5-33.2 | 506 | 71.7 | 66.8-76.5 |
| H.S. or G.E.D. | 1,540 | 690,549 | 248 | 18.6 | 15.9-21.2 | 1,292 | 81.4 | 78.8-84.1 |
| Some Post-H.S. | 1,448 | 772,918 | 201 | 14.8 | 12.4-17.1 | 1,247 | 85.2 | 82.9-87.6 |
| College Graduate | 1,447 | 448,084 | 149 | 10.4 | 8.5-12.3 | 1,298 | 89.6 | 87.7-91.5 |
| Less than \$15,000 | 621 | 242,055 | 166 | 27.5 | 22.7-32.2 | 455 | 72.5 | 67.8-77.3 |
| \$15,000-\$24,999 | 964 | 432,560 | 222 | 27.1 | 23.2-31.1 | 742 | 72.9 | 68.9-76.8 |
| \$25,000-\$34,999 | 480 | 216,598 | 86 | 20.2 | 15.5-24.9 | 394 | 79.8 | 75.1-84.5 |
| \$35,000-\$49,999 | 577 | 264,989 | 71 | 16.2 | 11.8-20.6 | 506 | 83.8 | 79.4-88.2 |
| \$50,000-\$74,999 | 541 | 263,906 | 52 | 13.6 | 9.4-17.8 | 489 | 86.4 | 82.2-90.6 |
| \$75,000+ | 908 | 428,550 | 33 | 4.6 | 2.8-6.5 | 875 | 95.4 | 93.5-97.2 |

(1) Unweighted number
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group.
Note: Denominator excludes respondents with do not know/refused/missing responses

| Table 3-B. Could Not See a Doctor in Past 12 Months Because of Cost by Sex |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathbf{N}^{(1)}$ | \%(2) | C.I. (95\%) |
| White/Non-Hisp. | 228 | 17.1 | 14.7-19.4 | 132 | 13.8 | 11.2-16.4 | 360 | 15.5 | 13.7-17.2 |
| Black or Afr. Am./Non-Hisp. | 228 | 19.7 | 16.5-22.9 | 120 | 18.0 | 14.2-21.8 | 348 | 19.0 | 16.5-21.4 |
| Other Races/Ethnicities** | 29 | 36.6 | 22.7-50.5 | 12 | 14.9 | 4.3-25.6 | 41 | 23.4 | 14.6-32.3 |
| 18-24 years | 37 | 23.4 | 15.8-30.9 | 22 | 14.1 | 7.8-20.3 | 59 | 18.6 | 13.7-23.6 |
| 25-34 years | 71 | 24.5 | 18.6-30.3 | 41 | 19.4 | 13.0-25.8 | 112 | 21.9 | 17.6-26.3 |
| 35-44 years | 85 | 22.1 | 17.2-27.1 | 42 | 15.7 | 10.3-21.1 | 127 | 19.0 | 15.4-22.6 |
| 45-54 years | 98 | 22.6 | 17.7-27.6 | 56 | 19.4 | 13.8-24.9 | 154 | 21.0 | 17.3-24.8 |
| 55-64 years | 125 | 20.8 | 16.8-24.9 | 65 | 17.1 | 12.4-21.8 | 190 | 19.0 | 16.0-22.1 |
| 65+ years | 73 | 7.2 | 5.3-9.2 | 37 | 6.9 | 4.3-9.5 | 110 | 7.1 | 5.5-8.7 |
| Less than H.S. | 86 | 26.6 | 20.3-33.0 | 70 | 29.9 | 22.6-37.1 | 156 | 28.3 | 23.5-33.2 |
| H.S. or G.E.D. | 151 | 21.1 | 17.4-24.8 | 97 | 16.2 | 12.5-19.9 | 248 | 18.6 | 15.9-21.2 |
| Some Post-H.S. | 145 | 18.6 | 15.3-21.9 | 56 | 10.0 | 6.9-13.0 | 201 | 14.8 | 12.4-17.1 |
| College Graduate | 107 | 11.9 | 9.3-14.4 | 42 | 8.6 | 5.8-11.5 | 149 | 10.4 | 8.5-12.3 |
| Less than \$15,000 | 117 | 29.5 | 23.7-35.2 | 49 | 24.6 | 16.6-32.6 | 166 | 27.5 | 22.7-32.2 |
| \$15,000-\$24,999 | 155 | 29.9 | 24.9-35.0 | 67 | 23.3 | 17.0-29.6 | 222 | 27.1 | 23.2-31.1 |
| \$25,000-\$34,999 | 60 | 22.6 | 16.4-28.8 | 26 | 17.0 | 9.9-24.1 | 86 | 20.2 | 15.5-24.9 |
| \$35,000-\$49,999 | 45 | 17.9 | 12.0-23.8 | 26 | 14.4 | 8.0-20.9 | 71 | 16.2 | 11.8-20.6 |
| \$50,000-\$74,999 | 30 | 12.6 | 7.7-17.4 | 22 | 14.3 | 7.9-20.7 | 52 | 13.6 | 9.4-17.8 |
| \$75,000+ | 16 | 5.1 | 2.3-7.8 | 17 | 4.3 | 1.9-6.7 | 33 | 4.6 | 2.8-6.5 |
| (1) Unweighted number of cases <br> (2) Weighted percent <br> **Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group. <br> Note: Denominator excludes respondents with do not know/refused/missing responses |  |  |  |  |  |  |  |  |  |

## Physical Health Status

In both public and private medicine, the concept of health-related quality of life refers to the physical and mental health perceived by a person or a group of persons. ${ }^{6}$ Health care professionals use healthrelated quality of life to measure the effects of chronic illness in patients

## Physical Health Status

 Question:Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good? and to better understand how an illness interferes with the day-to-day life activities of an individual. Similarly, health professionals use health-related quality of life to measure the effects of numerous disorders, short-term and long-term disabilities, and diseases in different populations. Tracking health-related quality of life in different populations can aid in identifying subgroups with poor physical or mental health and can help in developing policies or interventions to improve their health. ${ }^{6}$

The 2019 MS BRFSS revealed that 17.2\% of respondents had eight or more days of poor physical health in the past 30 days. Females had a higher rate of $8+$ poor physical health days (18.5\%) compared to males (15.8\%). Overall, rates did not differ greatly among race groups; however, females of another race had the highest rate (22.1\%) of all race/sex groups (Fig. 13). The rate of having $8+$ poor physical health days increased with age; respondents aged 18-24 years had a rate of $7.8 \%$, while those aged 65 years or older had a rate of 24.7\% (Fig. 14).

The rate of 8+ poor physical health days decreased as level of education increased (Fig. 15). In regard to annual household income, the rate was highest among those making less than $\$ 15,000(35.0 \%)$ and lowest among those making $\$ 75,000$ or more (7.0\%) (Fig. 16).



Figure 15. Percentage of Respondents with 8+ Poor Physical Health Days by Education Level \& Sex



TABLE 4-A. Physical Health Status
Q: For how many days during the past 30 days was your physical health not good?

| DEMOGRAPHIC GROUPS | RESPONDENTS |  | More than 7 days |  |  | 7 days or fewer |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 4,968 | 2,229,309 | 987 | 17.2 | 15.9-18.5 | 3,981 | 82.8 | 81.5-84.1 |
| Male | 2,004 | 1,070,487 | 375 | 15.8 | 13.9-17.7 | 1,629 | 84.2 | 82.3-86.1 |
| Female | 2,964 | 1,158,822 | 612 | 18.5 | 16.7-20.3 | 2,352 | 81.5 | 79.7-83.3 |
| White/Non-Hisp. | 2,876 | 1,296,021 | 550 | 17.1 | 15.4-18.7 | 2,326 | 82.9 | 81.3-84.6 |
| Black or Afr. Am./Non-Hisp. | 1,882 | 784,175 | 382 | 16.6 | 14.5-18.8 | 1,500 | 83.4 | 81.2-85.5 |
| Other Races/Ethnicities** | 159 | 123,318 | 40 | 18.9 | 11.4-26.5 | 119 | 81.1 | 73.5-88.6 |
| 18-24 years | 282 | 301,016 | 24 | 7.8 | 4.4-11.3 | 258 | 92.2 | 88.7-95.6 |
| 25-34 years | 529 | 378,930 | 50 | 8.7 | 6.0-11.3 | 479 | 91.3 | 88.7-94.0 |
| 35-44 years | 628 | 355,722 | 72 | 11.6 | 8.6-14.6 | 556 | 88.4 | 85.4-91.4 |
| 45-54 years | 725 | 337,333 | 139 | 19.1 | 15.4-22.8 | 586 | 80.9 | 77.2-84.6 |
| 55-64 years | 1,017 | 366,754 | 274 | 27.3 | 23.8-30.8 | 743 | 72.7 | 69.2-76.2 |
| $65+$ years | 1,744 | 467,482 | 417 | 24.7 | 22.1-27.3 | 1,327 | 75.3 | 72.7-77.9 |
| Less than H.S. | 619 | 345,686 | 208 | 30.4 | 25.7-35.1 | 411 | 69.6 | 64.9-74.3 |
| H.S. or G.E.D. | 1,485 | 670,400 | 332 | 18.4 | 16.0-20.7 | 1,153 | 81.6 | 79.3-84.0 |
| Some Post-H.S. | 1,422 | 762,851 | 256 | 14.1 | 11.9-16.2 | 1,166 | 85.9 | 83.8-88.1 |
| College Graduate | 1,424 | 442,017 | 188 | 10.7 | 8.8-12.5 | 1,236 | 89.3 | 87.5-91.2 |
| Less than \$15,000 | 591 | 231,396 | 231 | 35.0 | 29.8-40.1 | 360 | 65.0 | 59.9-70.2 |
| \$15,000-\$24,999 | 934 | 423,928 | 236 | 23.0 | 19.5-26.6 | 698 | 77.0 | 73.4-80.5 |
| \$25,000-\$34,999 | 471 | 211,146 | 82 | 15.6 | 11.4-19.8 | 389 | 84.4 | 80.2-88.6 |
| \$35,000-\$49,999 | 562 | 259,210 | 86 | 13.3 | 9.9-16.7 | 476 | 86.7 | 83.3-90.1 |
| \$50,000-\$74,999 | 537 | 262,630 | 60 | 9.9 | 6.7-13.1 | 477 | 90.1 | 86.9-93.3 |
| \$75,000+ | 901 | 425,048 | 75 | 7.0 | 5.2-8.8 | 826 | 93.0 | 91.2-94.8 |

(1) Unweighted number
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group.
Note: Denominator excludes respondents with do not know/refused/missing responses

Table 4-B. More than 7 Days of Poor Physical Health by Sex

| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 335 | 17.8 | 15.6-20.0 | 215 | 16.2 | 13.8-18.7 | 550 | 17.1 | 15.4-18.7 |
| Black or Afr. Am./Non-Hisp. | 247 | 18.3 | 15.4-21.2 | 135 | 14.6 | 11.5-17.8 | 382 | 16.6 | 14.5-18.8 |
| Other Races/Ethnicities** | 20 | 22.1 | 9.7-34.5 | 20 | 16.9 | 7.7-26.0 | 40 | 18.9 | 11.4-26.5 |
| 18-24 years | 13 | 9.3 | 3.8-14.8 | 11 | 6.4 | 2.2-10.7 | 24 | 7.8 | 4.4-11.3 |
| 25-34 years | 31 | 9.8 | 5.9-13.7 | 19 | 7.6 | 4.0-11.2 | 50 | 8.7 | 6.0-11.3 |
| 35-44 years | 47 | 13.4 | 9.3-17.6 | 25 | 9.6 | 5.3-14.0 | 72 | 11.6 | 8.6-14.6 |
| 45-54 years | 86 | 21.5 | 16.2-26.8 | 53 | 16.5 | 11.5-21.5 | 139 | 19.1 | 15.4-22.8 |
| 55-64 years | 156 | 25.2 | 20.9-29.5 | 118 | 29.6 | 24.1-35.2 | 274 | 27.3 | 23.8-30.8 |
| 65+ years | 270 | 25.8 | 22.6-29.1 | 147 | 23.3 | 19.1-27.4 | 417 | 24.7 | 22.1-27.3 |
| Less than H.S. | 122 | 32.6 | 26.0-39.1 | 86 | 28.5 | 21.9-35.1 | 208 | 30.4 | 25.7-35.1 |
| H.S. or G.E.D. | 198 | 20.8 | 17.5-24.2 | 134 | 16.1 | 12.8-19.4 | 332 | 18.4 | 16.0-20.7 |
| Some Post-H.S. | 164 | 16.1 | 13.1-19.0 | 92 | 11.6 | 8.6-14.5 | 256 | 14.1 | 11.9-16.2 |
| College Graduate | 126 | 10.6 | 8.3-12.9 | 62 | 10.7 | 7.7-13.8 | 188 | 10.7 | 8.8-12.5 |
| Less than \$15,000 | 153 | 35.5 | 29.3-41.7 | 78 | 34.3 | 25.5-43.1 | 231 | 35.0 | 29.8-40.1 |
| \$15,000-\$24,999 | 148 | 23.1 | 18.7-27.5 | 88 | 23.0 | 17.3-28.6 | 236 | 23.0 | 19.5-26.6 |
| \$25,000-\$34,999 | 51 | 15.3 | 9.9-20.7 | 31 | 16.1 | 9.5-22.7 | 82 | 15.6 | 11.4-19.8 |
| \$35,000-\$49,999 | 51 | 14.3 | 9.6-19.0 | 35 | 12.3 | 7.3-17.2 | 86 | 13.3 | 9.9-16.7 |
| \$50,000-\$74,999 | 39 | 13.1 | 8.0-18.3 | 21 | 7.5 | 3.5-11.5 | 60 | 9.9 | 6.7-13.1 |
| \$75,000+ | 40 | 7.8 | 5.0-10.6 | 35 | 6.4 | 4.0-8.7 | 75 | 7.0 | 5.2-8.8 |

(1) Unweighted number of cases
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group
Note: Denominator excludes respondents with do not know/refused/missing responses

## Mental Health Status

The concept of health-related quality of life refers to the physical and mental health perceived by a person or a group of persons. ${ }^{6}$ Health-related quality of life can be used to measure the effects of

> Mental Health Status Question:
> Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?
chronic illness, various disorders, short-term and long-term disabilities, and diseases. Monitoring health-related quality of life in different populations can help with both identifying subgroups with poor physical or mental health and developing policies or interventions to improve their health. ${ }^{6}$

The 2019 MS BRFSS revealed that 21.8\% of respondents had eight or more days of poor mental health in the past 30 days. Overall, females had a higher rate of $8+$ poor mental health days ( $24.5 \%$ ) compared to males (18.7\%). Respondents of other races (27.5\%) had a higher rate than Black (21.6\%) and White (21.1\%) respondents. Females of another race had the highest rate of 8+ poor mental health days (38.0\%) of all race/sex groups (Fig. 17). For both males and females, the age group with the highest rate was 18 to 24 years (Fig.18).

The rate of 8+ poor mental health days decreased as level of education increased (Fig. 19). In regard to annual household income, the rate was highest among those making less than $\$ 15,000$ ( $30.6 \%$ ) and those making $\$ 15,000$ to $\$ 24,999$ ( $30.5 \%$ ) and lowest among those making $\$ 75,000$ or more ( $11.6 \%$ ) (Fig. 20).



Figure 19. Percentage of Respondents with
8+ Poor Mental Health Days by Education Level \& Sex




Table 5-B. More than 7 Days of Poor Mental Health by Sex

| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 345 | 23.7 | 21.0-26.4 | 179 | 18.2 | 15.3-21.1 | 524 | 21.1 | 19.1-23.0 |
| Black or Afr. Am./Non-Hisp. | 246 | 23.3 | 19.8-26.8 | 124 | 19.5 | 15.2-23.7 | 370 | 21.6 | 18.9-24.3 |
| Other Races/Ethnicities** | 27 | 38.0 | 23.7-52.4 | 16 | 20.9 | 8.6-33.2 | 43 | 27.5 | 17.8-37.2 |
| 18-24 years | 54 | 38.6 | 29.7-47.5 | 40 | 31.9 | 22.3-41.5 | 94 | 35.2 | 28.6-41.7 |
| 25-34 years | 85 | 26.8 | 21.0-32.7 | 35 | 14.3 | 9.4-19.3 | 120 | 20.6 | 16.7-24.6 |
| 35-44 years | 79 | 21.6 | 16.4-26.7 | 54 | 21.4 | 15.4-27.4 | 133 | 21.5 | 17.5-25.4 |
| 45-54 years | 121 | 31.6 | 25.8-37.3 | 46 | 16.8 | 11.1-22.5 | 167 | 24.5 | 20.4-28.6 |
| 55-64 years | 132 | 20.9 | 17.0-24.8 | 79 | 21.2 | 16.1-26.3 | 211 | 21.1 | 17.9-24.3 |
| 65+ years | 149 | 14.6 | 12.0-17.3 | 64 | 10.1 | 7.3-13.0 | 213 | 12.7 | 10.7-14.6 |
| Less than H.S. | 110 | 37.4 | 30.4-44.5 | 48 | 23.1 | 16.1-30.1 | 158 | 29.9 | 24.8-35.0 |
| H.S. or G.E.D. | 178 | 23.6 | 19.7-27.5 | 112 | 20.7 | 16.3-25.2 | 290 | 22.1 | 19.2-25.1 |
| Some Post-H.S. | 192 | 24.3 | 20.6-28.0 | 104 | 18.4 | 14.4-22.4 | 296 | 21.6 | 18.9-24.4 |
| College Graduate | 147 | 17.8 | 14.6-21.0 | 55 | 11.6 | 8.2-15.0 | 202 | 15.1 | 12.8-17.4 |
| Less than \$15,000 | 124 | 32.0 | 25.9-38.2 | 51 | 28.4 | 19.4-37.5 | 175 | 30.6 | 25.4-35.8 |
| \$15,000-\$24,999 | 174 | 36.9 | 31.5-42.3 | 69 | 21.6 | 15.8-27.4 | 243 | 30.5 | 26.4-34.7 |
| \$25,000-\$34,999 | 55 | 17.8 | 12.1-23.4 | 26 | 16.9 | 9.8-23.9 | 81 | 17.4 | 12.9-21.8 |
| \$35,000-\$49,999 | 67 | 25.3 | 18.6-31.9 | 37 | 19.2 | 12.3-26.2 | 104 | 22.2 | 17.4-27.1 |
| \$50,000-\$74,999 | 35 | 15.8 | 9.7-21.8 | 28 | 16.1 | 9.3-23.0 | 63 | 16.0 | 11.3-20.7 |
| \$75,000+ | 60 | 14.5 | 10.5-18.4 | 40 | 9.2 | 5.9-12.5 | 100 | 11.6 | 9.0-14.2 |

(1) Unweighted number of cases
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group
Note: Denominator excludes respondents with do not know/refused/missing responses

## EXERCISE AND Physical AcTIVITY

Regular physical activity helps to maintain the functional independence of older adults and enhances the quality of life for people of all ages. Adequate physical activity levels can prevent 1 in 10 premature deaths, as well as 1 in 8 cases of breast cancer, 1 in 12 cases of diabetes, and 1 in 15 cases of heart

> Exercise and Physical Activity Question: During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise? disease. ${ }^{7}$ The role of physical activity in preventing coronary heart disease (CHD) is of particular importance, given that CHD was the leading cause of death in the United States and Mississippi in 2019.8,9 The risk posed by physical inactivity is almost as high as several wellknown CHD risk factors such as cigarette smoking, hypertension, and high blood cholesterol.

In Mississippi in 2019, 37.7\% of the population reported not participating in any physical activity outside of work in the past 30 days. Women reported a higher rate of physical inactivity (40.1\%) than did men (35.1\%). Black respondents had the highest rate with $42.5 \%$, followed by White respondents with $36.3 \%$, and respondents of other races with $25.6 \%$ (Fig. 21). Black females reported the highest rate of physical inactivity of all race/sex groups at 45.6\%. Overall, rates of physical inactivity increased with age (Fig. 22).

Rates of physical inactivity increased as level of education (Fig. 23) and annual household income (Fig. 24) decreased. Respondents who did not graduate from high school had the highest rate of all education level groups with $52.3 \%$, and those whose households earn less than $\$ 15,000$ per year had the highest rate among income groups with 54.3\%.


## TABLE 6-A. Exercise (Past Month)

Q: Other than your regular job, did you participate in any physical activities or exercises?

| DEMOGRAPHIC <br> GROUPS | RESPONDENTS |  | Yes |  |  | No |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TOTAL | WEIGHTED | $\mathbf{N}^{(1)}$ | $\%$ | $\%^{(2)}$ | C.I. $(95 \%)$ | $\mathbf{N}^{(1)}$ | $\%$ |
| TOTAL | 4,933 | $2,186,250$ | 2,908 | 62.3 | $60.5-64.0$ | 2,025 | 37.7 | $36.0-39.5$ |
| Male | 1,969 | $1,044,747$ | 1,239 | 64.9 | $62.1-67.6$ | 730 | 35.1 | $32.4-37.9$ |
| Female | 2,964 | $1,141,503$ | 1,669 | 59.9 | $57.6-62.2$ | 1,295 | 40.1 | $37.8-42.4$ |
| White/Non-Hisp. | 2,868 | $1,281,414$ | 1,754 | 63.7 | $61.5-65.9$ | 1,114 | 36.3 | $34.1-38.5$ |
| Black or Afr. Am./Non-Hisp. | 1,861 | 761,358 | 1,016 | 57.5 | $54.4-60.6$ | 845 | 42.5 | $39.4-45.6$ |
| Other Races/Ethnicities** | 156 | 120,062 | 105 | 74.4 | $65.4-83.4$ | 51 | 25.6 | $16.6-34.6$ |
| 18-24 years | 273 | 289,632 | 204 | 74.1 | $68.0-80.2$ | 69 | 25.9 | $19.8-32.0$ |
| 25-34 years | 501 | 358,497 | 341 | 68.9 | $63.9-73.8$ | 160 | 31.1 | $26.2-36.1$ |
| $35-44$ years | 612 | 350,971 | 397 | 66.7 | $62.3-71.0$ | 215 | 33.3 | $29.0-37.7$ |
| 45-54 years | 703 | 321,792 | 418 | 61.2 | $56.7-65.6$ | 285 | 38.8 | $34.4-43.3$ |
| $55-64$ years | 1,011 | 365,170 | 556 | 55.2 | $51.4-59.1$ | 455 | 44.8 | $40.9-48.6$ |
| $65+$ years | 1,791 | 478,909 | 971 | 53.9 | $51.0-56.8$ | 820 | 46.1 | $43.2-49.0$ |
| Less than H.S. | 635 | 340,840 | 280 | 47.7 | $42.4-53.0$ | 355 | 52.3 | $47.0-57.6$ |
| H.S. or G.E.D. | 1,474 | 661,786 | 775 | 57.1 | $53.9-60.4$ | 699 | 42.9 | $39.6-46.1$ |
| Some Post-H.S. | 1,410 | 747,213 | 853 | 65.7 | $62.6-68.9$ | 557 | 34.3 | $31.1-37.4$ |
| College Graduate | 1,399 | 429,186 | 993 | 75.4 | $72.7-78.1$ | 406 | 24.6 | $21.9-27.3$ |
| Less than $\$ 15,000$ | 609 | 238,815 | 273 | 45.7 | $40.2-51.1$ | 336 | 54.3 | $48.9-59.8$ |
| $\$ 15,000-\$ 24,999$ | 946 | 423,178 | 483 | 54.2 | $50.0-58.5$ | 463 | 45.8 | $41.5-50.0$ |
| $\$ 25,000-\$ 34,999$ | 469 | 210,133 | 277 | 61.8 | $56.0-67.5$ | 192 | 38.2 | $32.5-44.0$ |
| $\$ 35,000-\$ 49,999$ | 569 | 259,948 | 367 | 65.8 | $60.6-71.0$ | 202 | 34.2 | $29.0-39.4$ |
| $\$ 50,000-\$ 74,999$ | 527 | 253,420 | 366 | 74.2 | $69.4-79.0$ | 161 | 25.8 | $21.0-30.6$ |
| $\$ 75,000+$ | 894 | 420,257 | 661 | 77.0 | $73.6-80.3$ | 233 | 23.0 | $19.7-26.4$ |

(1) Unweighted number
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group. Note: Denominator excludes respondents with do not know/refused/missing responses

Table 6-B. Physical Inactivity in Past Month by Sex

| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathbf{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 683 | 37.7 | 34.8-40.6 | 431 | 34.8 | 31.5-38.2 | 1,114 | 36.3 | 34.1-38.5 |
| Black or Afr. Am./Non-Hisp. | 572 | 45.6 | 41.8-49.5 | 273 | 38.4 | 33.4-43.5 | 845 | 42.5 | 39.4-45.6 |
| Other Races/Ethnicities** | 30 | 27.7 | 16.2-39.3 | 21 | 24.2 | 11.5-37.0 | 51 | 25.6 | 16.6-34.6 |
| 18-24 years | 46 | 34.4 | 25.5-43.3 | 23 | 18.1 | 10.2-26.0 | 69 | 25.9 | 19.8-32.0 |
| 25-34 years | 103 | 32.4 | 26.4-38.4 | 57 | 29.9 | 22.1-37.7 | 160 | 31.1 | 26.2-36.1 |
| 35-44 years | 136 | 36.4 | 30.5-42.3 | 79 | 30.0 | 23.6-36.5 | 215 | 33.3 | 29.0-37.7 |
| 45-54 years | 177 | 38.9 | 33.1-44.7 | 108 | 38.8 | 32.0-45.5 | 285 | 38.8 | 34.4-43.3 |
| 55-64 years | 272 | 42.5 | 37.7-47.4 | 183 | 47.3 | 41.3-53.3 | 455 | 44.8 | 40.9-48.6 |
| 65+ years | 550 | 49.7 | 46.1-53.3 | 270 | 41.4 | 36.8-46.0 | 820 | 46.1 | 43.2-49.0 |
| Less than H.S. | 214 | 53.0 | 46.2-59.8 | 141 | 51.7 | 43.6-59.7 | 355 | 52.3 | 47.0-57.6 |
| H.S. or G.E.D. | 435 | 47.4 | 43.0-51.8 | 264 | 38.6 | 33.8-43.4 | 699 | 42.9 | 39.6-46.1 |
| Some Post-H.S. | 364 | 37.3 | 33.3-41.3 | 193 | 30.5 | 25.7-35.3 | 557 | 34.3 | 31.1-37.4 |
| College Graduate | 278 | 27.2 | 23.6-30.7 | 128 | 21.3 | 17.2-25.4 | 406 | 24.6 | 21.9-27.3 |
| Less than \$15,000 | 234 | 52.3 | 45.9-58.8 | 102 | 57.2 | 47.8-66.5 | 336 | 54.3 | 48.9-59.8 |
| \$15,000-\$24,999 | 312 | 47.4 | 42.1-52.7 | 151 | 43.4 | 36.3-50.5 | 463 | 45.8 | 41.5-50.0 |
| \$25,000-\$34,999 | 136 | 43.5 | 36.0-51.0 | 56 | 31.1 | 22.5-39.7 | 192 | 38.2 | 32.5-44.0 |
| \$35,000-\$49,999 | 119 | 37.5 | 30.4-44.6 | 83 | 30.9 | 23.5-38.4 | 202 | 34.2 | 29.0-39.4 |
| \$50,000-\$74,999 | 88 | 27.5 | 21.2-33.8 | 73 | 24.6 | 17.6-31.5 | 161 | 25.8 | 21.0-30.6 |
| \$75,000+ | 113 | 20.7 | 16.4-24.9 | 120 | 25.0 | 20.0-30.0 | 233 | 23.0 | 19.7-26.4 |

(1) Unweighted number of cases
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group
Note: Denominator excludes respondents with do not know/refused/missing responses

## HyPERTENSION

Hypertension, or high blood pressure, is a condition in which a person's blood pressure is at or above $130 / 80 \mathrm{~mm} \mathrm{Hg} .{ }^{10}$ Having blood pressure that is consistently elevated can damage the heart and

> Hypertension Question:
> Have you ever been told by a doctor, nurse, or other health professional that you have high blood pressure? increase the risk of heart disease and stroke. ${ }^{10}$ Nationally, approximately onethird of adults report having been diagnosed with high blood pressure, ${ }^{11}$ and hypertension and hypertensive renal disease accounted for more than 36,500 deaths in $2019 .{ }^{12}$ Hypertension and hypertensive renal disease were the tenth leading cause of death in Mississippi in 2019.9

The 2019 Mississippi BRFSS data revealed that 43.6\% of respondents had ever been told by a healthcare professional that they had high blood pressure. Men and women had similar rates of hypertension, with $43.0 \%$ and $44.2 \%$, respectively. Black respondents had the highest rate (47.0\%), followed by White respondents (42.9\%), and those of other races (30.6\%). In terms of race and sex, Black females had the highest rate at $50.0 \%$, while males of other races had the lowest rate with $23.9 \%$ (Fig. 25). The rate of having ever been diagnosed with hypertension increased with age, with those aged 65 years and older reporting the highest rate (71.8\%) (Fig. 26).

Overall, the rate of hypertension increased as education level (Fig. 27) and income decreased (Fig. 28). Respondents who did not graduate from high school had the highest rate of all education level groups with $63.0 \%$, and those whose households earn less than $\$ 15,000$ per year had the highest rate among income groups with $54.6 \%$.



Figure 27. Percentage of Respondents Ever Told They Have Hypertension by Education Level \& Sex



| TABLE 7-A. Hypertension <br> Q: Ever told by a doctor, nurse, or other health professional that you have high blood pressure? |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC GROUPS | RESPONDENTS |  | Yes |  |  | No |  |  |
|  | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 5,105 | 2,270,767 | 2,702 | 43.6 | 41.9-45.4 | 2,403 | 56.4 | 54.6-58.1 |
| Male | 2,043 | 1,080,565 | 1,068 | 43.0 | 40.2-45.8 | 975 | 57.0 | 54.2-59.8 |
| Female | 3,062 | 1,190,203 | 1,634 | 44.2 | 42.0-46.5 | 1,428 | 55.8 | 53.5-58.0 |
| White/Non-Hisp. | 2,934 | 1,314,393 | 1,433 | 42.9 | 40.7-45.2 | 1,501 | 57.1 | 54.8-59.3 |
| Black or Afr. Am./Non-Hisp. | 1,957 | 805,891 | 1,180 | 47.0 | 44.0-50.0 | 777 | 53.0 | 50.0-56.0 |
| Other Races/Ethnicities** | 162 | 124,821 | 63 | 30.6 | 21.2-40.0 | 99 | 69.4 | 60.0-78.8 |
| 18-24 years | 281 | 296,896 | 34 | 13.1 | 8.3-17.8 | 247 | 86.9 | 82.2-91.7 |
| 25-34 years | 538 | 385,223 | 105 | 20.1 | 15.9-24.2 | 433 | 79.9 | 75.8-84.1 |
| 35-44 years | 639 | 362,986 | 209 | 32.5 | 28.1-36.9 | 430 | 67.5 | 63.1-71.9 |
| 45-54 years | 739 | 340,729 | 364 | 48.3 | 43.9-52.8 | 375 | 51.7 | 47.2-56.1 |
| 55-64 years | 1,044 | 374,049 | 650 | 60.5 | 56.8-64.2 | 394 | 39.5 | 35.8-43.2 |
| 65+ years | 1,816 | 485,514 | 1,310 | 71.8 | 69.3-74.4 | 506 | 28.2 | 25.6-30.7 |
| Less than H.S. | 658 | 357,841 | 471 | 63.0 | 57.8-68.3 | 187 | 37.0 | 31.7-42.2 |
| H.S. or G.E.D. | 1,540 | 689,603 | 865 | 44.5 | 41.3-47.6 | 675 | 55.5 | 52.4-58.7 |
| Some Post-H.S. | 1,444 | 767,311 | 708 | 37.7 | 34.6-40.8 | 736 | 62.3 | 59.2-65.4 |
| College Graduate | 1,443 | 446,926 | 648 | 37.0 | 34.0-40.0 | 795 | 63.0 | 60.0-66.0 |
| Less than \$15,000 | 619 | 240,743 | 401 | 54.6 | 49.1-60.2 | 218 | 45.4 | 39.8-50.9 |
| \$15,000-\$24,999 | 964 | 432,286 | 581 | 51.6 | 47.3-55.9 | 383 | 48.4 | 44.1-52.7 |
| \$25,000-\$34,999 | 480 | 216,598 | 250 | 41.9 | 36.2-47.6 | 230 | 58.1 | 52.4-63.8 |
| \$35,000-\$49,999 | 577 | 264,401 | 291 | 43.2 | 37.8-48.5 | 286 | 56.8 | 51.5-62.2 |
| \$50,000-\$74,999 | 538 | 258,972 | 237 | 35.7 | 30.6-40.9 | 301 | 64.3 | 59.1-69.4 |
| \$75,000+ | 906 | 428,283 | 375 | 33.4 | 29.7-37.0 | 531 | 66.6 | 63.0-70.3 |
| (1) Unweighted number <br> (2) Weighted percent <br> **Refer to Table B on p. 7 for <br> Note: Denominator excludes | ist of race pondents | and ethnicities do not know | ded in th ed $/ \mathrm{mis}$ | Ra pons | Ethnicities" | ograph |  |  |

Table 7-B. History of Hypertension by Sex

| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathbf{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 811 | 40.9 | 38.0-43.8 | 622 | 45.1 | 41.6-48.6 | 1,433 | 42.9 | 40.7-45.2 |
| Black or Afr. Am./Non-Hisp. | 771 | 50.0 | 46.2-53.8 | 409 | 43.3 | 38.5-48.0 | 1,180 | 47.0 | 44.0-50.0 |
| Other Races/Ethnicities** | 37 | 40.7 | 27.0-54.4 | 26 | 23.9 | 11.9-35.9 | 63 | 30.6 | 21.2-40.0 |
| 18-24 years | 18 | 13.5 | 7.1-20.0 | 16 | 12.6 | 5.5-19.6 | 34 | 13.1 | 8.3-17.8 |
| 25-34 years | 62 | 19.2 | 13.9-24.5 | 43 | 20.9 | 14.5-27.3 | 105 | 20.1 | 15.9-24.2 |
| 35-44 years | 123 | 31.7 | 26.1-37.3 | 86 | 33.3 | 26.5-40.1 | 209 | 32.5 | 28.1-36.9 |
| 45-54 years | 210 | 47.1 | 41.1-53.0 | 154 | 49.7 | 43.1-56.3 | 364 | 48.3 | 43.9-52.8 |
| 55-64 years | 380 | 59.6 | 54.8-64.4 | 270 | 61.5 | 55.7-67.2 | 650 | 60.5 | 56.8-64.2 |
| 65+ years | 822 | 73.0 | 69.8-76.2 | 488 | 70.4 | 66.1-74.6 | 1,310 | 71.8 | 69.3-74.4 |
| Less than H.S. | 276 | 63.4 | 56.6-70.1 | 195 | 62.7 | 54.8-70.6 | 471 | 63.0 | 57.8-68.3 |
| H.S. or G.E.D. | 513 | 48.3 | 44.0-52.6 | 352 | 40.9 | 36.2-45.5 | 865 | 44.5 | 41.3-47.6 |
| Some Post-H.S. | 443 | 39.2 | 35.3-43.1 | 265 | 35.8 | 30.9-40.7 | 708 | 37.7 | 34.6-40.8 |
| College Graduate | 397 | 34.6 | 30.9-38.3 | 251 | 40.0 | 35.0-44.9 | 648 | 37.0 | 34.0-40.0 |
| Less than \$15,000 | 276 | 55.7 | 49.2-62.2 | 125 | 53.2 | 43.4-62.9 | 401 | 54.6 | 49.1-60.2 |
| \$15,000-\$24,999 | 371 | 50.3 | 45.0-55.5 | 210 | 53.4 | 46.3-60.6 | 581 | 51.6 | 47.3-55.9 |
| \$25,000-\$34,999 | 160 | 44.5 | 37.1-51.9 | 90 | 38.3 | 29.5-47.2 | 250 | 41.9 | 36.2-47.6 |
| \$35,000-\$49,999 | 150 | 34.4 | 28.1-40.7 | 141 | 52.1 | 43.8-60.3 | 291 | 43.2 | 37.8-48.5 |
| \$50,000-\$74,999 | 123 | 36.1 | 29.3-42.9 | 114 | 35.5 | 28.1-42.9 | 237 | 35.7 | 30.6-40.9 |
| \$75,000+ | 178 | 33.6 | 28.5-38.7 | 197 | 33.1 | 28.0-38.3 | 375 | 33.4 | 29.7-37.0 |

(1) Unweighted number of cases
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group
Note: Denominator excludes respondents with do not know/refused/missing responses

## Cholesterol

Blood cholesterol is a waxy substance that is produced in the liver. ${ }^{13}$ Although the body produces the amount of blood cholesterol it needs, additional dietary cholesterol is present in various types of

Cholesterol Question:
Have you ever been told by a doctor, nurse, or other health professional that your blood cholesterol is high? animal products, such as meat, seafood, poultry, eggs, and dairy products. Although cholesterol is necessary for the human body to function, ${ }^{13}$ excess LDL cholesterol ("bad" cholesterol) can accumulate in the arteries in the form of plaque and can constrict blood flow and ultimately lead to cardiovascular diseases. ${ }^{14}$ Nationally, approximately one-third of adults report having been diagnosed with high cholesterol. ${ }^{11}$

The 2019 MS BRFSS results showed that $36.8 \%$ of respondents had ever been told by a healthcare professional that they had high cholesterol. Men and women had similar rates of high cholesterol, with $36.5 \%$ and $37.0 \%$, respectively. White respondents had the highest rate ( $41.2 \%$ ), followed by Black respondents ( $30.6 \%$ ) and those of other races ( $27.8 \%$ ) (Fig. 29). There was little variation in rates between sexes within each race group, with the exception of the other race group, in which females had a rate of $34.6 \%$, while males had a rate of $22.7 \%$. The rate of ever being diagnosed with high cholesterol increased with age (Fig. 30).

The rate of high cholesterol was highest among respondents who did not graduate high school (48.0\%) and lowest among those who attended college or technical school (30.6\%) (Fig. 31). In terms of annual household income, the rate of ever being diagnosed with high cholesterol was highest among those who earned $\$ 15,000$ to $\$ 24,999$ (41.0\%) and lowest among those who earned $\$ 75,000$ or more (29.9\%) (Fig. 32).



Figure 31. Percentage of Respondents Ever Told They Have High Cholesterol by Education Level \& Sex




Table 8-B. History of High Cholesterol by Sex

| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 692 | 41.3 | 38.3-44.4 | 492 | 40.9 | 37.3-44.6 | 1,184 | 41.2 | 38.8-43.5 |
| Black or Afr. Am./Non-Hisp. | 442 | 30.5 | 27.0-33.9 | 247 | 30.7 | 26.2-35.3 | 689 | 30.6 | 27.8-33.3 |
| Other Races/Ethnicities** | 26 | 34.6 | 19.5-49.7 | 19 | 22.7 | 10.1-35.2 | 45 | 27.8 | 17.8-37.9 |
| 18-24 years | 5 | 6.7 | . $3-13.2$ | 5 | 5.3 | 0.0-10.8 | 10 | 6.0 | 1.7-10.3 |
| 25-34 years | 25 | 9.7 | 5.4-14.1 | 25 | 14.9 | 8.8-20.9 | 50 | 12.1 | 8.5-15.7 |
| 35-44 years | 63 | 20.3 | 14.9-25.7 | 52 | 25.0 | 18.2-31.8 | 115 | 22.5 | 18.3-26.8 |
| 45-54 years | 148 | 36.0 | 30.1-41.8 | 118 | 45.4 | 38.2-52.5 | 266 | 40.3 | 35.7-44.9 |
| 55-64 years | 307 | 55.7 | 50.7-60.7 | 206 | 49.2 | 43.0-55.4 | 513 | 52.7 | 48.8-56.7 |
| 65+ years | 606 | 58.7 | 55.0-62.3 | 356 | 55.8 | 51.1-60.5 | 962 | 57.4 | 54.5-60.3 |
| Less than H.S. | 173 | 50.4 | 43.1-57.7 | 116 | 45.4 | 37.0-53.8 | 289 | 48.0 | 42.4-53.6 |
| H.S. or G.E.D. | 374 | 41.5 | 37.1-45.8 | 261 | 38.3 | 33.4-43.2 | 635 | 39.9 | 36.6-43.2 |
| Some Post-H.S. | 306 | 31.5 | 27.6-35.4 | 184 | 29.5 | 24.7-34.4 | 490 | 30.6 | 27.6-33.7 |
| College Graduate | 315 | 31.8 | 28.0-35.6 | 203 | 37.5 | 32.2-42.7 | 518 | 34.2 | 31.0-37.3 |
| Less than \$15,000 | 179 | 39.4 | 33.0-45.7 | 76 | 36.7 | 27.1-46.4 | 255 | 38.3 | 32.9-43.7 |
| \$15,000-\$24,999 | 232 | 38.3 | 32.8-43.7 | 144 | 45.1 | 37.6-52.7 | 376 | 41.0 | 36.6-45.5 |
| \$25,000-\$34,999 | 119 | 35.2 | 28.1-42.3 | 52 | 28.0 | 19.2-36.8 | 171 | 32.4 | 26.8-37.9 |
| \$35,000-\$49,999 | 110 | 31.0 | 24.5-37.5 | 108 | 49.5 | 41.4-57.7 | 218 | 39.5 | 34.1-44.8 |
| \$50,000-\$74,999 | 123 | 39.1 | 31.8-46.5 | 102 | 33.6 | 26.0-41.1 | 225 | 36.0 | 30.6-41.4 |
| \$75,000+ | 142 | 29.1 | 24.0-34.2 | 157 | 30.6 | 25.3-35.9 | 299 | 29.9 | 26.2-33.6 |
| (1) Unweighted number of cases <br> (2) Weighted percent <br> **Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group. <br> Note: Denominator excludes respondents with do not know/refused/missing responses |  |  |  |  |  |  |  |  |  |

## ANGINA / CORONARY HEART DISEASE / STROKE

Cardiovascular disease (CVD) includes coronary heart disease, stroke, complications of hypertension,

> Coronary Heart Disease/Stroke Question:
> Has a doctor, nurse, or other health professional ever told you that you had any of the following: angina or coronary heart disease? A stroke? and diseases of the arterial blood vessels. ${ }^{15}$ In 2019, Mississippi reported 7,993 deaths from heart disease, which was the leading cause of death in the state, and 1,851 from cerebrovascular disease (stroke). ${ }^{9}$ In addition to causing almost one-third of all deaths in Mississippi in 2019, ${ }^{9}$ CVD is one of the major causes of disability among working adults. ${ }^{16}$

The 2019 BRFSS data results indicated that $8.9 \%$ of respondents had ever been told by a healthcare professional that they had coronary heart disease or stroke. Overall, men had a slightly higher rate (9.1\%) than did women ( $8.8 \%$ ). While White respondents had the highest rate of coronary heart disease or stroke ( $9.7 \%$ ) in comparison to other races, females of other races had the highest rate of all sex and race combinations at $12.4 \%$ (Fig. 33). Males of other races had the lowest rate (5.5\%). Like other chronic conditions, the prevalence of coronary heart disease or stroke increased with age (Fig. 34). Males aged 65 years and older had the highest rate of ever being told that they had coronary heart disease or stroke (26.8\%).

Rates of coronary heart disease and stroke increased as education level (Fig. 35) and income decreased (Fig. 36). In terms of sex and education, females who did not graduate high school had the highest rate (17.4\%). Similarly, in terms of sex and annual household income, females who earned less than $\$ 15,000$ had the highest rate ( $16.6 \%$ ).


| TABLE 9-A. Angina/Coronary Heart Disease/Stroke <br> Q: Ever told you had angina or coronary heart disease or stroke? |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC GROUPS | RESPONDENTS |  | Yes |  |  | No |  |  |
|  | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 5,078 | 2,267,105 | 597 | 8.9 | 8.0-9.8 | 4,481 | 91.1 | 90.2-92.0 |
| Male | 2,032 | 1,081,961 | 273 | 9.1 | 7.7-10.4 | 1,759 | 90.9 | 89.6-92.3 |
| Female | 3,046 | 1,185,143 | 324 | 8.8 | 7.5-10.0 | 2,722 | 91.2 | 90.0-92.5 |
| White/Non-Hisp. | 2,918 | 1,313,054 | 357 | 9.7 | 8.4-10.9 | 2,561 | 90.3 | 89.1-91.6 |
| Black or Afr. Am./Non-Hisp. | 1,944 | 802,392 | 207 | 7.2 | 5.9-8.4 | 1,737 | 92.8 | 91.6-94.1 |
| Other Races/Ethnicities** | 163 | 125,482 | 20 | 8.2 | 3.0-13.4 | 143 | 91.8 | 86.6-97.0 |
| 18-24 years | 284 | 302,883 | 1 | 0.2 | 0.0-0.6 | 283 | 99.8 | 99.4-100.0 |
| 25-34 years | 539 | 386,315 | 4 | 0.6 | 0.0-1.3 | 535 | 99.4 | 98.7-100.0 |
| 35-44 years | 640 | 363,903 | 19 | 2.6 | 1.3-4.0 | 621 | 97.4 | 96.0-98.7 |
| 45-54 years | 733 | 338,481 | 51 | 6.6 | 4.2-9.0 | 682 | 93.4 | 91.0-95.8 |
| 55-64 years | 1,040 | 373,006 | 150 | 14.9 | 12.1-17.6 | 890 | 85.1 | 82.4-87.9 |
| 65+ years | 1,796 | 479,311 | 367 | 22.4 | 19.9-24.9 | 1,429 | 77.6 | 75.1-80.1 |
| Less than H.S. | 654 | 358,642 | 122 | 16.2 | 12.5-19.8 | 532 | 83.8 | 80.2-87.5 |
| H.S. or G.E.D. | 1,527 | 685,050 | 207 | 9.3 | 7.8-10.8 | 1,320 | 90.7 | 89.2-92.2 |
| Some Post-H.S. | 1,439 | 768,686 | 158 | 7.5 | 6.0-8.9 | 1,281 | 92.5 | 91.1-94.0 |
| College Graduate | 1,439 | 446,185 | 107 | 5.1 | 4.0-6.3 | 1,332 | 94.9 | 93.7-96.0 |
| Less than \$15,000 | 610 | 238,402 | 111 | 16.1 | 12.2-20.0 | 499 | 83.9 | 80.0-87.8 |
| \$15,000-\$24,999 | 959 | 430,478 | 123 | 10.4 | 8.1-12.6 | 836 | 89.6 | 87.4-91.9 |
| \$25,000-\$34,999 | 478 | 215,999 | 55 | 9.3 | 6.1-12.4 | 423 | 90.7 | 87.6-93.9 |
| \$35,000-\$49,999 | 576 | 264,480 | 65 | 7.7 | 5.5-9.9 | 511 | 92.3 | 90.1-94.5 |
| \$50,000-\$74,999 | 538 | 262,689 | 44 | 5.6 | 3.6-7.6 | 494 | 94.4 | 92.4-96.4 |
| \$75,000+ | 905 | 426,775 | 39 | 2.9 | 1.8-4.0 | 866 | 97.1 | 96.0-98.2 |
| (1) Unweighted number <br> (2) Weighted percent <br> ${ }^{* *}$ Refer to Table B on p. 7 fo <br> Note: Denominator excludes | ist of race pondents | nd ethnicities h do not know | ed in ed/mi | R Rac ponse | Ethnicities" | ograph |  |  |

Table 9-B. History of Angina/Coronary Heart Disease/Stroke by Sex

| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 184 | 8.9 | 7.4-10.5 | 173 | 10.4 | 8.5-12.4 | 357 | 9.7 | 8.4-10.9 |
| Black or Afr. Am./Non-Hisp. | 124 | 7.5 | 5.9-9.2 | 83 | 6.7 | 4.9-8.5 | 207 | 7.2 | 5.9-8.4 |
| Other Races/Ethnicities** | 10 | 12.4 | 1.4-23.5 | 10 | 5.5 | 1.2-9.8 | 20 | 8.2 | 3.0-13.4 |
| 18-24 years | 0 | -- | -- | 1 | 0.4 | 0.0-1.2 | 1 | 0.2 | 0.0-0.6 |
| 25-34 years | 3 | 0.7 | 0.0-1.5 | 1 | 0.6 | 0.0-1.7 | 4 | 0.6 | 0.0-1.3 |
| 35-44 years | 10 | 2.4 | .7-4.0 | 9 | 2.9 | .8-5.0 | 19 | 2.6 | 1.3-4.0 |
| 45-54 years | 29 | 8.7 | 4.5-12.9 | 22 | 4.4 | 2.3-6.5 | 51 | 6.6 | 4.2-9.0 |
| 55-64 years | 83 | 14.6 | 11.1-18.1 | 67 | 15.2 | 10.9-19.5 | 150 | 14.9 | 12.1-17.6 |
| 65+ years | 196 | 19.0 | 16.0-22.0 | 171 | 26.8 | 22.6-31.1 | 367 | 22.4 | 19.9-24.9 |
| Less than H.S. | 71 | 17.4 | 12.0-22.7 | 51 | 15.1 | 10.1-20.0 | 122 | 16.2 | 12.5-19.8 |
| H.S. or G.E.D. | 116 | 10.3 | 8.0-12.5 | 91 | 8.4 | 6.4-10.4 | 207 | 9.3 | 7.8-10.8 |
| Some Post-H.S. | 82 | 6.5 | 4.8-8.2 | 76 | 8.7 | 6.3-11.0 | 158 | 7.5 | 6.0-8.9 |
| College Graduate | 53 | 4.8 | 3.2-6.3 | 54 | 5.6 | 3.9-7.3 | 107 | 5.1 | 4.0-6.3 |
| Less than \$15,000 | 66 | 16.6 | 11.3-21.8 | 45 | 15.4 | 9.7-21.0 | 111 | 16.1 | 12.2-20.0 |
| \$15,000-\$24,999 | 76 | 10.0 | 7.2-12.7 | 47 | 11.0 | 7.1-14.8 | 123 | 10.4 | 8.1-12.6 |
| \$25,000-\$34,999 | 31 | 7.5 | 4.3-10.7 | 24 | 11.6 | 5.6-17.7 | 55 | 9.3 | 6.1-12.4 |
| \$35,000-\$49,999 | 29 | 6.4 | 3.7-9.2 | 36 | 8.9 | 5.4-12.4 | 65 | 7.7 | 5.5-9.9 |
| \$50,000-\$74,999 | 16 | 4.6 | 2.0-7.2 | 28 | 6.3 | 3.5-9.2 | 44 | 5.6 | 3.6-7.6 |
| \$75,000+ | 15 | 2.2 | .9-3.5 | 24 | 3.4 | 1.7-5.1 | 39 | 2.9 | 1.8-4.0 |

(1) Unweighted number of cases
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group
Note: Denominator excludes respondents with do not know/refused/missing responses

## Asthma

Asthma is a chronic disorder of the lungs that makes it difficult for a person to breathe. ${ }^{17,18}$ Asthma attacks can range in severity from mild to life threatening. Symptoms of asthma include wheezing,

> Asthma Question:
> Has a doctor, nurse, or other health professional ever told you that you had asthma?
coughing, tightness of the chest, and shortness of breath. ${ }^{17,18}$ Asthma attacks can often be prevented or controlled through the use of medication and avoidance of the trigger of the attack. ${ }^{17}$ In 2019, nearly $10 \%$ of adults in the U.S. reported ever having been diagnosed with asthma. ${ }^{11}$ In 2017, Mississippi had the second highest mortality rate for asthma in the U.S. with 14.3 deaths per million. ${ }^{19}$

In Mississippi, the 2019 BRFSS survey revealed that $14.4 \%$ of respondents reported that a health professional had ever told them that they had asthma. Overall, females had a higher rate of asthma (17.2\%) than did males (11.3\%). There was little variation in rate among the race groups; all three hovered around $14 \%$ (Fig. 37). In terms of race and sex, Black females reported the highest rate (18.8\%). For both males and females, the rates of ever being told they had asthma were highest among respondents in the 18-24 years age group (Fig. 38).

In terms of education level, the asthma rate was highest among respondents who did not graduate high school (20.5\%) and lowest among those who graduated from college or technical school (10.3\%) (Fig. 39). Females who did not graduate high school had the highest rate of all sex and education combinations (25.2\%). In regard to annual household income, the rate of ever being told they had asthma was highest among respondents who earned less than $\$ 15,000$ (20.7\%) and lowest among those who made $\$ 75,000$ or more ( $9.2 \%$ ) (Fig. 40). Females who earned less than $\$ 15,000$ had the highest rate of all sex and household income combinations (25.5\%).


Figure 39. Percentage of Respondents Ever Told They Have Asthma by Education Level \& Sex



Figure 40. Percentage of Respondents Ever Told They Have Asthma by Household Income \& Sex


TABLE 10-A. Ever Had Asthma
Q: Ever told by a doctor, nurse, or other health professional that you had asthma?

| DEMOGRAPHIC GROUPS | RESPONDENTS |  | Yes |  |  | No |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | total | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $N^{(1)}$ | \%(2) | C.I. (95\%) |
| TOTAL | 5,107 | 2,274,594 | 703 | 14.4 | 13.0-15.7 | 4,404 | 85.6 | 84.3-87.0 |
| Male | 2,045 | 1,084,672 | 213 | 11.3 | 9.3-13.2 | 1,832 | 88.7 | 86.8-90.7 |
| Female | 3,062 | 1,189,922 | 490 | 17.2 | 15.3-19.1 | 2,572 | 82.8 | 80.9-84.7 |
| White/Non-Hisp. | 2,937 | 1,317,319 | 388 | 14.2 | 12.5-15.9 | 2,549 | 85.8 | 84.1-87.5 |
| Black or Afr. Am./Non-Hisp. | 1,953 | 803,887 | 284 | 14.2 | 12.0-16.3 | 1,669 | 85.8 | 83.7-88.0 |
| Other Races/Ethnicities** | 165 | 127,735 | 22 | 14.9 | 6.9-23.0 | 143 | 85.1 | 77.0-93.1 |
| 18-24 years | 280 | 298,628 | 50 | 19.2 | 13.6-24.9 | 230 | 80.8 | 75.1-86.4 |
| 25-34 years | 540 | 386,835 | 69 | 12.1 | 8.9-15.4 | 471 | 87.9 | 84.6-91.1 |
| 35-44 years | 641 | 364,179 | 81 | 12.9 | 9.7-16.2 | 560 | 87.1 | 83.8-90.3 |
| 45-54 years | 738 | 342,128 | 105 | 16.1 | 12.6-19.6 | 633 | 83.9 | 80.4-87.4 |
| 55-64 years | 1,041 | 372,856 | 151 | 14.1 | 11.5-16.7 | 890 | 85.9 | 83.3-88.5 |
| $65+$ years | 1,821 | 486,407 | 241 | 12.9 | 11.0-14.9 | 1,580 | 87.1 | 85.1-89.0 |
| Less than H.S. | 658 | 359,747 | 125 | 20.5 | 16.0-24.9 | 533 | 79.5 | 75.1-84.0 |
| H.S. or G.E.D. | 1,539 | 689,309 | 193 | 12.6 | 10.3-14.9 | 1,346 | 87.4 | 85.1-89.7 |
| Some Post-H.S. | 1,444 | 769,052 | 221 | 15.3 | 12.9-17.8 | 1,223 | 84.7 | 82.2-87.1 |
| College Graduate | 1,447 | 447,945 | 159 | 10.3 | 8.4-12.2 | 1,288 | 89.7 | 87.8-91.6 |
| Less than \$15,000 | 620 | 240,152 | 121 | 20.7 | 16.1-25.3 | 499 | 79.3 | 74.7-83.9 |
| \$15,000-\$24,999 | 965 | 432,669 | 151 | 15.7 | 12.5-18.9 | 814 | 84.3 | 81.1-87.5 |
| \$25,000-\$34,999 | 477 | 215,455 | 62 | 14.0 | 9.5-18.4 | 415 | 86.0 | 81.6-90.5 |
| \$35,000-\$49,999 | 578 | 265,080 | 71 | 12.4 | 8.8-16.0 | 507 | 87.6 | 84.0-91.2 |
| \$50,000-\$74,999 | 541 | 263,906 | 75 | 18.0 | 13.0-22.9 | 466 | 82.0 | 77.1-87.0 |
| \$75,000+ | 906 | 428,250 | 78 | 9.2 | 6.7-11.6 | 828 | 90.8 | 88.4-93.3 |

(1) Unweighted number
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group.
Note: Denominator excludes respondents with do not know/refused/missing responses

| Table 10-B. History of Asthma by Sex |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 253 | 15.7 | 13.5-17.9 | 135 | 12.6 | 10.0-15.3 | 388 | 14.2 | 12.5-15.9 |
| Black or Afr. Am./Non-Hisp. | 216 | 18.8 | 15.5-22.0 | 68 | 8.5 | 6.0-11.0 | 284 | 14.2 | 12.0-16.3 |
| Other Races/Ethnicities** | 14 | 17.3 | 5.7-28.9 | 8 | 13.4 | 2.5-24.3 | 22 | 14.9 | 6.9-23.0 |
| 18-24 years | 32 | 21.8 | 14.1-29.4 | 18 | 16.8 | 8.5-25.1 | 50 | 19.2 | 13.6-24.9 |
| 25-34 years | 50 | 16.9 | 11.7-22.0 | 19 | 7.5 | 3.9-11.1 | 69 | 12.1 | 8.9-15.4 |
| 35-44 years | 48 | 12.7 | 8.6-16.7 | 33 | 13.3 | 8.1-18.4 | 81 | 12.9 | 9.7-16.2 |
| 45-54 years | 69 | 20.0 | 14.8-25.2 | 36 | 11.9 | 7.3-16.6 | 105 | 16.1 | 12.6-19.6 |
| 55-64 years | 109 | 17.4 | 13.8-21.1 | 42 | 10.4 | 6.7-14.0 | 151 | 14.1 | 11.5-16.7 |
| 65+ years | 176 | 15.4 | 12.7-18.1 | 65 | 9.7 | 6.9-12.5 | 241 | 12.9 | 11.0-14.9 |
| Less than H.S. | 84 | 25.2 | 18.7-31.6 | 41 | 16.1 | 10.0-22.1 | 125 | 20.5 | 16.0-24.9 |
| H.S. or G.E.D. | 123 | 14.3 | 11.1-17.5 | 70 | 11.0 | 7.8-14.2 | 193 | 12.6 | 10.3-14.9 |
| Some Post-H.S. | 166 | 19.0 | 15.7-22.3 | 55 | 10.8 | 7.2-14.4 | 221 | 15.3 | 12.9-17.8 |
| College Graduate | 113 | 12.3 | 9.6-15.0 | 46 | 7.8 | 5.1-10.4 | 159 | 10.3 | 8.4-12.2 |
| Less than \$15,000 | 98 | 25.5 | 19.6-31.4 | 23 | 13.7 | 6.5-20.9 | 121 | 20.7 | 16.1-25.3 |
| \$15,000-\$24,999 | 111 | 20.3 | 15.7-24.9 | 40 | 9.5 | 5.6-13.3 | 151 | 15.7 | 12.5-18.9 |
| \$25,000-\$34,999 | 43 | 14.3 | 9.0-19.7 | 19 | 13.5 | 5.9-21.1 | 62 | 14.0 | 9.5-18.4 |
| \$35,000-\$49,999 | 47 | 15.3 | 10.2-20.3 | 24 | 9.5 | 4.4-14.6 | 71 | 12.4 | 8.8-16.0 |
| \$50,000-\$74,999 | 41 | 17.6 | 11.3-24.0 | 34 | 18.2 | 11.1-25.3 | 75 | 18.0 | 13.0-22.9 |
| \$75,000+ | 46 | 10.6 | 7.1-14.1 | 32 | 8.0 | 4.5-11.4 | 78 | 9.2 | 6.7-11.6 |
| (1) Unweighted number of ca <br> (2) Weighted percent <br> **Refer to Table B on p. 7 for <br> Note: Denominator excludes | st of r ponde | d eth do | s included w/refused |  | es an es | nicities" dem | aphic |  |  |

## ARTHRITIS

Arthritis is the inflammation of joints, and it has the potential to be a debilitating condition. It affects one in four adults in the United States ${ }^{11}$ and is the most common cause of disability. ${ }^{20}$ Arthritis can

> Arthritis Question:
> Has a doctor, nurse, or other health professional ever told you that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia? substantially limit activities like regular work, housekeeping, and school. According to National Health Interview Survey (NHIS) data from 2013-2015, $43.5 \%$ of adults with arthritis experience activity limitation due to the condition. ${ }^{16}$ The impact of arthritis is expected to increase as the population ages. ${ }^{20}$

Overall, in Mississippi in 2019, 28.9\% of respondents had ever been diagnosed with some form of arthritis. Females had a higher rate of arthritis ( $32.6 \%$ ) compared to males ( $24.9 \%$ ), and White respondents had the highest rate (31.2\%) among all race groups, followed by respondents of other race groups (25.7\%) and Black respondents (25.4\%) (Fig. 41). In terms of race and sex, females of another race had the highest rate at $34.9 \%$, followed closely by White females at $34.6 \%$. The proportion of adults that had ever been told by a healthcare professional that they have arthritis increased with age (Fig. 42); the rate was $5.0 \%$ among respondents aged $18-24$ years and $55.4 \%$ among those aged 65 years and older.

Overall, the rate of arthritis increased as level of education (Fig. 43) and annual household income (Fig. 44) decreased. Respondents who did not graduate high school had the highest rate (42.9\%), while those who completed college or technical school had the lowest (22.3\%). Similarly, those whose annual household income was below $\$ 15,000$ had the highest rate at $42.4 \%$, while those whose income was $\$ 75,000$ or above had the lowest rate at $22.0 \%$.



Figure 43. Percentage of Respondents Ever Told They Have Arthritis by Education Level \& Sex



| TABLE 11-A. Arthritis ssional that you had arthritis, |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC GROUPS | RESPONDENTS |  | Yes |  |  | No |  |  |
|  | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 5,101 | 2,280,110 | 1,931 | 28.9 | 27.4-30.4 | 3,170 | 71.1 | 69.6-72.6 |
| Male | 2,047 | 1,089,614 | 682 | 24.9 | 22.6-27.2 | 1,365 | 75.1 | 72.8-77.4 |
| Female | 3,054 | 1,190,496 | 1,249 | 32.6 | 30.5-34.6 | 1,805 | 67.4 | 65.4-69.5 |
| White/Non-Hisp. | 2,936 | 1,321,952 | 1,120 | 31.2 | 29.2-33.2 | 1,816 | 68.8 | 66.8-70.8 |
| Black or Afr. Am./Non-Hisp. | 1,951 | 805,303 | 740 | 25.4 | 23.1-27.7 | 1,211 | 74.6 | 72.3-76.9 |
| Other Races/Ethnicities** | 165 | 127,735 | 51 | 25.7 | 16.0-35.4 | 114 | 74.3 | 64.6-84.0 |
| 18-24 years | 284 | 302,883 | 11 | 5.0 | 1.2-8.8 | 273 | 95.0 | 91.2-98.8 |
| 25-34 years | 540 | 386,835 | 52 | 7.1 | 4.9-9.2 | 488 | 92.9 | 90.8-95.1 |
| 35-44 years | 640 | 363,847 | 120 | 19.1 | 15.3-22.8 | 520 | 80.9 | 77.2-84.7 |
| 45-54 years | 736 | 341,257 | 211 | 27.7 | 23.7-31.6 | 525 | 72.3 | 68.4-76.3 |
| 55-64 years | 1,040 | 373,968 | 502 | 46.6 | 42.8-50.3 | 538 | 53.4 | 49.7-57.2 |
| 65+ years | 1,813 | 486,327 | 1,016 | 55.4 | 52.6-58.3 | 797 | 44.6 | 41.7-47.4 |
| Less than H.S. | 658 | 363,415 | 355 | 42.9 | 38.0-47.9 | 303 | 57.1 | 52.1-62.0 |
| H.S. or G.E.D. | 1,537 | 690,217 | 590 | 28.0 | 25.4-30.6 | 947 | 72.0 | 69.4-74.6 |
| Some Post-H.S. | 1,444 | 770,589 | 527 | 26.9 | 24.2-29.7 | 917 | 73.1 | 70.3-75.8 |
| College Graduate | 1,443 | 447,348 | 453 | 22.3 | 19.9-24.7 | 990 | 77.7 | 75.3-80.1 |
| Less than \$15,000 | 616 | 240,650 | 320 | 42.4 | 37.2-47.6 | 296 | 57.6 | 52.4-62.8 |
| \$15,000-\$24,999 | 965 | 433,148 | 398 | 32.4 | 28.6-36.1 | 567 | 67.6 | 63.9-71.4 |
| \$25,000-\$34,999 | 479 | 216,130 | 186 | 27.9 | 23.2-32.6 | 293 | 72.1 | 67.4-76.8 |
| \$35,000-\$49,999 | 578 | 265,080 | 201 | 25.6 | 21.3-29.8 | 377 | 74.4 | 70.2-78.7 |
| \$50,000-\$74,999 | 540 | 263,465 | 179 | 24.3 | 20.0-28.6 | 361 | 75.7 | 71.4-80.0 |
| \$75,000+ | 906 | 428,168 | 229 | 22.0 | 18.5-25.5 | 677 | 78.0 | 74.5-81.5 |
| (1) Unweighted number <br> (2) Weighted percent <br> **Refer to Table B on p. 7 for <br> Note: Denominator excludes | st of race pondents | nd ethnicities do not know | ed in ed $/ \mathrm{mi}$ | Rac pons | Ethnicities" | ograph |  |  |


| Table 11-B. History of Arthritis by Sex |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC |  | Fema |  |  | Mal |  |  | To |  |
| GROUPS | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \%(2) | C.I. (95\%) |
| White/Non-Hisp. | 689 | 34.6 | 31.8-37.3 | 431 | 27.6 | 24.7-30.5 | 1,120 | 31.2 | 29.2-33.2 |
| Black or Afr. Am./Non-Hisp. | 513 | 28.7 | 25.6-31.7 | 227 | 21.4 | 17.9-24.9 | 740 | 25.4 | 23.1-27.7 |
| Other Races/Ethnicities** | 32 | 34.9 | 21.2-48.6 | 19 | 19.8 | 6.7-32.8 | 51 | 25.7 | 16.0-35.4 |
| 18-24 years | 7 | 5.5 | 1.2-9.8 | 4 | 4.6 | .0-10.8 | 11 | 5.0 | 1.2-8.8 |
| 25-34 years | 42 | 10.8 | 7.3-14.4 | 10 | 3.3 | 1.0-5.7 | 52 | 7.1 | 4.9-9.2 |
| 35-44 years | 76 | 20.7 | 15.7-25.7 | 44 | 17.3 | 11.8-22.9 | 120 | 19.1 | 15.3-22.8 |
| 45-54 years | 130 | 29.9 | 24.5-35.3 | 81 | 25.2 | 19.3-31.1 | 211 | 27.7 | 23.7-31.6 |
| 55-64 years | 318 | 51.5 | 46.6-56.4 | 184 | 41.1 | 35.3-46.8 | 502 | 46.6 | 42.8-50.3 |
| 65+ years | 661 | 58.1 | 54.5-61.7 | 355 | 52.1 | 47.5-56.7 | 1,016 | 55.4 | 52.6-58.3 |
| Less than H.S. | 223 | 48.0 | 41.3-54.6 | 132 | 38.4 | 31.2-45.6 | 355 | 42.9 | 38.0-47.9 |
| H.S. or G.E.D. | 372 | 33.2 | 29.4-37.0 | 218 | 23.1 | 19.6-26.7 | 590 | 28.0 | 25.4-30.6 |
| Some Post-H.S. | 361 | 31.8 | 28.1-35.4 | 166 | 20.9 | 16.7-25.1 | 527 | 26.9 | 24.2-29.7 |
| College Graduate | 289 | 22.5 | 19.5-25.5 | 164 | 22.1 | 18.2-26.0 | 453 | 22.3 | 19.9-24.7 |
| Less than \$15,000 | 233 | 45.8 | 39.6-52.0 | 87 | 37.6 | 28.6-46.5 | 320 | 42.4 | 37.2-47.6 |
| \$15,000-\$24,999 | 268 | 33.6 | 28.8-38.3 | 130 | 30.8 | 24.8-36.8 | 398 | 32.4 | 28.6-36.1 |
| \$25,000-\$34,999 | 126 | 31.1 | 24.9-37.4 | 60 | 23.5 | 16.3-30.7 | 186 | 27.9 | 23.2-32.6 |
| \$35,000-\$49,999 | 116 | 26.5 | 20.8-32.1 | 85 | 24.7 | 18.2-31.1 | 201 | 25.6 | 21.3-29.8 |
| \$50,000-\$74,999 | 109 | 34.3 | 27.3-41.2 | 70 | 17.1 | 12.2-21.9 | 179 | 24.3 | 20.0-28.6 |
| \$75,000+ | 114 | 23.2 | 18.6-27.8 | 115 | 21.0 | 15.8-26.2 | 229 | 22.0 | 18.5-25.5 |
| (1) Unweighted number of c <br> (2) Weighted percent ${ }^{* *}$ Refer to Table B on p. 7 for Note: Denominator excludes | of nd | d eth do | es included ow/refused |  | es an es | nicities" | raphic |  |  |

## SKIN CANCER

Skin cancer is the most common type of cancer in the U.S., ${ }^{21,22}$ with an estimated $6.6 \%$ of people ever having been diagnosed with it. ${ }^{11}$ While some forms of skin cancer can be treated relatively easily, melanomas can be deadly. ${ }^{22}$ Excessive exposure to ultraviolet (UV) light is a major risk factor for skin cancer. ${ }^{23}$ The two types of UV light that are linked to skin cancer are UVA and UVB. ${ }^{23}$ UVB rays are

> Skin Cancer
> Question:
> Has a doctor, nurse, or other health professional ever told you that you had skin cancer? responsible for producing sunburn and play the greatest role in causing skin cancers. ${ }^{23}$ UVA rays are linked to long-term skin damage like wrinkles but are also believed to play a role in the formation of some skin cancers. ${ }^{23}$ Prevention options include limiting exposure to UV light by avoiding sun exposure and tanning beds, as well as using sunscreens and other sun protection. ${ }^{23}$

According to 2019 MS BRFSS results, $6.3 \%$ of respondents reported ever being told they had skin cancer. Males had a higher rate (7.0\%) than females (5.7\%). White respondents had a considerably higher rate of skin cancer (10.1\%) compared to Black respondents ( $2.8 \%$ ) and those of other races ( $0.6 \%$ ) (Fig. 45). The rate increased with age, with zero respondents aged 18-24 years reporting ever being diagnosed with skin cancer, and $17.6 \%$ of those aged 65 years and older reporting a diagnosis (Fig. 46). Men aged 65 years and older had the highest rate of all age/sex combinations with $22.3 \%$.

Rates of skin cancer diagnosis by education level ranged from 5.6\% to 7.6\% (Fig. 47). Respondents with a higher annual household income had a slightly higher rate of ever being told they had skin cancer compared to those with lower incomes (Fig. 48). The rate was $6.7 \%$ among individuals who reported a household income of $\$ 75,000$ or more and $5.1 \%$ among those who reported earning $\$ 15,000$ or less per year.


Figure 47. Percentage of Respondents Ever Told They Have Skin Cancer by Education Level \& Sex




TABLE 12-A. Skin Cancer
Q: Ever told by a doctor, nurse, or other health professional that you had skin cancer?

| DEMOGRAPHIC GROUPS | RESPONDENTS |  | Yes |  |  | No |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 5,106 | 2,277,520 | 416 | 6.3 | 5.5-7.0 | 4,690 | 93.7 | 93.0-94.5 |
| Male | 2,044 | 1,086,385 | 201 | 7.0 | 5.8-8.2 | 1,843 | 93.0 | 91.8-94.2 |
| Female | 3,062 | 1,191,136 | 215 | 5.7 | 4.7-6.6 | 2,847 | 94.3 | 93.4-95.3 |
| White/Non-Hisp. | 2,933 | 1,318,483 | 396 | 10.1 | 8.9-11.3 | 2,537 | 89.9 | 88.7-91.1 |
| Black or Afr. Am./Non-Hisp. | 1,956 | 806,083 | 7 | 0.6 | 0.1-1.1 | 1,949 | 99.4 | 89.9-99.9 |
| Other Races/Ethnicities** | 164 | 126,778 | 8 | 2.8 | 0.4-5.2 | 156 | 97.2 | 94.8-99.6 |
| 18-24 years | 284 | 302,883 | 0 | 0.0 | - | 284 | 100.0 | 100.0-100.0 |
| 25-34 years | 540 | 386,835 | 6 | 1.2 | 0.2-2.3 | 534 | 98.8 | 97.7-99.8 |
| 35-44 years | 640 | 363,221 | 12 | 1.7 | 0.7-2.7 | 628 | 98.3 | 97.3-99.3 |
| 45-54 years | 738 | 342,496 | 26 | 4.0 | 2.2-5.8 | 712 | 96.0 | 94.2-97.8 |
| 55-64 years | 1,042 | 371,948 | 77 | 8.1 | 6.1-10.2 | 965 | 91.9 | 89.8-93.9 |
| $65+$ years | 1,814 | 485,144 | 291 | 17.6 | 15.3-19.8 | 1,523 | 82.4 | 80.2-84.7 |
| Less than H.S. | 658 | 359,704 | 50 | 7.6 | 5.2-10.0 | 608 | 92.4 | 90.0-94.8 |
| H.S. or G.E.D. | 1,540 | 689,861 | 112 | 5.6 | 4.4-6.8 | 1,428 | 94.4 | 93.2-95.6 |
| Some Post-H.S. | 1,446 | 772,559 | 113 | 5.6 | 4.4-6.9 | 1,333 | 94.4 | 93.1-95.6 |
| College Graduate | 1,443 | 446,855 | 141 | 7.5 | 6.0-9.0 | 1,302 | 92.5 | 91.0-94.0 |
| Less than \$15,000 | 619 | 239,658 | 33 | 5.1 | 2.9-7.2 | 586 | 94.9 | 92.8-97.1 |
| \$15,000-\$24,999 | 961 | 431,626 | 62 | 5.3 | 3.7-6.9 | 899 | 94.7 | 93.1-96.3 |
| \$25,000-\$34,999 | 477 | 215,716 | 30 | 5.0 | 2.6-7.5 | 447 | 95.0 | 92.5-97.4 |
| \$35,000-\$49,999 | 578 | 265,080 | 46 | 5.9 | 3.9-8.0 | 532 | 94.1 | 92.0-96.1 |
| \$50,000-\$74,999 | 540 | 263,615 | 60 | 5.8 | 4.1-7.6 | 480 | 94.2 | 92.4-95.9 |
| \$75,000+ | 907 | 428,383 | 81 | 6.7 | 5.0-8.5 | 826 | 93.3 | 91.5-95.0 |

(1) Unweighted number
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group.
Note: Denominator excludes respondents with do not know/refused/missing responses

Table 12-B. History of Skin Cancer by Sex

| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathbf{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 205 | 9.2 | 7.7-10.7 | 191 | 11.1 | 9.2-13.0 | 396 | 10.1 | 8.9-11.3 |
| Black or Afr. Am./Non-Hisp. | 5 | 0.6 | 0.0-1.2 | 2 | 0.6 | 0.0-1.4 | 7 | 0.6 | 0.1-1.1 |
| Other Races/Ethnicities** | 3 | 3.1 | 0.0-7.0 | 5 | 2.6 | 0.0-5.5 | 8 | 2.8 | 0.4-5.2 |
| 18-24 years | 5 | 1.9 | 0.1-3.6 | 1 | 0.6 | 0.0-1.7 | 0 | 0.0 | - |
| 25-34 years | 7 | 1.7 | 0.3-3.0 | 5 | 1.8 | 0.2-3.4 | 6 | 1.2 | 0.2-2.3 |
| 35-44 years | 17 | 3.9 | 1.7-6.1 | 9 | 4.1 | 1.2-7.0 | 12 | 1.7 | 0.7-2.7 |
| 45-54 years | 41 | 7.6 | 4.9-10.3 | 36 | 8.7 | 5.5-11.8 | 26 | 4.0 | 2.2-5.8 |
| 55-64 years | 144 | 13.9 | 11.3-16.5 | 147 | 22.3 | 18.3-26.2 | 77 | 8.1 | 6.1-10.2 |
| 65+ years | 5 | 1.9 | 0.1-3.6 | 1 | 0.6 | 0.0-1.7 | 291 | 17.6 | 15.3-19.8 |
| Less than H.S. | 25 | 6.8 | 3.8-9.8 | 25 | 8.3 | 4.6-12.1 | 50 | 7.6 | 5.2-10.0 |
| H.S. or G.E.D. | 64 | 5.9 | 4.2-7.6 | 48 | 5.3 | 3.5-7.1 | 112 | 5.6 | 4.4-6.8 |
| Some Post-H.S. | 52 | 4.3 | 2.8-5.7 | 61 | 7.3 | 5.1-9.5 | 113 | 5.6 | 4.4-6.9 |
| College Graduate | 74 | 7.0 | 5.1-8.9 | 67 | 8.2 | 5.9-10.6 | 141 | 7.5 | 6.0-9.0 |
| Less than \$15,000 | 19 | 4.2 | 1.7-6.6 | 14 | 6.4 | 2.3-10.4 | 33 | 5.1 | 2.9-7.2 |
| \$15,000-\$24,999 | 38 | 5.6 | 3.5-7.8 | 24 | 4.9 | 2.6-7.2 | 62 | 5.3 | 3.7-6.9 |
| \$25,000-\$34,999 | 15 | 3.5 | 1.4-5.7 | 15 | 7.1 | 2.1-12.0 | 30 | 5.0 | 2.6-7.5 |
| \$35,000-\$49,999 | 15 | 3.2 | 1.2-5.2 | 31 | 8.7 | 5.1-12.2 | 46 | 5.9 | 3.9-8.0 |
| \$50,000-\$74,999 | 28 | 5.3 | 3.1-7.5 | 32 | 6.2 | 3.6-8.8 | 60 | 5.8 | 4.1-7.6 |
| \$75,000+ | 37 | 6.5 | 4.0-9.1 | 44 | 6.9 | 4.5-9.3 | 81 | 6.7 | 5.0-8.5 |

(1) Unweighted number of cases
(2) Weighted percent
${ }^{\star *}$ Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group.
Note: Denominator excludes respondents with do not know/refused/missing responses

## OTHER TYPES OF CANCER

Cancer is a condition in which cells in the body begin to replicate out of control. ${ }^{24}$ There are many different types of cancer that can impact different body systems. Additionally, cancer can begin in one location in the body and spread, or metastasize, to another location. ${ }^{24}$ In 2019, $7.3 \%$ of adults in the U.S. reported ever being diagnosed with a cancer other than skin cancer. ${ }^{11}$ Although treatments exist for different types of cancer, no single cure for all cancer types has been developed. ${ }^{25}$ Malignant neoplasms (cancers) were the second leading cause of death in Mississippi in 2019.9

Other Types of Cancer Question: Has a doctor, nurse, or other health professional ever told you that you had any other types of cancer (besides skin cancer)?

The 2019 Mississippi BRFSS revealed that $6.6 \%$ of respondents had been diagnosed with a type of cancer other than skin cancer. The rate was higher among females ( $7.6 \%$ ) than males ( $5.6 \%$ ). White respondents had the highest rate of cancer (7.6\%), followed by Black respondents (5.8\%) and those of other races (2.8\%) (Fig. 49). The rate of cancer diagnosis generally increased with age; less than $2 \%$ of respondents aged 18-24 years reporting ever being diagnosed with cancer, while $15.9 \%$ of those aged 65 years and older reported a diagnosis (Fig. 50). In terms of age and sex, females had a higher rate of cancer diagnosis for every age group except age 65 years and older.

Those with less than a high school education had the highest rates of cancer diagnosis with 9.3\% (Fig. 51). Rates were also higher among respondents with an annual household income of less than $\$ 50,000$ compared to those who earned $\$ 50,000$ or more per year (Fig. 52).


TABLE 13-A. Other Types of Cancer
Q: Ever told by a doctor, nurse, or other health professional that you had any other types of cancer?

| DEMOGRAPHIC <br> GROUPS | RESPONDENTS |  | Yes |  |  | No |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TOTAL | WEIGHTED | $\mathbf{N}^{(1)}$ | $\%{ }^{(2)}$ | C.I. $(95 \%)$ | $\mathbf{N}^{(1)}$ | $\%$ | C.I. $(95 \%)$ |
| TOTAL | 5,109 | $2,279,574$ | 467 | 6.6 | $5.9-7.4$ | 4,642 | 93.4 | $92.6-94.1$ |
| Male | 2,048 | $1,088,700$ | 171 | 5.6 | $4.5-6.6$ | 1,877 | 94.4 | $93.4-95.5$ |
| Female | 3,061 | $1,190,874$ | 296 | 7.6 | $6.5-8.8$ | 2,765 | 92.4 | $91.2-93.5$ |
| White/Non-Hisp. | 2,939 | $1,320,979$ | 298 | 7.6 | $6.5-8.6$ | 2,641 | 92.4 | $91.4-93.5$ |
| Black or Afr. Am./Non-Hisp. | 1,953 | 805,300 | 155 | 5.8 | $4.5-7.0$ | 1,798 | 94.2 | $93.0-95.5$ |
| Other Races/Ethnicities** | 165 | 127,735 | 10 | 2.8 | $0.4-5.3$ | 155 | 97.2 | $94.7-99.6$ |
| 18-24 years | 283 | 302,411 | 2 | 1.4 | $0.0-3.4$ | 281 | 98.6 | $96.6-100.0$ |
| 25-34 years | 540 | 386,835 | 12 | 2.6 | $0.9-4.3$ | 528 | 97.4 | $95.7-99.1$ |
| 35-44 years | 640 | 363,794 | 15 | 1.9 | $0.8-3.0$ | 625 | 98.1 | $97.0-99.2$ |
| $45-54$ years | 738 | 341,860 | 34 | 4.6 | $2.8-6.4$ | 704 | 95.4 | $93.6-97.2$ |
| 55-64 years | 1,041 | 372,924 | 100 | 9.3 | $7.2-11.5$ | 941 | 90.7 | $88.5-92.8$ |
| $65+$ years | 1,819 | 486,758 | 301 | 15.9 | $13.9-17.9$ | 1,518 | 84.1 | $82.1-86.1$ |
| Less than H.S. | 658 | 361,343 | 80 | 9.3 | $6.7-11.8$ | 578 | 90.7 | $88.2-93.3$ |
| H.S. or G.E.D. | 1,541 | 689,497 | 147 | 6.8 | $5.5-8.2$ | 1,394 | 93.2 | $91.8-94.5$ |
| Some Post-H.S. | 1,446 | 772,645 | 117 | 5.7 | $4.3-7.1$ | 1,329 | 94.3 | $92.9-95.7$ |
| College Graduate | 1,446 | 447,698 | 122 | 6.0 | $4.7-7.3$ | 1,324 | 94.0 | $92.7-95.3$ |
| Less than $\$ 15,000$ | 617 | 239,289 | 60 | 7.8 | $5.5-10.1$ | 557 | 92.2 | $89.9-94.5$ |
| $\$ 15,000-\$ 24,999$ | 963 | 432,499 | 90 | 6.1 | $4.5-7.7$ | 873 | 93.9 | $92.3-95.5$ |
| $\$ 25,000-\$ 34,999$ | 480 | 216,598 | 46 | 8.4 | $4.9-11.9$ | 434 | 91.6 | $88.1-95.1$ |
| $\$ 35,000-\$ 49,999$ | 577 | 264,973 | 55 | 7.0 | $4.6-9.5$ | 522 | 93.0 | $90.5-95.4$ |
| $\$ 50,000-\$ 74,999$ | 540 | 262,930 | 45 | 5.0 | $3.2-6.8$ | 495 | 95.0 | $93.2-96.8$ |
| $\$ 75,000+$ | 908 | 428,550 | 66 | 5.3 | $3.7-6.9$ | 842 | 94.7 | $93.1-96.3$ |

(1) Unweighted number
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group. Note: Denominator excludes respondents with do not know/refused/missing responses

Table 13-B. History of Other Types of Cancer by Sex

| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 190 | 8.6 | 7.1-10.1 | 108 | 6.4 | 4.9-8.0 | 298 | 7.6 | 6.5-8.6 |
| Black or Afr. Am./Non-Hisp. | 97 | 6.6 | 4.7-8.4 | 58 | 4.8 | 3.2-6.3 | 155 | 5.8 | 4.5-7.0 |
| Other Races/Ethnicities** | 7 | 4.6 | 0.3-9.0 | 3 | 1.7 | 0.0-4.5 | 10 | 2.8 | 0.4-5.3 |
| 18-24 years | 1 | 1.5 | 0.0-4.5 | 1 | 1.3 | 0.0-3.8 | 2 | 1.4 | 0.0-3.4 |
| 25-34 years | 10 | 4.4 | 1.2-7.5 | 2 | 0.9 | 0.0-2.2 | 12 | 2.6 | 0.9-4.3 |
| 35-44 years | 12 | 3.2 | 1.1-5.2 | 3 | 0.5 | 0.0-1.2 | 15 | 1.9 | 0.8-3.0 |
| 45-54 years | 24 | 5.5 | 2.9-8.1 | 10 | 3.6 | 1.1-6.1 | 34 | 4.6 | 2.8-6.4 |
| 55-64 years | 69 | 11.1 | 8.1-14.1 | 31 | 7.3 | 4.3-10.4 | 100 | 9.3 | 7.2-11.5 |
| 65+ years | 178 | 15.2 | 12.7-17.8 | 123 | 16.7 | 13.5-20.0 | 301 | 15.9 | 13.9-17.9 |
| Less than H.S. | 48 | 9.5 | 6.0-13.0 | 32 | 9.0 | 5.3-12.8 | 80 | 9.3 | 6.7-11.8 |
| H.S. or G.E.D. | 90 | 8.4 | 6.3-10.5 | 57 | 5.3 | 3.7-7.0 | 147 | 6.8 | 5.5-8.2 |
| Some Post-H.S. | 83 | 7.4 | 5.3-9.5 | 34 | 3.6 | 2.0-5.2 | 117 | 5.7 | 4.3-7.1 |
| College Graduate | 74 | 5.8 | 4.2-7.4 | 48 | 6.2 | 4.2-8.3 | 122 | 6.0 | 4.7-7.3 |
| Less than \$15,000 | 39 | 8.1 | 5.1-11.1 | 21 | 7.2 | 3.7-10.8 | 60 | 7.8 | 5.5-10.1 |
| \$15,000-\$24,999 | 57 | 5.8 | 3.9-7.6 | 33 | 6.5 | 3.8-9.3 | 90 | 6.1 | 4.5-7.7 |
| \$25,000-\$34,999 | 35 | 10.8 | 5.4-16.1 | 11 | 5.2 | 1.6-8.9 | 46 | 8.4 | 4.9-11.9 |
| \$35,000-\$49,999 | 32 | 8.5 | 4.6-12.4 | 23 | 5.5 | 2.6-8.5 | 55 | 7.0 | 4.6-9.5 |
| \$50,000-\$74,999 | 25 | 6.7 | 3.4-10.0 | 20 | 3.7 | 1.8-5.6 | 45 | 5.0 | 3.2-6.8 |
| \$75,000+ | 30 | 5.8 | 3.3-8.4 | 36 | 4.8 | 2.9-6.8 | 66 | 5.3 | 3.7-6.9 |

(1) Unweighted number of cases
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group
Note: Denominator excludes respondents with do not know/refused/missing responses

## COPD/EMPHYSEMA/CHRONIC BRONCHITIS

Chronic obstructive pulmonary disease, or COPD, is a designation of a group of lung diseases, such as emphysema and chronic bronchitis, that cause breathing problems. ${ }^{26}$ Many factors can contribute to

COPD Question:
Has a doctor, nurse, or other health professional ever told you that you had chronic obstructive pulmonary disease, COPD, emphysema, or chronic bronchitis? COPD, including exposure to tobacco smoke and air pollution, genetics, and infections. Chronic lower respiratory disease, including COPD, was the fourth leading cause of death in the U.S. in $2018^{26}$ and the third leading cause of death in Mississippi in 2019.9 Estimates from 2019 show that $6.5 \%$ of adults in the U.S. had been diagnosed with COPD ${ }^{11}$; however, it is believed that this condition is underdiagnosed. ${ }^{26}$

According to 2019 MS BRFSS results, $9.4 \%$ of respondents have ever been diagnosed with COPD. Women had a higher rate than men (10.3\% vs. $8.4 \%)$. Respondents of other races had the highest rate of these lung problems at $10.2 \%$, followed by White respondents at 9.9\%, and Black respondents at 7.9\% (Fig. 53). In terms of race and sex, females of other races had the highest rate at $16.3 \%$, while males of other races had the lowest at $6.2 \%$. Overall, the rate of COPD increased with age; $4.2 \%$ of respondents aged 18-24 years reported a diagnosis compared to $15.0 \%$ of those aged 65 years and older (Fig. 54).

The rate of ever being diagnosed with COPD increased as education level decreased (Fig. 55). Individuals with less than a high school education had a rate of $17.4 \%$, while those who graduated from a college or technical school had a rate of 3.5\%. Similarly, lower annual household income groups generally had higher rates than higher household income groups (Fig. 56). Respondents whose annual household income was less than $\$ 15,000$ had a rate of $19.7 \%$, while those with an annual household income of $\$ 75,000$ or more had a rate of $2.1 \%$.


Figure 55. Percentage of Respondents Ever Told They Have COPD, Emphysema, or Chronic Bronchitis by Education Level \& Sex


Figure 54. Percentage of Respondents Ever Told They Have COPD, Emphysema, or Chronic Bronchitis by Age \& Sex


Figure 56. Percentage of Respondents Ever Told They Have COPD, Emphysema, or Chronic Bronchitis by Household Income \& Sex
30.0\%


| TABLE 14-A. COPD, Emphysema, Chronic Bronchitis <br> Q: Ever told by a doctor, nurse, or other health professional that you had COPD, emphysema, or chronic bronchitis? |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC GROUPS | RESPONDENTS |  | Yes |  |  | No |  |  |
|  | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 5,103 | 2,277,394 | 534 | 9.4 | 8.4-10.4 | 4,569 | 90.6 | 89.6-91.6 |
| Male | 2,044 | 1,086,800 | 202 | 8.4 | 7.0-9.9 | 1,842 | 91.6 | 90.1-93.0 |
| Female | 3,059 | 1,190,594 | 332 | 10.3 | 8.9-11.8 | 2,727 | 89.7 | 88.2-91.1 |
| White/Non-Hisp. | 2,939 | 1,320,805 | 323 | 9.9 | 8.6-11.2 | 2,616 | 90.1 | 88.8-91.4 |
| Black or Afr. Am./Non-Hisp. | 1,947 | 803,923 | 180 | 7.9 | 6.2-9.5 | 1,767 | 92.1 | 90.5-93.8 |
| Other Races/Ethnicities** | 164 | 126,489 | 20 | 10.2 | 4.1-16.3 | 144 | 89.8 | 83.7-95.9 |
| 18-24 years | 284 | 302,883 | 11 | 4.2 | 1.5-6.9 | 273 | 95.8 | 93.1-98.5 |
| 25-34 years | 536 | 384,344 | 23 | 5.0 | 2.6-7.3 | 513 | 95.0 | 92.7-97.4 |
| 35-44 years | 641 | 364,179 | 35 | 4.6 | 2.8-6.5 | 606 | 95.4 | 93.5-97.2 |
| 45-54 years | 740 | 343,015 | 79 | 10.9 | 7.9-13.9 | 661 | 89.1 | 86.1-92.1 |
| 55-64 years | 1,039 | 372,628 | 128 | 14.0 | 11.3-16.8 | 911 | 86.0 | 83.2-88.7 |
| 65+ years | 1,815 | 485,352 | 253 | 15.0 | 12.8-17.2 | 1,562 | 85.0 | 82.8-87.2 |
| Less than H.S. | 656 | 360,271 | 119 | 17.4 | 13.4-21.3 | 537 | 82.6 | 78.7-86.6 |
| H.S. or G.E.D. | 1,538 | 690,162 | 192 | 10.8 | 9.0-12.7 | 1,346 | 89.2 | 87.3-91.0 |
| Some Post-H.S. | 1,446 | 772,030 | 147 | 7.8 | 6.2-9.4 | 1,299 | 92.2 | 90.6-93.8 |
| College Graduate | 1,444 | 446,390 | 73 | 3.5 | 2.5-4.6 | 1,371 | 96.5 | 95.4-97.5 |
| Less than \$15,000 | 614 | 239,387 | 119 | 19.7 | 15.4-24.1 | 495 | 80.3 | 75.9-84.6 |
| \$15,000-\$24,999 | 963 | 432,483 | 144 | 14.1 | 11.1-17.0 | 819 | 85.9 | 83.0-88.9 |
| \$25,000-\$34,999 | 478 | 215,832 | 40 | 6.8 | 4.3-9.2 | 438 | 93.2 | 90.8-95.7 |
| \$35,000-\$49,999 | 577 | 264,349 | 56 | 7.7 | 5.2-10.2 | 521 | 92.3 | 89.8-94.8 |
| \$50,000-\$74,999 | 540 | 263,465 | 39 | 6.7 | 4.2-9.3 | 501 | 93.3 | 90.7-95.8 |
| \$75,000+ | 908 | 428,550 | 25 | 2.1 | 1.1-3.1 | 883 | 97.9 | 96.9-98.9 |
| (1) Unweighted number <br> (2) Weighted percent <br> **Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group. <br> Note: Denominator excludes respondents with do not know/refused/missing responses |  |  |  |  |  |  |  |  |

Table 14-B. History of COPD, Emphysema, or Chronic Bronchitis by Sex

| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 192 | 10.4 | 8.6-12.2 | 131 | 9.4 | 7.5-11.3 | 323 | 9.9 | 8.6-11.2 |
| Black or Afr. Am./Non-Hisp. | 118 | 8.5 | 6.3-10.7 | 62 | 7.1 | 4.5-9.7 | 180 | 7.9 | 6.2-9.5 |
| Other Races/Ethnicities** | 14 | 16.3 | 4.9-27.7 | 6 | 6.2 | 0.0-12.4 | 20 | 10.2 | 4.1-16.3 |
| 18-24 years | 6 | 4.1 | 0.7-7.4 | 5 | 4.4 | .2-8.5 | 11 | 4.2 | 1.5-6.9 |
| 25-34 years | 15 | 6.5 | 2.5-10.5 | 8 | 3.4 | 1.0-5.9 | 23 | 5.0 | 2.6-7.3 |
| 35-44 years | 28 | 6.6 | 3.8-9.4 | 7 | 2.5 | 0.2-4.8 | 35 | 4.6 | 2.8-6.5 |
| 45-54 years | 46 | 11.8 | 7.5-16.2 | 33 | 9.9 | 5.8-14.0 | 79 | 10.9 | 7.9-13.9 |
| 55-64 years | 75 | 13.8 | 10.3-17.3 | 53 | 14.3 | 10.0-18.6 | 128 | 14.0 | 11.3-16.8 |
| 65+ years | 157 | 14.9 | 12.2-17.6 | 96 | 15.2 | 11.6-18.7 | 253 | 15.0 | 12.8-17.2 |
| Less than H.S. | 74 | 20.9 | 14.8-27.0 | 45 | 14.1 | 9.1-19.1 | 119 | 17.4 | 13.4-21.3 |
| H.S. or G.E.D. | 106 | 11.3 | 8.7-13.9 | 86 | 10.5 | 7.8-13.1 | 192 | 10.8 | 9.0-12.7 |
| Some Post-H.S. | 100 | 9.2 | 7.1-11.4 | 47 | 6.0 | 3.8-8.2 | 147 | 7.8 | 6.2-9.4 |
| College Graduate | 50 | 3.9 | 2.5-5.2 | 23 | 3.1 | 1.5-4.7 | 73 | 3.5 | 2.5-4.6 |
| Less than \$15,000 | 79 | 20.4 | 14.8-25.9 | 40 | 18.9 | 11.9-25.9 | 119 | 19.7 | 15.4-24.1 |
| \$15,000-\$24,999 | 90 | 14.5 | 10.6-18.5 | 54 | 13.4 | 8.8-18.0 | 144 | 14.1 | 11.1-17.0 |
| \$25,000-\$34,999 | 31 | 8.3 | 4.9-11.6 | 9 | 4.7 | 1.1-8.3 | 40 | 6.8 | 4.3-9.2 |
| \$35,000-\$49,999 | 28 | 6.0 | 3.3-8.8 | 28 | 9.3 | 5.1-13.6 | 56 | 7.7 | 5.2-10.2 |
| \$50,000-\$74,999 | 23 | 8.5 | 4.3-12.7 | 16 | 5.5 | 2.4-8.5 | 39 | 6.7 | 4.2-9.3 |
| \$75,000+ | 10 | 1.5 | 0.5-2.5 | 15 | 2.6 | 1.0-4.2 | 25 | 2.1 | 1.1-3.1 |

(1) Unweighted number of cases
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group
Note: Denominator excludes respondents with do not know/refused/missing responses

Depression involves persistent feelings of sadness that interfere with day-to-day functioning. ${ }^{27}$ Symptoms can include, but are not limited to, losing interest in things one used to enjoy, problems sleeping, difficulty concentrating, feeling anxious or irritable, or contemplating suicide. ${ }^{27}$ It is estimated that approximately 16 million adults (or 3 in 50 adults) in the United States experience depression each year. Therapy and prescription medication can help people with depression, and

> Depressive Disorder
> Question:
> Has a doctor, nurse, or other health professional ever told you that you had a depressive disorder, including depression, major depression, dysthymia, or minor depression? crisis centers, such as the National Suicide Prevention Lifeline (1-800-2738255) exist to help people thinking about suicide. ${ }^{27}$

The 2019 Mississippi BRFSS data revealed that 20.6\% respondents had ever been diagnosed with a depressive disorder. The rate was considerably higher among women (26.2\%) compared to men (14.6\%). White respondents reported the highest rate at $24.4 \%$, followed by those of other race groups at 20.7\%, and Black respondents at 14.1\% (Fig. 57). Women of other races and White women had the highest rates, with $33.5 \%$ and $30.0 \%$, respectively. The age groups with the highest rates of ever being diagnosed with a depressive disorder were 45-54 years (24.7\%) and 55-64 years (23.8\%) (Fig. 58).

The rate of ever being diagnosed with a depressive disorder increased as education level decreased. (Fig. 59). Similarly, individuals who reported lower annual household incomes had a higher rate compared to those with higher household incomes (Fig. 60). The highest rate among income groups belonged to the $\$ 15,000$ to $\$ 24,999$ category ( $27.9 \%$ ). It should be noted that women had higher rates of ever being diagnosed with a depressive disorder than did men for every examined grouping of race, age, education level, and household income.


Figure 59. Percentage of Respondents Ever Told They Have A Depressive Disorder



Figure 60. Percentage of Respondents Ever Told They Have A Depressive Disorder by Household Income \& Sex
$50.0 \%$
$40.0 \%$
$30.0 \%$
$20.0 \%$
$10.0 \%$
$0.0 \%$


TABLE 15-A. Depressive Disorder
Q: Ever told by a doctor, nurse, or other health professional that you had a depressive disorder?

| DEMOGRAPHIC GROUPS | RESPONDENTS |  | Yes |  |  | No |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 5,097 | 2,273,954 | 1,037 | 20.6 | 19.2-22.1 | 4,060 | 79.4 | 77.9-80.8 |
| Male | 2,046 | 1,088,632 | 296 | 14.6 | 12.7-16.5 | 1,750 | 85.4 | 83.5-87.3 |
| Female | 3,051 | 1,185,322 | 741 | 26.2 | 24.1-28.3 | 2,310 | 73.8 | 71.7-75.9 |
| White/Non-Hisp. | 2,931 | 1,317,761 | 686 | 24.4 | 22.4-26.4 | 2,245 | 75.6 | 73.6-77.6 |
| Black or Afr. Am./Non-Hisp. | 1,950 | 803,210 | 300 | 14.1 | 12.0-16.1 | 1,650 | 85.9 | 83.9-88.0 |
| Other Races/Ethnicities** | 165 | 127,735 | 40 | 20.7 | 12.6-28.8 | 125 | 79.3 | 71.2-87.4 |
| 18-24 years | 281 | 300,513 | 54 | 18.4 | 13.3-23.4 | 227 | 81.6 | 76.6-86.7 |
| 25-34 years | 536 | 384,326 | 119 | 20.1 | 16.3-23.9 | 417 | 79.9 | 76.1-83.7 |
| 35-44 years | 639 | 363,408 | 130 | 19.7 | 16.1-23.3 | 509 | 80.3 | 76.7-83.9 |
| 45-54 years | 737 | 341,538 | 180 | 24.7 | 20.8-28.7 | 557 | 75.3 | 71.3-79.2 |
| 55-64 years | 1,039 | 373,501 | 248 | 23.8 | 20.6-27.0 | 791 | 76.2 | 73.0-79.4 |
| $65+$ years | 1,819 | 486,897 | 296 | 17.4 | 15.1-19.6 | 1,523 | 82.6 | 80.4-84.9 |
| Less than H.S. | 657 | 361,556 | 171 | 29.0 | 24.2-33.8 | 486 | 71.0 | 66.2-75.8 |
| H.S. or G.E.D. | 1,534 | 687,606 | 296 | 19.0 | 16.4-21.5 | 1,238 | 81.0 | 78.5-83.6 |
| Some Post-H.S. | 1,443 | 769,047 | 318 | 20.0 | 17.5-22.5 | 1,125 | 80.0 | 77.5-82.5 |
| College Graduate | 1,444 | 447,204 | 248 | 17.5 | 15.1-19.9 | 1,196 | 82.5 | 80.1-84.9 |
| Less than \$15,000 | 618 | 240,457 | 177 | 26.5 | 21.9-31.1 | 441 | 73.5 | 68.9-78.1 |
| \$15,000-\$24,999 | 963 | 432,592 | 248 | 27.9 | 24.0-31.7 | 715 | 72.1 | 68.3-76.0 |
| \$25,000-\$34,999 | 476 | 214,212 | 104 | 21.7 | 17.0-26.4 | 372 | 78.3 | 73.6-83.0 |
| \$35,000-\$49,999 | 577 | 264,497 | 102 | 18.7 | 14.6-22.8 | 475 | 81.3 | 77.2-85.4 |
| \$50,000-\$74,999 | 541 | 263,906 | 88 | 16.3 | 12.2-20.3 | 453 | 83.7 | 79.7-87.8 |
| \$75,000+ | 905 | 427,200 | 129 | 14.2 | 11.5-16.9 | 776 | 85.8 | 83.1-88.5 |

(1) Unweighted number
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group. Note: Denominator excludes respondents with do not know/refused/missing responses

Table 15-B. History of Depressive Disorder by Sex

| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 477 | 30.0 | 27.2-32.8 | 209 | 18.4 | 15.7-21.1 | 686 | 24.4 | 22.4-26.4 |
| Black or Afr. Am./Non-Hisp. | 228 | 18.8 | 15.8-21.9 | 72 | 8.2 | 5.7-10.7 | 300 | 14.1 | 12.0-16.1 |
| Other Races/Ethnicities** | 28 | 33.5 | 19.9-47.0 | 12 | 12.6 | 3.6-21.5 | 40 | 20.7 | 12.6-28.8 |
| 18-24 years | 33 | 23.0 | 15.2-30.7 | 21 | 14.0 | 7.7-20.4 | 54 | 18.4 | 13.3-23.4 |
| 25-34 years | 92 | 29.2 | 23.3-35.0 | 27 | 11.3 | 6.9-15.7 | 119 | 20.1 | 16.3-23.9 |
| 35-44 years | 92 | 25.5 | 20.1-30.9 | 38 | 13.5 | 9.0-18.1 | 130 | 19.7 | 16.1-23.3 |
| 45-54 years | 131 | 32.1 | 26.4-37.8 | 49 | 16.8 | 11.5-22.0 | 180 | 24.7 | 20.8-28.7 |
| 55-64 years | 168 | 27.3 | 23.1-31.6 | 80 | 19.8 | 14.9-24.7 | 248 | 23.8 | 20.6-27.0 |
| 65+ years | 220 | 21.8 | 18.7-24.8 | 76 | 11.8 | 8.6-15.0 | 296 | 17.4 | 15.1-19.6 |
| Less than H.S. | 123 | 39.4 | 32.5-46.3 | 48 | 19.6 | 13.6-25.6 | 171 | 29.0 | 24.2-33.8 |
| H.S. or G.E.D. | 193 | 22.7 | 19.1-26.4 | 103 | 15.5 | 12.0-19.0 | 296 | 19.0 | 16.4-21.5 |
| Some Post-H.S. | 231 | 25.9 | 22.3-29.4 | 87 | 12.7 | 9.6-15.9 | 318 | 20.0 | 17.5-22.5 |
| College Graduate | 191 | 22.3 | 18.9-25.7 | 57 | 11.4 | 8.1-14.6 | 248 | 17.5 | 15.1-19.9 |
| Less than \$15,000 | 138 | 34.2 | 28.1-40.4 | 39 | 15.5 | 9.5-21.6 | 177 | 26.5 | 21.9-31.1 |
| \$15,000-\$24,999 | 178 | 32.4 | 27.3-37.4 | 70 | 21.7 | 15.9-27.6 | 248 | 27.9 | 24.0-31.7 |
| \$25,000-\$34,999 | 74 | 24.7 | 18.4-31.0 | 30 | 17.6 | 10.6-24.7 | 104 | 21.7 | 17.0-26.4 |
| \$35,000-\$49,999 | 67 | 22.2 | 16.3-28.1 | 35 | 15.1 | 9.5-20.8 | 102 | 18.7 | 14.6-22.8 |
| \$50,000-\$74,999 | 59 | 24.8 | 18.0-31.6 | 29 | 10.1 | 5.5-14.8 | 88 | 16.3 | 12.2-20.3 |
| \$75,000+ | 90 | 19.1 | 14.9-23.3 | 39 | 10.2 | 6.7-13.6 | 129 | 14.2 | 11.5-16.9 |

(1) Unweighted number of cases
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group
Note: Denominator excludes respondents with do not know/refused/missing responses

## DIABETES

Diabetes is a chronic condition that causes the body to either not produce enough insulin or not use it effectively. ${ }^{28}$ Insulin is produced in the pancreas and helps the body regulate the use of blood sugar. ${ }^{28}$ In diabetes, there is excess blood sugar in the blood stream, and this excess can contribute to other health conditions like heart disease, kidney disease, and vision loss. ${ }^{28}$ According to the CDC, the number of adults with diabetes has doubled over the last two decades, resulting in 34.2 million adults having diabetes. ${ }^{28}$ Diabetes is the seventh leading cause of death in both the U.S. ${ }^{28}$ and Mississippi. ${ }^{9}$

> Diabetes Question:
> Has a doctor, nurse, or other health professional ever told you that you had diabetes?

The 2019 MS BRFSS revealed that $14.8 \%$ of respondents had ever been diagnosed with diabetes by a health care professional. Females had a slightly higher rate than males, with $15.4 \%$ and $14.2 \%$, respectively. Black respondents had the highest rate of diabetes (17.4\%), followed by White respondents (13.2\%), and respondents of other races (12.7\%) (Fig. 61). Black women had the highest rate of all race/sex groups with $18.7 \%$, while men of other races had the lowest rate at $9.8 \%$. The rate of diabetes diagnosis increased with age (Fig. 62); respondents in the $65+$ years age group had a rate of $30.1 \%$, those in the $45-64$ years age group had a rate of $20.6 \%$, and the $18-44$ years group had a rate of $3.5 \%$.

The rate of diabetes increased as level of education decreased; it was highest among respondents who did not complete high school (25.9\%) and lowest among those who graduated from college or technical school (9.9\%) (Fig. 63). Similarly, the rate of diabetes was highest among individuals whose household income was less than $\$ 15,000$ per year (21.6\%) and lowest among those whose income was $\$ 75,000$ or more per year (7.8\%) (Fig. 64).




Figure 64. Percentage of Respondents Ever Told They Have Diabetes by Household Income \& Sex
40.0\%
30.0\%
20.0\%
10.0\%
0.0\%

Figure 62. Percentage of Respondents Ever Told They Have Diabetes by Age \& Sex


TABLE 16-A. Diabetes
Q: Ever told by a doctor, nurse, or other health professional that you had diabetes?

| DEMOGRAPHIC GROUPS | RESPONDENTS |  | Yes |  |  | No |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | total | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $N^{(1)}$ | \%(2) | C.I. (95\%) |
| TOTAL | 5,113 | 2,281,242 | 993 | 14.8 | 13.7-15.9 | 4,120 | 85.2 | 84.1-86.3 |
| Male | 2,049 | 1,089,616 | 417 | 14.2 | 12.6-15.9 | 1,632 | 85.8 | 84.1-87.4 |
| Female | 3,064 | 1,191,626 | 576 | 15.4 | 13.8-16.9 | 2,488 | 84.6 | 83.1-86.2 |
| White/Non-Hisp. | 2,940 | 1,321,299 | 471 | 13.2 | 11.8-14.6 | 2,469 | 86.8 | 85.4-88.2 |
| Black or Afr. Am./Non-Hisp. | 1,956 | 806,360 | 476 | 17.4 | 15.5-19.4 | 1,480 | 82.6 | 80.6-84.5 |
| Other Races/Ethnicities** | 165 | 127,735 | 31 | 12.7 | 6.4-19.0 | 134 | 87.3 | 81.0-93.6 |
| 18-24 years | 283 | 301,850 | 3 | 0.6 | 0.0-1.3 | 280 | 99.4 | 98.7-100.0 |
| 25-34 years | 540 | 386,835 | 12 | 1.9 | 0.7-3.1 | 528 | 98.1 | 96.9-99.3 |
| 35-44 years | 641 | 364,179 | 52 | 7.7 | 5.4-10.0 | 589 | 92.3 | 90.0-94.6 |
| 45-54 years | 738 | 342,344 | 114 | 15.4 | 12.3-18.6 | 624 | 84.6 | 81.4-87.7 |
| 55-64 years | 1,045 | 374,639 | 280 | 25.2 | 22.0-28.4 | 765 | 74.8 | 71.6-78.0 |
| $65+$ years | 1,818 | 486,402 | 520 | 30.1 | 27.4-32.8 | 1,298 | 69.9 | 67.2-72.6 |
| Less than H.S. | 661 | 362,223 | 209 | 25.9 | 21.8-30.1 | 452 | 74.1 | 69.9-78.2 |
| H.S. or G.E.D. | 1,541 | 691,030 | 349 | 16.1 | 14.1-18.1 | 1,192 | 83.9 | 81.9-85.9 |
| Some Post-H.S. | 1,448 | 772,047 | 240 | 11.3 | 9.6-12.9 | 1,208 | 88.7 | 87.1-90.4 |
| College Graduate | 1,445 | 447,551 | 189 | 9.9 | 8.1-11.6 | 1,256 | 90.1 | 88.4-91.9 |
| Less than \$15,000 | 621 | 241,018 | 166 | 21.6 | 17.6-25.6 | 455 | 78.4 | 74.4-82.4 |
| \$15,000-\$24,999 | 963 | 432,393 | 237 | 19.1 | 16.1-22.1 | 726 | 80.9 | 77.9-83.9 |
| \$25,000-\$34,999 | 480 | 216,598 | 83 | 13.2 | 9.8-16.5 | 397 | 86.8 | 83.5-90.2 |
| \$35,000-\$49,999 | 577 | 264,817 | 103 | 13.7 | 10.6-16.8 | 474 | 86.3 | 83.2-89.4 |
| \$50,000-\$74,999 | 540 | 263,595 | 83 | 11.0 | 8.1-13.8 | 457 | 89.0 | 86.2-91.9 |
| \$75,000+ | 908 | 428,550 | 103 | 7.8 | 6.0-9.6 | 805 | 92.2 | 90.4-94.0 |

(1) Unweighted number
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group.
Note: Denominator excludes respondents with do not know/refused/missing responses

| Table 16-B. History of Diabetes by Sex |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \%(2) | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 247 | 12.8 | 11.0-14.7 | 224 | 13.7 | 11.6-15.8 | 471 | 13.2 | 11.8-14.6 |
| Black or Afr. Am./Non-Hisp. | 303 | 18.7 | 16.1-21.4 | 173 | 15.8 | 12.9-18.8 | 476 | 17.4 | 15.5-19.4 |
| Other Races/Ethnicities** | 17 | 17.1 | 5.6-28.5 | 14 | 9.8 | 2.9-16.7 | 31 | 12.7 | 6.4-19.0 |
| 18-24 years | 2 | 0.9 | 0.0-2.0 | 1 | 0.4 | 0.0-1.2 | 3 | 0.6 | 0.0-1.3 |
| 25-34 years | 8 | 2.2 | 0.5-3.9 | 4 | 1.6 | 0.0-3.2 | 12 | 1.9 | 0.7-3.1 |
| 35-44 years | 34 | 8.6 | 5.2-11.9 | 18 | 6.8 | 3.6-10.0 | 52 | 7.7 | 5.4-10.0 |
| 45-54 years | 59 | 14.7 | 10.6-18.8 | 55 | 16.2 | 11.4-21.1 | 114 | 15.4 | 12.3-18.6 |
| 55-64 years | 165 | 27.1 | 22.7-31.5 | 115 | 23.1 | 18.5-27.7 | 280 | 25.2 | 22.0-28.4 |
| 65+ years | 299 | 28.2 | 24.8-31.6 | 221 | 32.7 | 28.3-37.1 | 520 | 30.1 | 27.4-32.8 |
| Less than H.S. | 127 | 29.3 | 23.4-35.2 | 82 | 22.9 | 17.1-28.7 | 209 | 25.9 | 21.8-30.1 |
| H.S. or G.E.D. | 192 | 17.1 | 14.2-20.0 | 157 | 15.1 | 12.3-17.9 | 349 | 16.1 | 14.1-18.1 |
| Some Post-H.S. | 147 | 12.5 | 10.1-14.8 | 93 | 9.8 | 7.4-12.1 | 240 | 11.3 | 9.6-12.9 |
| College Graduate | 107 | 8.4 | 6.5-10.4 | 82 | 11.8 | 8.7-14.9 | 189 | 9.9 | 8.1-11.6 |
| Less than \$15,000 | 115 | 22.6 | 17.9-27.4 | 51 | 20.1 | 13.3-27.0 | 166 | 21.6 | 17.6-25.6 |
| \$15,000-\$24,999 | 146 | 19.3 | 15.4-23.2 | 91 | 18.9 | 14.2-23.6 | 237 | 19.1 | 16.1-22.1 |
| \$25,000-\$34,999 | 49 | 13.0 | 8.5-17.4 | 34 | 13.5 | 8.3-18.6 | 83 | 13.2 | 9.8-16.5 |
| \$35,000-\$49,999 | 47 | 11.0 | 7.2-14.8 | 56 | 16.4 | 11.4-21.5 | 103 | 13.7 | 10.6-16.8 |
| \$50,000-\$74,999 | 40 | 11.6 | 7.3-15.9 | 43 | 10.5 | 6.7-14.3 | 83 | 11.0 | 8.1-13.8 |
| \$75,000+ | 44 | 7.6 | 5.0-10.1 | 59 | 8.0 | 5.5-10.5 | 103 | 7.8 | 6.0-9.6 |
| (1) Unweighted number of cases <br> (2) Weighted percent <br> **Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group. <br> Note: Denominator excludes respondents with do not know/refused/missing responses |  |  |  |  |  |  |  |  |  |

## OVERWEIGHT AND OBESITY/BODY MASS INDEX (BMI)

The proportion of overweight persons has increased substantially during the past twenty years. ${ }^{29}$ Even though some progress has been made, there are shortfalls for healthy physical activity and dietaryconsumption levels, contributing to an obesity prevalence of $42.4 \%$ in the United States in 2017-

> BMI Questions:
> (1) About how much do you weigh without shoes?
> (2) About how tall are you without shoes? 2018.29 Being overweight substantially increases a person's risk of illness from several of the leading preventable causes of death, including hypertension, high cholesterol, type 2 diabetes, heart disease and stroke, various types of cancer, as well as arthritis. ${ }^{30}$ Weight may be controlled through dietary changes such as decreasing caloric intake and by increasing physical activity.

According to 2019 Mississippi BRFSS results, 93.1\% of respondents reported both heights and weights for the calculation of Body Mass Indices (BMIs). Of these, $72.7 \%$ of respondents had BMIs in the overweight ( $\mathrm{BMI} \geq 25$ ) or obese ( $\mathrm{BMI} \geq 30$ ) category. Mississippi's obesity rate for 2019 was $40.8 \%$, which was an increase from $39.5 \%$ in 2018 and $37.5 \%$ in 2017.

Males had a slightly higher rate of being overweight or obese (73.7\%) than did females (71.7\%). Black respondents had the highest rate ( $76.8 \%$ ), followed closely by respondents of other race groups ( $76.7 \%$ ), and White respondents ( $69.9 \%$ ). In terms of sex and race, Black females and males of other races had the highest rates of overweight or obesity at $81.2 \%$ and $78.2 \%$, respectively (Fig. 65). All age groups had overweight/obesity rates over 50\%, but 35-44 years and 45-54 years had the highest rates, with $80.3 \%$ and $80.5 \%$, respectively (Fig. 66). The overweight/obesity rate was highest among those whose highest level of education was graduation from high school (75.0\%) (Fig. 67) and those whose annual household income was $\$ 50,000$ to $\$ 74,999$ (76.3\%) (Fig. 68).


TABLE 17-A. Overweight and Obesity
Overweight/Obesity status based on BMI calculated from self-reported height and weight

| DEMOGRAPHIC GROUPS | RESPONDENTS |  | Overweight or Obese |  |  | Not Overweight or Obese |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 4,737 | 2,105,051 | 3,506 | 72.7 | 71.0-74.5 | 1,231 | 27.3 | 25.5-29.0 |
| Male | 1,964 | 1,045,250 | 1,488 | 73.7 | 71.1-76.4 | 476 | 26.3 | 23.6-28.9 |
| Female | 2,773 | 1,059,801 | 2,018 | 71.7 | 69.5-74.0 | 755 | 28.3 | 26.0-30.5 |
| White/Non-Hisp. | 2,760 | 1,235,420 | 1,914 | 69.9 | 67.7-72.1 | 846 | 30.1 | 27.9-32.3 |
| Black or Afr. Am./Non-Hisp. | 1,792 | 737,449 | 1,451 | 76.8 | 73.9-79.7 | 341 | 23.2 | 20.3-26.1 |
| Other Races/Ethnicities** | 147 | 112,188 | 111 | 76.7 | 67.3-86.1 | 36 | 23.3 | 13.9-32.7 |
| 18-24 years | 260 | 274,143 | 145 | 55.9 | 48.8-62.9 | 115 | 44.1 | 37.1-51.2 |
| 25-34 years | 488 | 351,272 | 334 | 68.3 | 63.3-73.3 | 154 | 31.7 | 26.7-36.7 |
| 35-44 years | 594 | 338,785 | 475 | 80.3 | 76.4-84.1 | 119 | 19.7 | 15.9-23.6 |
| 45-54 years | 681 | 316,080 | 553 | 80.5 | 76.8-84.2 | 128 | 19.5 | 15.8-23.2 |
| 55-64 years | 978 | 352,622 | 770 | 77.9 | 74.6-81.2 | 208 | 22.1 | 18.8-25.4 |
| $65+$ years | 1,710 | 458,095 | 1,209 | 71.5 | 68.8-74.2 | 501 | 28.5 | 25.8-31.2 |
| Less than H.S. | 608 | 332,653 | 453 | 71.1 | 65.9-76.2 | 155 | 28.9 | 23.8-34.1 |
| H.S. or G.E.D. | 1,423 | 640,195 | 1,068 | 75.0 | 72.0-77.9 | 355 | 25.0 | 22.1-28.0 |
| Some Post-H.S. | 1,342 | 710,584 | 977 | 71.6 | 68.4-74.8 | 365 | 28.4 | 25.2-31.6 |
| College Graduate | 1,351 | 415,272 | 997 | 72.6 | 69.6-75.6 | 354 | 27.4 | 24.4-30.4 |
| Less than \$15,000 | 589 | 231,079 | 425 | 69.9 | 64.6-75.2 | 164 | 30.1 | 24.8-35.4 |
| \$15,000-\$24,999 | 894 | 401,338 | 642 | 72.2 | 68.2-76.1 | 252 | 27.8 | 23.9-31.8 |
| \$25,000-\$34,999 | 461 | 206,785 | 365 | 75.8 | 70.4-81.2 | 96 | 24.2 | 18.8-29.6 |
| \$35,000-\$49,999 | 559 | 256,447 | 425 | 72.2 | 66.7-77.7 | 134 | 27.8 | 22.3-33.3 |
| \$50,000-\$74,999 | 523 | 254,869 | 393 | 76.3 | 71.6-81.0 | 130 | 23.7 | 19.0-28.4 |
| \$75,000+ | 867 | 408,679 | 647 | 73.4 | 69.6-77.2 | 220 | 26.6 | 22.8-30.4 |

(1) Unweighted number
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group
Note: Denominator excludes respondents with do not know/refused/missing responses

| Table 17-B. Overweight and Obesity by Sex |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
|  | $\mathbf{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathbf{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathbf{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 987 | 65.0 | 62.0-68.1 | 927 | 74.6 | 71.3-77.8 | 1,914 | 69.9 | 67.7-72.1 |
| Black or Afr. Am./Non-Hisp. | 953 | 81.2 | 77.8-84.6 | 498 | 71.5 | 66.7-76.4 | 1,451 | 76.8 | 73.9-79.7 |
| Other Races/Ethnicities** | 60 | 74.2 | 60.2-88.3 | 51 | 78.2 | 66.0-90.5 | 111 | 76.7 | 67.3-86.1 |
| 18-24 years | 77 | 55.6 | 46.1-65.1 | 68 | 56.2 | 45.9-66.4 | 145 | 55.9 | 48.8-62.9 |
| 25-34 years | 200 | 71.9 | 66.0-77.8 | 134 | 65.1 | 57.3-72.9 | 334 | 68.3 | 63.3-73.3 |
| 35-44 years | 271 | 76.0 | 70.3-81.6 | 204 | 84.7 | 79.8-89.6 | 475 | 80.3 | 76.4-84.1 |
| 45-54 years | 309 | 78.9 | 73.7-84.0 | 244 | 82.2 | 76.9-87.4 | 553 | 80.5 | 76.8-84.2 |
| 55-64 years | 435 | 76.0 | 71.6-80.5 | 335 | 79.9 | 74.9-84.8 | 770 | 77.9 | 74.6-81.2 |
| 65+ years | 713 | 69.5 | 66.1-72.9 | 496 | 73.9 | 69.7-78.1 | 1,209 | 71.5 | 68.8-74.2 |
| Less than H.S. | 274 | 79.2 | 73.6-84.8 | 179 | 64.6 | 56.7-72.5 | 453 | 71.1 | 65.9-76.2 |
| H.S. or G.E.D. | 576 | 72.8 | 68.7-77.0 | 492 | 76.8 | 72.7-81.0 | 1,068 | 75.0 | 72.0-77.9 |
| Some Post-H.S. | 576 | 69.9 | 65.8-74.0 | 401 | 73.5 | 68.6-78.4 | 977 | 71.6 | 68.4-74.8 |
| College Graduate | 588 | 69.0 | 64.9-73.0 | 409 | 77.1 | 72.5-81.6 | 997 | 72.6 | 69.6-75.6 |
| Less than \$15,000 | 308 | 78.0 | 73.0-83.0 | 117 | 58.9 | 49.1-68.7 | 425 | 69.9 | 64.6-75.2 |
| \$15,000-\$24,999 | 417 | 73.5 | 68.5-78.5 | 225 | 70.4 | 64.0-76.9 | 642 | 72.2 | 68.2-76.1 |
| \$25,000-\$34,999 | 238 | 81.1 | 75.2-86.9 | 127 | 69.0 | 59.6-78.5 | 365 | 75.8 | 70.4-81.2 |
| \$35,000-\$49,999 | 232 | 70.2 | 62.6-77.8 | 193 | 74.1 | 66.2-82.0 | 425 | 72.2 | 66.7-77.7 |
| \$50,000-\$74,999 | 185 | 70.1 | 63.3-76.9 | 208 | 80.6 | 74.3-86.9 | 393 | 76.3 | 71.6-81.0 |
| \$75,000+ | 290 | 67.0 | 61.5-72.5 | 357 | 78.4 | 73.2-83.6 | 647 | 73.4 | 69.6-77.2 |
| (1) Unweighted number of cases <br> (2) Weighted percent <br> ${ }^{* *}$ Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group. <br> Note: Denominator excludes respondents with do not know/refused/missing responses |  |  |  |  |  |  |  |  |  |

Tobacco use is the leading preventable cause of death in the U.S. ${ }^{31}$ Approximately 5,400 adults in Mississippi die from smoking-related illnesses every year. ${ }^{31}$ Health problems related to smoking cigarettes include cancers, lung disease, and heart disease. ${ }^{31}$ Mississippi's rate of new cases of lung

Cigarette Smoking Questions:
(1) Have you smoked at least 100 cigarettes in your entire life? If Yes,
(2) Do you now smoke cigarettes every day, some days, or not at all? cancer is higher than the national rate ( 75.2 vs. 58.7 per 100,000). ${ }^{32}$ Over the past decade the percentage of adult smokers has decreased, although other nicotine-delivery systems (e.g., e-cigarettes) have become popular.

According to 2019 MS BRFSS data, 20.4\% of respondents were current cigarette smokers. Males had a higher rate of smoking (24.2\%) than females ( $16.9 \%$ ). Respondents of other races had the highest rate ( $32.6 \%$ ), followed by White (20.6\%) and Black (18.1\%). In terms of race and sex, the group with the highest rate was males of other races (38.4\%), followed by Black males (24.9\%), and females of other races (23.7\%) (Fig. 69). The group with the lowest rate was Black females ( $12.6 \%$ ). The age group with the highest rate of current cigarette smoking was 25-34 years (27.6\%), and the lowest rate was among those aged 65 years and older (10.8\%) (Fig. 70).

The rate of smoking increased as level of education decreased; those with less than a high school diploma had the highest rate (30.9\%), while those with a college or technical degree had the lowest (8.7\%) (Fig. 71). Similarly, the rate was highest among those with a household income of less than $\$ 15,000$ (31.3\%) and lowest among those whose household earned $\$ 75,000$ or more (12.1\%) (Fig. 72).

Of respondents who were current cigarette smokers, $60.6 \%$ said that they had stopped smoking for one day or longer during the past 12 months because they were trying to quit smoking.


Figure 71. Percentage of Respondents Who Are Current Smokers by


Figure 70. Percentage of Respondents Who Are Current Smokers by Age \& Sex


Figure 72. Percentage of Respondents Who Are Current Smokers by Household Income \& Sex


| TABLE 18-A. Current Smoker <br> Has smoked at least 100 cigarettes in entire life and now smokes every day or some days |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC GROUPS | RESPONDENTS |  | Yes |  |  | No |  |  |
|  | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 4,945 | 2,194,090 | 847 | 20.4 | 18.8-22.0 | 4,098 | 79.6 | 78.0-81.2 |
| Male | 1,982 | 1,050,805 | 409 | 24.2 | 21.6-26.9 | 1,573 | 75.8 | 73.1-78.4 |
| Female | 2,963 | 1,143,285 | 438 | 16.9 | 15.1-18.7 | 2,525 | 83.1 | 81.3-84.9 |
| White/Non-Hisp. | 2,872 | 1,284,341 | 491 | 20.6 | 18.6-22.6 | 2,381 | 79.4 | 77.4-81.4 |
| Black or Afr. Am./Non-Hisp. | 1,870 | 769,095 | 303 | 18.1 | 15.6-20.5 | 1,567 | 81.9 | 79.5-84.4 |
| Other Races/Ethnicities** | 155 | 116,649 | 45 | 32.6 | 21.5-43.6 | 110 | 67.4 | 56.4-78.5 |
| 18-24 years | 274 | 292,089 | 37 | 16.1 | 10.4-21.8 | 237 | 83.9 | 78.2-89.6 |
| 25-34 years | 512 | 364,238 | 122 | 27.6 | 22.8-32.5 | 390 | 72.4 | 67.5-77.2 |
| 35-44 years | 611 | 350,068 | 141 | 24.4 | 20.3-28.5 | 470 | 75.6 | 71.5-79.7 |
| 45-54 years | 707 | 324,220 | 164 | 24.3 | 20.2-28.4 | 543 | 75.7 | 71.6-79.8 |
| 55-64 years | 1,015 | 365,545 | 204 | 23.1 | 19.7-26.5 | 811 | 76.9 | 73.5-80.3 |
| 65+ years | 1,782 | 476,409 | 179 | 10.8 | 8.9-12.8 | 1,603 | 89.2 | 87.2-91.1 |
| Less than H.S. | 634 | 337,978 | 153 | 30.9 | 25.7-36.1 | 481 | 69.1 | 63.9-74.3 |
| H.S. or G.E.D. | 1,476 | 665,845 | 312 | 24.5 | 21.6-27.5 | 1,164 | 75.5 | 72.5-78.4 |
| Some Post-H.S. | 1,412 | 750,837 | 255 | 18.9 | 16.2-21.6 | 1,157 | 81.1 | 78.4-83.8 |
| College Graduate | 1,406 | 432,039 | 125 | 8.7 | 6.9-10.5 | 1,281 | 91.3 | 89.5-93.1 |
| Less than \$15,000 | 613 | 239,322 | 170 | 31.3 | 26.1-36.5 | 443 | 68.7 | 63.5-73.9 |
| \$15,000-\$24,999 | 946 | 421,236 | 218 | 27.5 | 23.6-31.5 | 728 | 72.5 | 68.5-76.4 |
| \$25,000-\$34,999 | 470 | 211,328 | 75 | 20.4 | 15.1-25.7 | 395 | 79.6 | 74.3-84.9 |
| \$35,000-\$49,999 | 569 | 259,932 | 83 | 18.0 | 13.6-22.4 | 486 | 82.0 | 77.6-86.4 |
| \$50,000-\$74,999 | 533 | 257,535 | 80 | 20.2 | 15.0-25.3 | 453 | 79.8 | 74.7-85.0 |
| \$75,000+ | 897 | 423,036 | 88 | 12.1 | 8.8-15.5 | 809 | 87.9 | 84.5-91.2 |
| (1) Unweighted number <br> (2) Weighted percent <br> **Refer to Table B on p. 7 for <br> Note: Denominator excludes | ist of rac pondents | nd ethnicities th do not know | d in ed/mi | Rac ponse | Ethnicities" | graph |  |  |


| Table 18-B. Current Smoker by Sex |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 270 | 18.8 | 16.4-21.3 | 221 | 22.4 | 19.3-25.6 | 491 | 20.6 | 18.6-22.6 |
| Black or Afr. Am./Non-Hisp. | 144 | 12.6 | 10.0-15.2 | 159 | 24.9 | 20.4-29.3 | 303 | 18.1 | 15.6-20.5 |
| Other Races/Ethnicities** | 20 | 23.7 | 12.1-35.4 | 25 | 38.4 | 22.1-54.8 | 45 | 32.6 | 21.5-43.6 |
| 18-24 years | 13 | 10.1 | 4.3-15.8 | 24 | 21.6 | 12.2-30.9 | 37 | 16.1 | 10.4-21.8 |
| 25-34 years | 63 | 23.0 | 17.4-28.7 | 59 | 32.1 | 24.3-39.8 | 122 | 27.6 | 22.8-32.5 |
| 35-44 years | 69 | 19.9 | 14.9-24.8 | 72 | 29.4 | 22.8-36.1 | 141 | 24.4 | 20.3-28.5 |
| 45-54 years | 91 | 23.1 | 17.6-28.6 | 73 | 25.6 | 19.6-31.6 | 164 | 24.3 | 20.2-28.4 |
| 55-64 years | 104 | 19.4 | 15.4-23.4 | 100 | 27.2 | 21.6-32.8 | 204 | 23.1 | 19.7-26.5 |
| 65+ years | 98 | 9.4 | 7.2-11.6 | 81 | 12.7 | 9.3-16.1 | 179 | 10.8 | 8.9-12.8 |
| Less than H.S. | 70 | 24.5 | 18.2-30.8 | 83 | 36.8 | 28.8-44.8 | 153 | 30.9 | 25.7-36.1 |
| H.S. or G.E.D. | 144 | 18.3 | 14.9-21.7 | 168 | 30.3 | 25.6-35.0 | 312 | 24.5 | 21.6-27.5 |
| Some Post-H.S. | 150 | 18.0 | 14.8-21.3 | 105 | 19.9 | 15.3-24.5 | 255 | 18.9 | 16.2-21.6 |
| College Graduate | 72 | 8.0 | 5.8-10.2 | 53 | 9.7 | 6.7-12.6 | 125 | 8.7 | 6.9-10.5 |
| Less than \$15,000 | 105 | 30.1 | 24.0-36.2 | 65 | 33.1 | 23.9-42.3 | 170 | 31.3 | 26.1-36.5 |
| \$15,000-\$24,999 | 116 | 22.2 | 17.7-26.7 | 102 | 35.1 | 28.2-42.1 | 218 | 27.5 | 23.6-31.5 |
| \$25,000-\$34,999 | 36 | 14.5 | 8.9-20.1 | 39 | 28.3 | 18.8-37.8 | 75 | 20.4 | 15.1-25.7 |
| \$35,000-\$49,999 | 44 | 17.4 | 11.7-23.1 | 39 | 18.6 | 11.9-25.3 | 83 | 18.0 | 13.6-22.4 |
| \$50,000-\$74,999 | 32 | 12.7 | 7.2-18.3 | 48 | 25.6 | 17.8-33.5 | 80 | 20.2 | 15.0-25.3 |
| \$75,000+ | 41 | 8.8 | 5.6-12.0 | 47 | 14.8 | 9.5-20.2 | 88 | 12.1 | 8.8-15.5 |
| (1) Unweighted number of cases <br> (2) Weighted percent <br> ${ }^{* *}$ Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group. <br> Note: Denominator excludes respondents with do not know/refused/missing responses |  |  |  |  |  |  |  |  |  |

## Alcohol Consumption (Binge Drinking)

Extensive alcohol use has been linked to a substantial proportion of injuries and deaths from motor vehicle crashes, falls, fires and drownings. ${ }^{33}$ Alcohol use also is a factor in homicide, suicide, and interpersonal violence and has been associated with high-risk sexual behavior. ${ }^{33}$ In 2019 alcohol use

Alcohol Consumption Question:
Considering all types of alcoholic beverages, how many times during the past 30 days did you have
5 or more drinks on an occasion (for men) or 4 or more drinks on occasion (for women)? was associated with $28 \%$ of all crash fatalities, according to the U. S. National Highway Traffic Safety Administration. ${ }^{34}$

Binge drinking in adults is defined as having five or more alcoholic drinks on one occasion for adult males and four or more alcoholic drinks on one occasion for adult females. ${ }^{35}$ According to 2019 MS BRFSS data, $13.4 \%$ of respondents reported binge drinking in the past 30 days.

Males had a higher rate of binge drinking (19.8\%) compared to females (7.6\%). In terms of race, the rate was highest among other races (25.5\%), followed by White (13.1\%) and Black (11.9\%); for each race group, males had higher rates than females (Fig. 73). Overall, the age group with the highest rate of binge drinking was $18-24$ years ( $21.6 \%$ ). Males in this age group reported the highest rate of binge drinking of all age and sex combinations with $30.8 \%$. (Fig. 74).

Among both males (21.1\%) and females (10.3\%), individuals who completed some college or technical school had the highest rate of binge drinking (Fig. 75). Among males, those with household incomes of $\$ 75,000$ or more had the highest rate of binge drinking (24.8\%). For females, the highest rate was among those with annual household incomes of $\$ 35,000$ to $\$ 49,999$ (10.4\%) (Fig. 76).



Figure 75. Percentage of Respondents Who Reported Binge Drinking by Education Level \& Sex


| TABLE 19-A. Binge Drinking (Past 30 Days) <br> Binge drinking = males having 5+ drinks on one occasion, females having 4+ drinks on one occasion |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC | RESPONDENTS |  | Yes |  |  | No |  |  |
| GROUPS | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 4,826 | 2,136,167 | 453 | 13.4 | 11.9-14.9 | 4,373 | 86.6 | 85.1-88.1 |
| Male | 1,909 | 1,013,757 | 279 | 19.8 | 17.2-22.5 | 1,630 | 80.2 | 77.5-82.8 |
| Female | 2,917 | 1,122,409 | 174 | 7.6 | 6.3-9.0 | 2,743 | 92.4 | 91.0-93.7 |
| White/Non-Hisp. | 2,823 | 1,263,513 | 269 | 13.1 | 11.3-14.9 | 2,554 | 86.9 | 85.1-88.7 |
| Black or Afr. Am./Non-Hisp. | 1,805 | 732,202 | 154 | 11.9 | 9.6-14.2 | 1,651 | 88.1 | 85.8-90.4 |
| Other Races/Ethnicities** | 153 | 117,933 | 24 | 25.5 | 14.4-36.6 | 129 | 74.5 | 63.4-85.6 |
| 18-24 years | 266 | 284,342 | 54 | 21.6 | 15.4-27.7 | 212 | 78.4 | 72.3-84.6 |
| 25-34 years | 493 | 350,001 | 80 | 18.2 | 13.9-22.5 | 413 | 81.8 | 77.5-86.1 |
| 35-44 years | 594 | 339,383 | 108 | 20.0 | 15.9-24.1 | 486 | 80.0 | 75.9-84.1 |
| 45-54 years | 684 | 316,256 | 91 | 13.8 | 10.6-16.9 | 593 | 86.2 | 83.1-89.4 |
| 55-64 years | 987 | 356,185 | 75 | 10.1 | 7.4-12.8 | 912 | 89.9 | 87.2-92.6 |
| 65+ years | 1,761 | 470,693 | 43 | 3.0 | 1.7-4.2 | 1,718 | 97.0 | 95.8-98.3 |
| Less than H.S. | 614 | 330,640 | 44 | 13.0 | 8.5-17.6 | 570 | 87.0 | 82.4-91.5 |
| H.S. or G.E.D. | 1,438 | 647,027 | 122 | 12.3 | 9.8-14.9 | 1,316 | 87.7 | 85.1-90.2 |
| Some Post-H.S. | 1,380 | 729,659 | 144 | 15.0 | 12.3-17.8 | 1,236 | 85.0 | 82.2-87.7 |
| College Graduate | 1,378 | 421,546 | 141 | 12.2 | 10.1-14.4 | 1,237 | 87.8 | 85.6-89.9 |
| Less than \$15,000 | 593 | 232,321 | 49 | 10.2 | 6.9-13.5 | 544 | 89.8 | 86.5-93.1 |
| \$15,000-\$24,999 | 920 | 411,139 | 81 | 15.1 | 11.4-18.9 | 839 | 84.9 | 81.1-88.6 |
| \$25,000-\$34,999 | 460 | 205,389 | 44 | 11.7 | 7.5-16.0 | 416 | 88.3 | 84.0-92.5 |
| \$35,000-\$49,999 | 555 | 252,693 | 58 | 14.8 | 10.4-19.3 | 497 | 85.2 | 80.7-89.6 |
| \$50,000-\$74,999 | 524 | 252,695 | 59 | 14.5 | 10.0-19.0 | 465 | 85.5 | 81.0-90.0 |
| \$75,000+ | 875 | 412,530 | 116 | 17.2 | 13.5-21.0 | 759 | 82.8 | 79.0-86.5 |

(1) Unweighted number
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group
Note: Denominator excludes respondents with do not know/refused/missing responses

Table 19-B. Binge Drinking in Past 30 Days by Sex

| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathbf{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 98 | 7.2 | 5.6-8.9 | 171 | 19.3 | 16.2-22.4 | 269 | 13.1 | 11.3-14.9 |
| Black or Afr. Am./Non-Hisp. | 67 | 7.1 | 5.0-9.3 | 87 | 18.1 | 13.8-22.4 | 154 | 11.9 | 9.6-14.2 |
| Other Races/Ethnicities** | 8 | 17.3 | 5.6-29.0 | 16 | 30.8 | 14.4-47.2 | 24 | 25.5 | 14.4-36.6 |
| 18-24 years | 19 | 11.3 | 6.0-16.7 | 35 | 30.8 | 20.7-40.8 | 54 | 21.6 | 15.4-27.7 |
| 25-34 years | 24 | 9.0 | 4.9-13.1 | 56 | 27.0 | 19.7-34.4 | 80 | 18.2 | 13.9-22.5 |
| 35-44 years | 49 | 13.4 | 9.0-17.8 | 59 | 27.5 | 20.4-34.6 | 108 | 20.0 | 15.9-24.1 |
| 45-54 years | 37 | 10.2 | 6.3-14.1 | 54 | 17.8 | 12.7-22.8 | 91 | 13.8 | 10.6-16.9 |
| 55-64 years | 26 | 5.1 | 2.9-7.3 | 49 | 15.8 | 10.7-20.9 | 75 | 10.1 | 7.4-12.8 |
| 65+ years | 19 | 1.5 | .7-2.4 | 24 | 4.8 | 2.2-7.5 | 43 | 3.0 | 1.7-4.2 |
| Less than H.S. | 16 | 6.1 | 2.7-9.6 | 28 | 19.2 | 11.5-26.9 | 44 | 13.0 | 8.5-17.6 |
| H.S. or G.E.D. | 33 | 4.5 | 2.6-6.4 | 89 | 19.8 | 15.4-24.2 | 122 | 12.3 | 9.8-14.9 |
| Some Post-H.S. | 60 | 10.3 | 7.4-13.1 | 84 | 21.1 | 16.1-26.1 | 144 | 15.0 | 12.3-17.8 |
| College Graduate | 64 | 8.1 | 5.9-10.2 | 77 | 17.7 | 13.7-21.8 | 141 | 12.2 | 10.1-14.4 |
| Less than \$15,000 | 21 | 6.6 | 3.2-9.9 | 28 | 15.4 | 8.9-21.9 | 49 | 10.2 | 6.9-13.5 |
| \$15,000-\$24,999 | 42 | 9.8 | 6.4-13.2 | 39 | 22.9 | 15.5-30.3 | 81 | 15.1 | 11.4-18.9 |
| \$25,000-\$34,999 | 12 | 4.7 | 1.3-8.2 | 32 | 21.2 | 12.7-29.6 | 44 | 11.7 | 7.5-16.0 |
| \$35,000-\$49,999 | 23 | 10.4 | 5.1-15.8 | 35 | 19.3 | 12.2-26.4 | 58 | 14.8 | 10.4-19.3 |
| \$50,000-\$74,999 | 24 | 9.5 | 5.2-13.8 | 35 | 18.1 | 11.2-25.1 | 59 | 14.5 | 10.0-19.0 |
| \$75,000+ | 37 | 8.3 | 5.3-11.3 | 79 | 24.8 | 18.7-30.9 | 116 | 17.2 | 13.5-21.0 |

(1) Unweighted number of cases
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group
Note: Denominator excludes respondents with do not know/refused/missing responses

## Flu Vaccine

Influenza and pneumonia conjointly were the eighth leading cause of death in Mississippi in 2019,9 but an influenza vaccine that can prevent the disease and several of its complications exists. ${ }^{36}$ The vaccine may be less effective in disease prevention among the 65 years and older age group; however, it does

## Flu Vaccine Question:

During the past 12 months, have you had either a flu vaccine that was sprayed in your nose or a flu shot that was injected into your arm? reduce the severity and incidence of complications and death. ${ }^{36}$ One of the HealthyPeople 2020 objectives was to reach an annual flu vaccination rate of $90 \%$ among non-institutionalized people aged 65 years and older, ${ }^{37}$ so this section of the report will focus on the results for that age group.

Based on 2019 BRFSS data, 63.8\% of the respondents aged 65 and older reported they had received the influenza vaccine in the past 12 months. Men (64.4\%) and women (63.4\%) reported similar rates of vaccination. Black respondents had a lower rate (57.6\%) compared to White respondents (65.4\%). There were too few respondents of other races in this age group to include in this report. Black female respondents had the lowest rate of flu vaccination with $56.8 \%$, while White females had the highest with $65.5 \%$ (Fig. 77).

In terms of education, the highest rate of influenza vaccination was among those who graduated from a college or technical school (72.4\%) (Fig. 78); rates ranged from $60.6 \%$ to $64.1 \%$ among individuals of other education levels. In terms of income, the lowest rate of vaccination was among those whose annual household income was between $\$ 15,000$ and $\$ 24,999$ ( $60.5 \%$ ) (Fig. 79); rates ranged from $65.8 \%$ to $68.5 \%$ among individuals of other education levels. Interestingly, in terms of income and sex, the lowest vaccination rate was among men whose annual household income was between $\$ 25,000$ and $\$ 34,999$ ( $55.0 \%$ ), and the highest was among women in the same income range ( $73.3 \%$ ).



TABLE 20-A. Influenza Vaccine - 65+ Years
Q: During the past 12 months, have you had either flu vaccine that was sprayed in your nose or
flu shot injected into your arm?

| DEMOGRAPHIC GROUPS | RESPONDENTS |  | Yes |  |  | No |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TOTAL | WEIGHTED | $\mathbf{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | $\%{ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 1,756 | 469,488 | 1,115 | 63.8 | 61.0-66.6 | 641 | 36.2 | 33.4-39.0 |
| Male | 656 | 203,236 | 421 | 64.4 | 59.9-68.8 | 235 | 35.6 | 31.2-40.1 |
| Female | 1,100 | 266,252 | 694 | 63.4 | 59.8-67.0 | 406 | 36.6 | 33.0-40.2 |
| White/Non-Hisp. | 1,166 | 328,897 | 782 | 65.4 | 62.0-68.8 | 384 | 34.6 | 31.2-38.0 |
| Black or Afr. Am./Non-Hisp. | 546 | 123,859 | 300 | 57.6 | 52.4-62.8 | 246 | 42.4 | 37.2-47.6 |
| Other Races/Ethnicities** | 25 | 10,596 | 17 | 74.8* | 54.8-94.9 | 8 | 25.2* | 5.1-45.2 |
| 65+ years | 1,756 | 469,488 | 1,115 | 63.8 | 61.0-66.6 | 641 | 36.2 | 33.4-39.0 |
| Less than H.S. | 308 | 111,286 | 183 | 64.1 | 57.7-70.4 | 125 | 35.9 | 29.6-42.3 |
| H.S. or G.E.D. | 537 | 143,866 | 344 | 62.5 | 57.5-67.5 | 193 | 37.5 | 32.5-42.5 |
| Some Post-H.S. | 470 | 140,943 | 281 | 60.6 | 55.3-65.9 | 189 | 39.4 | 34.1-44.7 |
| College Graduate | 437 | 72,886 | 305 | 72.4 | 67.5-77.3 | 132 | 27.6 | 22.7-32.5 |
| Less than \$15,000 | 214 | 55,753 | 137 | 66.6 | 58.9-74.3 | 77 | 33.4 | 25.7-41.1 |
| \$15,000-\$24,999 | 361 | 100,020 | 203 | 60.5 | 54.2-66.7 | 158 | 39.5 | 33.3-45.8 |
| \$25,000-\$34,999 | 166 | 47,397 | 107 | 65.8 | 56.9-74.8 | 59 | 34.2 | 25.2-43.1 |
| \$35,000-\$49,999 | 216 | 57,644 | 151 | 66.9 | 58.7-75.1 | 65 | 33.1 | 24.9-41.3 |
| \$50,000-\$74,999 | 158 | 43,499 | 109 | 68.5 | 59.9-77.0 | 49 | 31.5 | 23.0-40.1 |
| \$75,000+ | 191 | 47,029 | 132 | 67.4 | 59.4-75.4 | 59 | 32.6 | 24.6-40.6 |

(1) Unweighted number
(2) Weighted percent
*Sample size <50
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group.
Note: Denominator excludes respondents with do not know/refused/missing responses and respondents aged 64 or younger

| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 481 | 65.5 | 61.1-69.8 | 301 | 65.3 | 60.0-70.7 | 782 | 65.4 | 62.0-68.8 |
| Black or Afr. Am./Non-Hisp. | 195 | 56.8 | 50.4-63.3 | 105 | 58.7 | 50.1-67.3 | 300 | 57.6 | 52.4-62.8 |
| Other Races/Ethnicities** | 8 | 61.6* | 30.8-92.5 | 9 | 82.2* | 58.8-100.0 | 17 | 74.8* | 54.8-94.9 |
| 65+ years | 694 | 63.4 | 59.8-67.0 | 421 | 64.4 | 59.9-68.8 | 1,115 | 63.8 | 61.0-66.6 |
| Less than H.S. | 115 | 62.4 | 54.3-70.6 | 68 | 66.0 | 56.0-76.0 | 183 | 64.1 | 57.7-70.4 |
| H.S. or G.E.D. | 223 | 63.3 | 57.1-69.5 | 121 | 61.3 | 53.0-69.6 | 344 | 62.5 | 57.5-67.5 |
| Some Post-H.S. | 176 | 60.9 | 53.9-67.8 | 105 | 60.3 | 52.0-68.6 | 281 | 60.6 | 55.3-65.9 |
| College Graduate | 180 | 70.3 | 63.8-76.8 | 125 | 74.8 | 67.4-82.3 | 305 | 72.4 | 67.5-77.3 |
| Less than \$15,000 | 88 | 63.7 | 53.9-73.4 | 49 | 70.3 | 58.0-82.6 | 137 | 66.6 | 58.9-74.3 |
| \$15,000-\$24,999 | 134 | 59.0 | 51.4-66.6 | 69 | 62.4 | 52.0-72.8 | 203 | 60.5 | 54.2-66.7 |
| \$25,000-\$34,999 | 76 | 73.3 | 63.0-83.6 | 31 | 55.0 | 38.8-71.1 | 107 | 65.8 | 56.9-74.8 |
| \$35,000-\$49,999 | 77 | 65.5 | 53.2-77.8 | 74 | 68.1 | 57.1-79.0 | 151 | 66.9 | 58.7-75.1 |
| \$50,000-\$74,999 | 57 | 65.9 | 53.8-78.1 | 52 | 70.7 | 58.7-82.6 | 109 | 68.5 | 59.9-77.0 |
| \$75,000+ | 61 | 63.9 | 52.1-75.7 | 71 | 70.7 | 59.8-81.5 | 132 | 67.4 | 59.4-75.4 |
| (1) Unweighted number of cases <br> (2) Weighted percent <br> *Sample size <50 <br> **Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group. <br> Note: Denominator excludes respondents with do not know/refused/missing responses and respondents aged 64 or younger |  |  |  |  |  |  |  |  |  |

## PNEUMONIA VACCINE

Pneumonia is an acute respiratory infection that affects the alveoli, or air sacs, in the lungs and can cause mild to severe illness, with symptoms including, but not limited to, cough, fever, and difficulty breathing. ${ }^{38,39}$ Influenza and pneumonia conjointly were the eighth leading cause of death in

Pneumonia Vaccine Question:
Have you ever had a pneumonia shot also known as a pneumococcal vaccine? Mississippi in 2019,9 and national data show that the age-adjusted death rates for influenza and pneumonia increased by $4.2 \%$ between 2017 and 2018.40 Fortunately, vaccines exist that can help prevent pneumonia. One of the Healthy People 2020 objectives for pneumococcal vaccinations was to reach an annual vaccination rate of $90 \%$ among non-institutionalized people aged 65 years and older, ${ }^{37}$ so this section of the report will focus on the results for that age group.

The 2019 BRFSS results revealed that $66.6 \%$ of respondents aged 65 and older had ever received a pneumonia vaccination. Males had a lower rate of vaccination (63.6\%) compared to females (68.9\%). Black respondents had a lower overall rate (54.6\%) compared to White respondents ( $70.7 \%$ ). There were too few respondents of other races in this age group to include in this report. In terms of race and sex, the lowest rate of vaccination was among Black males (48.7\%), while the highest was among White females (72.1\%) (Fig. 80).

The rate of pneumonia vaccination decreased as education level decreased (Fig. 81). Respondents with less than a high school diploma had the lowest rate at $62.2 \%$, while those who completed college or technical school had the highest rate at $75.1 \%$. The rate of vaccination was lower among individuals whose annual household income was less than $\$ 25,000$ compared to those who earned $\$ 25,000$ or more per year (Fig. 82).



TABLE 21-A. Pneumonia Vaccine - 65+ Years
Q: Have you ever had a pneumonia shot also known as a pneumococcal vaccine?

| DEMOGRAPHIC GROUPS | RESPONDENTS |  | Yes |  |  | No |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathbf{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 1,704 | 454,183 | 1,121 | 66.6 | 63.9-69.4 | 583 | 33.4 | 30.6-36.1 |
| Male | 629 | 194,913 | 407 | 63.6 | 59.0-68.2 | 222 | 36.4 | 31.8-41.0 |
| Female | 1,075 | 259,269 | 714 | 68.9 | 65.5-72.3 | 361 | 31.1 | 27.7-34.5 |
| White/Non-Hisp. | 1,133 | 320,297 | 800 | 70.7 | 67.5-73.9 | 333 | 29.3 | 26.1-32.5 |
| Black or Afr. Am./Non-Hisp. | 528 | 117,190 | 292 | 54.6 | 49.2-59.9 | 236 | 45.4 | 40.1-50.8 |
| Other Races/Ethnicities** | 25 | 10,833 | 17 | 77.1* | 58.2-95.9 | 8 | 22.9* | 4.1-41.8 |
| 65+ years | 1,704 | 454,183 | 1,121 | 66.6 | 63.9-69.4 | 583 | 33.4 | 30.6-36.1 |
| Less than H.S. | 296 | 106,486 | 169 | 62.2 | 55.6-68.8 | 127 | 37.8 | 31.2-44.4 |
| H.S. or G.E.D. | 521 | 138,930 | 330 | 64.5 | 59.6-69.4 | 191 | 35.5 | 30.6-40.4 |
| Some Post-H.S. | 456 | 137,505 | 309 | 68.0 | 62.8-73.2 | 147 | 32.0 | 26.8-37.2 |
| College Graduate | 427 | 70,754 | 312 | 75.1 | 70.4-79.9 | 115 | 24.9 | 20.1-29.6 |
| Less than \$15,000 | 206 | 53,165 | 127 | 65.5 | 57.7-73.3 | 79 | 34.5 | 26.7-42.3 |
| \$15,000-\$24,999 | 351 | 96,659 | 212 | 61.3 | 54.8-67.8 | 139 | 38.7 | 32.2-45.2 |
| \$25,000-\$34,999 | 161 | 46,555 | 113 | 73.6 | 65.7-81.6 | 48 | 26.4 | 18.4-34.3 |
| \$35,000-\$49,999 | 212 | 56,616 | 150 | 70.3 | 62.3-78.3 | 62 | 29.7 | 21.7-37.7 |
| \$50,000-\$74,999 | 154 | 41,820 | 109 | 72.0 | 63.8-80.1 | 45 | 28.0 | 19.9-36.2 |
| \$75,000+ | 190 | 46,856 | 129 | 67.1 | 59.1-75.1 | 61 | 32.9 | 24.9-40.9 |

(1) Unweighted number
(2) Weighted percent
*Sample size $<50$
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group.
Note: Denominator excludes respondents with do not know/refused/missing responses and respondents aged 64 or younger

| Table 21-B. Pneumonia Vaccine (65+ Years Age Group) by Sex |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
|  | $\mathbf{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathbf{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathbf{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 498 | 72.1 | 68.0-76.1 | 302 | 68.8 | 63.6-74.1 | 800 | 70.7 | 67.5-73.9 |
| Black or Afr. Am./Non-Hisp. | 198 | 58.8 | 52.5-65.2 | 94 | 48.7 | 39.8-57.7 | 292 | 54.6 | 49.2-59.9 |
| Other Races/Ethnicities** | 8 | 74.0* | 49.5-98.4 | 9 | 78.7* | 53.2-100.0 | 17 | 77.1* | 58.2-95.9 |
| 65+ years | 714 | 68.9 | 65.5-72.3 | 407 | 63.6 | 59.0-68.2 | 1,121 | 66.6 | 63.9-69.4 |
| Less than H.S. | 110 | 64.7 | 56.7-72.7 | 59 | 59.3 | 48.5-70.1 | 169 | 62.2 | 55.6-68.8 |
| H.S. or G.E.D. | 216 | 66.6 | 60.8-72.5 | 114 | 61.1 | 52.6-69.6 | 330 | 64.5 | 59.6-69.4 |
| Some Post-H.S. | 197 | 70.7 | 64.2-77.2 | 112 | 64.6 | 56.2-73.0 | 309 | 68.0 | 62.8-73.2 |
| College Graduate | 191 | 76.9 | 71.1-82.7 | 121 | 73.0 | 65.2-80.9 | 312 | 75.1 | 70.4-79.9 |
| Less than \$15,000 | 85 | 65.2 | 55.5-74.9 | 42 | 65.9 | 52.9-78.8 | 127 | 65.5 | 57.7-73.3 |
| \$15,000-\$24,999 | 147 | 67.5 | 60.5-74.6 | 65 | 52.7 | 41.2-64.2 | 212 | 61.3 | 54.8-67.8 |
| \$25,000-\$34,999 | 79 | 78.4 | 68.9-87.9 | 34 | 66.8 | 52.7-80.8 | 113 | 73.6 | 65.7-81.6 |
| \$35,000-\$49,999 | 74 | 66.4 | 54.3-78.5 | 76 | 73.6 | 63.2-84.1 | 150 | 70.3 | 62.3-78.3 |
| \$50,000-\$74,999 | 55 | 68.4 | 56.8-80.1 | 54 | 75.1 | 63.7-86.5 | 109 | 72.0 | 63.8-80.1 |
| \$75,000+ | 67 | 73.7 | 63.1-84.2 | 62 | 61.1 | 49.3-72.9 | 129 | 67.1 | 59.1-75.1 |
| (1) Unweighted number of cases <br> (2) Weighted percent <br> *Sample size <50 <br> **Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group. <br> Note: Denominator excludes respondents with do not know/refused/missing responses and respondents aged 64 or younger |  |  |  |  |  |  |  |  |  |

## HIV/AIDS Testing

The CDC has estimated that approximately 1.2 million people aged 13 and older in the United States had human immunodeficiency virus (HIV) infection in $2019 .{ }^{41}$ Of these, $13.3 \%$ do not know their HIV status. ${ }^{41}$ Although the total number of people in the U.S. living with HIV infection in recent years

> HIV/AIDS Testing Question: Including fluid testing from your mouth but not including tests you may have had for blood donation, have you ever been tested for H.I.V.? increased (due to early diagnosis and treatment options), the annual number of new HIV infections declined by 9\% from 2015 to 2019.41

The 2019 BRFSS data revealed that 43.5\% of respondents reported that they had ever been tested for HIV. Females had a higher HIV testing rate (46.0\%) than males (40.8\%). A higher proportion of Black respondents had been tested (59.4\%) compared to White respondents (33.6\%) or respondents of other races (46.4\%). Black females had the highest testing rate of all race/sex combinations at 61.5\%, and White males had the lowest (32.1\%) (Fig. 83). In terms of age, the group with the lowest rate of testing was those aged 65 years and older, while respondents aged 35-44 years had the highest rate (Fig. 84). Women aged 35-44 had the highest rate of HIV testing (75.9\%) of all age/sex combinations, while women aged 65+ had the lowest (15.2\%).

Respondents who completed some college or technical school had the highest HIV testing rate ( $46.1 \%$ ), while those whose highest level of education was a high school diploma had the lowest (41.3\%) (Fig. 85). Respondents with lower annual household incomes had higher rates of HIV testing compared to respondents with higher household incomes. (Fig. 86).



Figure 85. Percentage of Respondents Who Have Been Tested for HIV by



TABLE 22-A. HIV Testing
Q: Including fluid testing from your mouth, but not including tests you may have had for blood donation, have you ever been tested for HIV?

| DEMOGRAPHIC GROUPS | RESPONDENTS |  | Yes |  |  | No |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \%(2) | C.I. (95\%) |
| TOTAL | 4,520 | 2,005,040 | 1,710 | 43.5 | 41.6-45.5 | 2,810 | 56.5 | 54.5-58.4 |
| Male | 1,792 | 951,445 | 652 | 40.8 | 37.7-43.9 | 1,140 | 59.2 | 56.1-62.3 |
| Female | 2,728 | 1,053,596 | 1,058 | 46.0 | 43.5-48.4 | 1,670 | 54.0 | 51.6-56.5 |
| White/Non-Hisp. | 2,605 | 1,165,888 | 748 | 33.6 | 31.2-35.9 | 1,857 | 66.4 | 64.1-68.8 |
| Black or Afr. Am./Non-Hisp. | 1,731 | 707,370 | 875 | 59.4 | 56.3-62.6 | 856 | 40.6 | 37.4-43.7 |
| Other Races/Ethnicities** | 139 | 109,098 | 69 | 46.4 | 34.4-58.5 | 70 | 53.6 | 41.5-65.6 |
| 18-24 years | 252 | 269,636 | 104 | 42.7 | 35.5-49.9 | 148 | 57.3 | 50.1-64.5 |
| 25-34 years | 457 | 331,147 | 269 | 60.0 | 54.6-65.4 | 188 | 40.0 | 34.6-45.4 |
| 35-44 years | 570 | 321,057 | 381 | 66.2 | 61.4-70.9 | 189 | 33.8 | 29.1-38.6 |
| 45-54 years | 648 | 293,455 | 341 | 50.7 | 46.0-55.5 | 307 | 49.3 | 44.5-54.0 |
| 55-64 years | 936 | 337,833 | 328 | 34.0 | 30.2-37.7 | 608 | 66.0 | 62.3-69.8 |
| $65+$ years | 1,617 | 431,803 | 274 | 17.8 | 15.5-20.2 | 1,343 | 82.2 | 79.8-84.5 |
| Less than H.S. | 570 | 304,509 | 201 | 42.0 | 36.3-47.7 | 369 | 58.0 | 52.3-63.7 |
| H.S. or G.E.D. | 1,333 | 602,342 | 461 | 41.3 | 37.8-44.9 | 872 | 58.7 | 55.1-62.2 |
| Some Post-H.S. | 1,304 | 698,675 | 538 | 46.1 | 42.5-49.6 | 766 | 53.9 | 50.4-57.5 |
| College Graduate | 1,300 | 395,368 | 509 | 43.8 | 40.4-47.2 | 791 | 56.2 | 52.8-59.6 |
| Less than \$15,000 | 566 | 225,835 | 262 | 50.6 | 44.9-56.3 | 304 | 49.4 | 43.7-55.1 |
| \$15,000-\$24,999 | 867 | 388,477 | 367 | 51.7 | 47.2-56.2 | 500 | 48.3 | 43.8-52.8 |
| \$25,000-\$34,999 | 429 | 190,094 | 185 | 49.4 | 43.0-55.7 | 244 | 50.6 | 44.3-57.0 |
| \$35,000-\$49,999 | 531 | 245,732 | 190 | 42.3 | 36.6-48.0 | 341 | 57.7 | 52.0-63.4 |
| \$50,000-\$74,999 | 480 | 227,786 | 173 | 42.3 | 36.0-48.6 | 307 | 57.7 | 51.4-64.0 |
| \$75,000+ | 821 | 387,128 | 311 | 39.7 | 35.4-43.9 | 510 | 60.3 | 56.1-64.6 |

(1) Unweighted number
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group.
Note: Denominator excludes respondents with do not know/refused/missing responses

| Table 22-B. HIV Testing by Sex |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \%(2) | C.I. (95\%) |
| White/Non-Hisp. | 437 | 34.9 | 31.8-38.1 | 311 | 32.1 | 28.4-35.7 | 748 | 33.6 | 31.2-35.9 |
| Black or Afr. Am./Non-Hisp. | 571 | 61.5 | 57.8-65.3 | 304 | 56.8 | 51.6-62.1 | 875 | 59.4 | 56.3-62.6 |
| Other Races/Ethnicities** | 38 | 52.8 | 37.6-68.0 | 31 | 42.8 | 26.2-59.4 | 69 | 46.4 | 34.4-58.5 |
| 18-24 years | 62 | 48.4 | 38.8-57.9 | 42 | 37.4 | 26.9-47.9 | 104 | 42.7 | 35.5-49.9 |
| 25-34 years | 179 | 68.1 | 61.8-74.5 | 90 | 52.6 | 44.1-61.2 | 269 | 60.0 | 54.6-65.4 |
| 35-44 years | 253 | 75.9 | 70.7-81.2 | 128 | 55.3 | 47.6-63.1 | 381 | 66.2 | 61.4-70.9 |
| 45-54 years | 216 | 55.5 | 49.2-61.7 | 125 | 45.3 | 38.1-52.4 | 341 | 50.7 | 46.0-55.5 |
| 55-64 years | 190 | 32.0 | 27.2-36.7 | 138 | 36.3 | 30.3-42.3 | 328 | 34.0 | 30.2-37.7 |
| 65+ years | 149 | 15.2 | 12.4-17.9 | 125 | 21.3 | 17.2-25.5 | 274 | 17.8 | 15.5-20.2 |
| Less than H.S. | 123 | 45.7 | 38.4-53.0 | 78 | 38.5 | 29.8-47.1 | 201 | 42.0 | 36.3-47.7 |
| H.S. or G.E.D. | 245 | 39.7 | 35.0-44.4 | 216 | 42.9 | 37.5-48.3 | 461 | 41.3 | 37.8-44.9 |
| Some Post-H.S. | 347 | 49.5 | 45.2-53.9 | 191 | 41.8 | 36.0-47.6 | 538 | 46.1 | 42.5-49.6 |
| College Graduate | 342 | 48.4 | 44.0-52.7 | 167 | 37.9 | 32.5-43.2 | 509 | 43.8 | 40.4-47.2 |
| Less than \$15,000 | 179 | 53.7 | 47.1-60.2 | 83 | 46.3 | 36.3-56.3 | 262 | 50.6 | 44.9-56.3 |
| \$15,000-\$24,999 | 247 | 55.3 | 50.0-60.6 | 120 | 46.2 | 38.5-54.0 | 367 | 51.7 | 47.2-56.2 |
| \$25,000-\$34,999 | 118 | 51.1 | 43.1-59.0 | 67 | 47.1 | 36.8-57.3 | 185 | 49.4 | 43.0-55.7 |
| \$35,000-\$49,999 | 122 | 48.9 | 41.3-56.5 | 68 | 35.8 | 27.4-44.3 | 190 | 42.3 | 36.6-48.0 |
| \$50,000-\$74,999 | 88 | 40.0 | 32.0-47.9 | 85 | 44.0 | 34.8-53.2 | 173 | 42.3 | 36.0-48.6 |
| \$75,000+ | 170 | 43.4 | 37.5-49.3 | 141 | 36.6 | 30.5-42.6 | 311 | 39.7 | 35.4-43.9 |
| (1) Unweighted number of c <br> (2) Weighted percent <br> ${ }^{* *}$ Refer to Table B on p. 7 fo <br> Note: Denominator excludes | of $r$ ond | nd eth h do | es included ow/refused | $\begin{aligned} & \text { e "Ot } \\ & \text { sing r } \end{aligned}$ | ces an es | nicities" de | aphic |  |  |

## MS BRFSS <br> Data Briefs

## Optional Module Questions

## PREDIABETES

Prediabetes is a health condition in which blood sugar levels are elevated but have not yet reached the point of type 2 diabetes. ${ }^{42}$ Approximately one-third of American adults have prediabetes, and roughly $84 \%$ do not know they have it. Prediabetes increases a person's risk of developing type 2 diabetes,

## Prediabetes

 Question:Have you ever been told by a doctor or other health professional that you have prediabetes or borderline diabetes? heart disease, and stroke. Diabetes is the seventh leading cause of death in both the U.S. ${ }^{28}$ and Mississippi. ${ }^{9}$ However, progression to type 2 diabetes can often be delayed or prevented through modest weight loss and moderate physical activity. ${ }^{42}$

According to the 2019 BRFSS, $9.2 \%$ of adults reported ever being told by a health professional that they have prediabetes or borderline diabetes. Females had a higher rate of prediabetes (11.4\%) than did males (6.9\%), and Black respondents had the highest rate of all race groups (11.2\%).
Figure 87 shows that females of other races had the highest rate of all sex/race combinations, with $16.9 \%$, while males of other races had the lowest rate at $3.0 \%$. Older age groups generally had higher rates of prediabetes; the age group with the highest rate was 55-64 years (13.2\%), and the group with the lowest rate was $18-24$ years (4.8\%) (Fig. 88).

Overall, rates of prediabetes were similar across education levels, though differences existed between sexes (Fig. 89). Respondents with lower annual household incomes had higher rates of ever being told they had prediabetes compared to those with higher incomes (Fig. 90). Women had higher rates of prediabetes than men for every examined grouping of race, age, education, and household income, except one household income level ( $\$ 35,000-49,000$ ).




TABLE 23-A. Prediabetes

| DEMOGRAPHIC GROUPS | RESPONDENTS |  | Yes |  |  | No |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 3,997 | 1,865,134 | 439 | 9.2 | 8.2-10.3 | 3,558 | 90.8 | 89.7-91.8 |
| Male | 1,576 | 894,200 | 141 | 6.9 | 5.4-8.4 | 1,435 | 93.1 | 91.6-94.6 |
| Female | 2,421 | 970,934 | 298 | 11.4 | 9.8-13.0 | 2,123 | 88.6 | 87.0-90.2 |
| White/Non-Hisp. | 2,380 | 1,092,159 | 225 | 8.2 | 6.9-9.5 | 2,155 | 91.8 | 90.5-93.1 |
| Black or Afr. Am./Non-Hisp. | 1,461 | 655,930 | 195 | 11.2 | 9.1-13.3 | 1,266 | 88.8 | 86.7-90.9 |
| Other Races/Ethnicities** | 122 | 101,588 | 17 | 8.2 | 3.4-13.0 | 105 | 91.8 | 87.0-96.6 |
| 18-24 years | 267 | 287,236 | 11 | 4.8 | 1.7-8.0 | 256 | 95.2 | 92.0-98.3 |
| 25-34 years | 499 | 357,139 | 32 | 6.2 | 3.8-8.6 | 467 | 93.8 | 91.4-96.2 |
| 35-44 years | 566 | 320,789 | 53 | 7.9 | 5.4-10.4 | 513 | 92.1 | 89.6-94.6 |
| 45-54 years | 607 | 280,795 | 84 | 12.6 | 9.5-15.7 | 523 | 87.4 | 84.3-90.5 |
| 55-64 years | 742 | 268,797 | 100 | 13.2 | 10.3-16.2 | 642 | 86.8 | 83.8-89.7 |
| 65+ years | 1,282 | 332,733 | 153 | 11.1 | 9.1-13.1 | 1,129 | 88.9 | 86.9-90.9 |
| Less than H.S. | 443 | 262,003 | 56 | 9.5 | 6.4-12.6 | 387 | 90.5 | 87.4-93.6 |
| H.S. or G.E.D. | 1,166 | 559,294 | 112 | 8.0 | 6.1-10.0 | 1,054 | 92.0 | 90.0-93.9 |
| Some Post-H.S. | 1,173 | 659,020 | 144 | 10.2 | 8.2-12.3 | 1,029 | 89.8 | 87.7-91.8 |
| College Graduate | 1,204 | 379,595 | 126 | 9.2 | 7.3-11.1 | 1,078 | 90.8 | 88.9-92.7 |
| Less than \$15,000 | 441 | 182,664 | 58 | 11.6 | 8.0-15.2 | 383 | 88.4 | 84.8-92.0 |
| \$15,000-\$24,999 | 714 | 341,197 | 83 | 12.0 | 8.7-15.2 | 631 | 88.0 | 84.8-91.3 |
| \$25,000-\$34,999 | 386 | 181,903 | 50 | 9.0 | 6.0-12.1 | 336 | 91.0 | 87.9-94.0 |
| \$35,000-\$49,999 | 462 | 220,956 | 50 | 10.3 | 6.5-14.1 | 412 | 89.7 | 85.9-93.5 |
| \$50,000-\$74,999 | 439 | 222,903 | 50 | 7.1 | 4.8-9.5 | 389 | 92.9 | 90.5-95.2 |
| \$75,000+ | 768 | 372,408 | 71 | 7.2 | 5.2-9.2 | 697 | 92.8 | 90.8-94.8 |

(1) Unweighted number
(2) Weighted percent
${ }^{* *}$ Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group
Note: Denominator excludes respondents with do not know/refused/missing responses

Table 23-B. History of Prediabetes by Sex

| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 142.0 | 9.7 | 7.8-11.6 | 83 | 6.6 | 4.8-8.3 | 225 | 8.2 | 6.9-9.5 |
| Black or Afr. Am./Non-Hisp. | 141 | 13.6 | 10.7-16.4 | 54 | 8.4 | 5.4-11.5 | 195 | 11.2 | 9.1-13.3 |
| Other Races/Ethnicities** | 13 | 16.9 | 6.1-27.7 | 4 | 3.0 | 0.0-6.2 | 17 | 8.2 | 3.4-13.0 |
| 18-24 years | 6 | 6.2 | .9-11.4 | 5 | 3.6 | 0.0-7.2 | 11 | 4.8 | 1.7-8.0 |
| 25-34 years | 25 | 8.9 | 5.2-12.5 | 7 | 3.6 | .5-6.7 | 32 | 6.2 | 3.8-8.6 |
| 35-44 years | 35 | 8.9 | 5.6-12.1 | 18 | 6.8 | 3.1-10.6 | 53 | 7.9 | 5.4-10.4 |
| 45-54 years | 59 | 15.8 | 11.2-20.4 | 25 | 9.2 | 5.2-13.3 | 84 | 12.6 | 9.5-15.7 |
| 55-64 years | 68 | 16.5 | 12.2-20.7 | 32 | 9.7 | 5.8-13.6 | 100 | 13.2 | 10.3-16.2 |
| 65+ years | 101 | 12.5 | 9.8-15.2 | 52 | 9.2 | 6.4-12.1 | 153 | 11.1 | 9.1-13.1 |
| Less than H.S. | 43 | 15.1 | 9.4-20.7 | 13 | 4.7 | 1.8-7.6 | 56 | 9.5 | 6.4-12.6 |
| H.S. or G.E.D. | 74 | 9.8 | 7.2-12.5 | 38 | 6.4 | 3.6-9.1 | 112 | 8.0 | 6.1-10.0 |
| Some Post-H.S. | 97 | 12.1 | 9.2-14.9 | 47 | 8.0 | 5.1-10.9 | 144 | 10.2 | 8.2-12.3 |
| College Graduate | 83 | 10.1 | 7.5-12.7 | 43 | 7.9 | 5.2-10.6 | 126 | 9.2 | 7.3-11.1 |
| Less than \$15,000 | 47 | 16.1 | 10.8-21.3 | 11 | 5.2 | 1.4-8.9 | 58 | 11.6 | 8.0-15.2 |
| \$15,000-\$24,999 | 65 | 15.8 | 11.1-20.6 | 18 | 6.6 | 2.6-10.6 | 83 | 12.0 | 8.7-15.2 |
| \$25,000-\$34,999 | 36 | 11.2 | 6.8-15.5 | 14 | 6.0 | 2.0-9.9 | 50 | 9.0 | 6.0-12.1 |
| \$35,000-\$49,999 | 29 | 8.9 | 5.1-12.7 | 21 | 11.7 | 5.1-18.3 | 50 | 10.3 | 6.5-14.1 |
| \$50,000-\$74,999 | 32 | 9.7 | 5.8-13.6 | 18 | 5.3 | 2.4-8.2 | 50 | 7.1 | 4.8-9.5 |
| \$75,000+ | 36 | 8.6 | 5.3-11.9 | 35 | 6.0 | 3.7-8.3 | 71 | 7.2 | 5.2-9.2 |

(1) Unweighted number of cases
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group
Note: Denominator excludes respondents with do not know/refused/missing responses

## Source of Health Care Coverage

The source of health care coverage question can be used to estimate the proportion of people in the state who have private health care coverage or public health care coverage.

Source of Health Care Coverage Question:
What is the primary source of your health care coverage?

Mississippi's 2019 BRFSS data revealed that, among respondents who provided specific information about the source of their health care coverage, $57.5 \%$ had private insurance, and $42.5 \%$ had public insurance.

Women had a higher rate of public insurance (44.9\%) than did men (39.6\%). Black respondents had the highest rate of public health care coverage (44.0\%), followed by White respondents (41.7\%), and respondents of other races $(38.8 \%)$. Black women had the highest rate of public health care coverage of all race/sex combinations with $46.7 \%$ (Fig. 91). Not unexpectedly, the age group with the highest rate of public health care coverage was 65 years and older (90.9\%); the age group with the lowest rate was 35-44 years (18.7\%) (Fig. 92).

For both men and women, the rate of having public health care coverage increased as both level of education and annual household income decreased. The rate was $74.5 \%$ among respondents with less than a high school education and $25.0 \%$ among individuals who graduated from a college or technical school (Fig. 93). Similarly, the rate was $82.3 \%$ among those whose annual household income totaled $\$ 15,000$ or less and was $14.3 \%$ among those who earned $\$ 75,000$ or more per year (Fig. 94).


| TABLE 24-A. Source of Health Care Coverage <br> Q: What is the primary source of your health care coverage? |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC | RES | NDENTS |  | Priva |  |  | Publ |  |
| GROUPS | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 4,216 | 1,746,987 | 1,972 | 57.5 | 55.6-59.4 | 2,244 | 42.5 | 40.6-44.4 |
| Male | 1,637 | 794,837 | 801 | 60.4 | 57.4-63.4 | 836 | 39.6 | 36.6-42.6 |
| Female | 2,579 | 952,150 | 1,171 | 55.1 | 52.6-57.5 | 1,408 | 44.9 | 42.5-47.4 |
| White/Non-Hisp. | 2,511 | 1,062,839 | 1,193 | 58.3 | 55.9-60.7 | 1,318 | 41.7 | 39.3-44.1 |
| Black or Afr. Am./Non-Hisp. | 1,559 | 590,005 | 705 | 56.0 | 52.7-59.3 | 854 | 44.0 | 40.7-47.3 |
| Other Races/Ethnicities** | 103 | 75,089 | 54 | 61.2 | 48.6-73.9 | 49 | 38.8 | 26.1-51.4 |
| 18-24 years | 174 | 168,119 | 133 | 72.8 | 64.8-80.7 | 41 | 27.2 | 19.3-35.2 |
| 25-34 years | 381 | 263,849 | 301 | 80.5 | 75.6-85.3 | 80 | 19.5 | 14.7-24.4 |
| 35-44 years | 501 | 279,173 | 397 | 81.3 | 77.2-85.4 | 104 | 18.7 | 14.6-22.8 |
| 45-54 years | 565 | 261,508 | 430 | 76.2 | 71.7-80.7 | 135 | 23.8 | 19.3-28.3 |
| 55-64 years | 838 | 297,057 | 524 | 63.7 | 59.6-67.7 | 314 | 36.2 | 32.2-40.3 |
| 65+ years | 1,718 | 457,587 | 164 | 9.1 | 7.4-10.8 | 1,554 | 90.9 | 89.2-92.6 |
| Less than H.S. | 514 | 258,228 | 87 | 25.5 | 19.9-31.1 | 427 | 74.5 | 68.9-80.1 |
| H.S. or G.E.D. | 1,229 | 505,063 | 477 | 52.9 | 49.3-56.4 | 752 | 47.0 | 43.5-50.6 |
| Some Post-H.S. | 1,195 | 598,595 | 617 | 64.0 | 60.8-67.3 | 578 | 36.0 | 32.7-39.2 |
| College Graduate | 1,263 | 378,485 | 784 | 75.0 | 72.4-77.6 | 479 | 25.0 | 22.4-27.6 |
| Less than \$15,000 | 447 | 156,368 | 56 | 17.7 | 12.5-22.9 | 391 | 82.3 | 77.1-87.5 |
| \$15,000-\$24,999 | 741 | 299,373 | 228 | 39.4 | 34.5-44.4 | 513 | 60.6 | 55.6-65.5 |
| \$25,000-\$34,999 | 393 | 164,789 | 187 | 60.5 | 54.4-66.6 | 206 | 39.5 | 33.4-45.6 |
| \$35,000-\$49,999 | 498 | 212,190 | 268 | 66.2 | 61.3-71.1 | 230 | 33.8 | 28.9-38.7 |
| \$50,000-\$74,999 | 479 | 226,178 | 311 | 72.1 | 66.8-77.5 | 168 | 27.8 | 22.4-33.1 |
| \$75,000+ | 812 | 367,622 | 627 | 85.7 | 83.3-88.2 | 185 | 14.3 | 11.8-16.7 |
| (1) Unweighted number <br> (2) Weighted percent <br> **Refer to Table B on p. 7 for <br> Note: Denominator excludes | ist of rac pondent | nd ethnicities h do not know | ded in th sed/mis | Rac pons | Ethnicities" e without in | ograph nce, and | nses |  |

Table 24-B. Public Health Care Coverage by Sex

| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 797 | 44.1 | 41.0-47.3 | 521 | 39.0 | 35.4-42.6 | 1,318 | 41.7 | 39.3-44.1 |
| Black or Afr. Am./Non-Hisp. | 570 | 46.7 | 42.6-50.8 | 284 | 40.1 | 34.7-45.5 | 854 | 44.0 | 40.7-47.3 |
| Other Races/Ethnicities** | 26 | 34.8 | 19.6-50.0 | 23 | 42.2 | 22.6-61.8 | 49 | 38.8 | 26.1-51.4 |
| 18-24 years | 26 | 27.4 | 17.4-37.3 | 15 | 27.0 | 14.1-40.0 | 41 | 27.2 | 19.3-35.2 |
| 25-34 years | 68 | 28.4 | 21.6-35.3 | 12 | 9.4 | 2.9-15.8 | 80 | 19.5 | 14.7-24.4 |
| 35-44 years | 65 | 21.2 | 15.6-26.9 | 39 | 16.0 | 10.2-21.8 | 104 | 18.7 | 14.6-22.8 |
| 45-54 years | 85 | 25.5 | 19.3-31.7 | 50 | 21.9 | 15.4-28.3 | 135 | 23.8 | 19.3-28.3 |
| 55-64 years | 190 | 36.6 | 31.4-41.8 | 124 | 35.8 | 29.4-42.1 | 314 | 36.2 | 32.2-40.3 |
| 65+ years | 962 | 90.0 | 87.8-92.2 | 592 | 92.0 | 89.5-94.6 | 1,554 | 90.9 | 89.2-92.6 |
| Less than H.S. | 271 | 78.8 | 71.9-85.6 | 156 | 69.7 | 60.8-78.6 | 427 | 74.5 | 68.9-80.1 |
| H.S. or G.E.D. | 491 | 57.4 | 52.7-62.2 | 261 | 36.4 | 31.3-41.4 | 752 | 47.0 | 43.5-50.6 |
| Some Post-H.S. | 350 | 36.5 | 32.3-40.7 | 228 | 35.3 | 30.1-40.5 | 578 | 36.0 | 32.7-39.2 |
| College Graduate | 292 | 22.3 | 19.2-25.3 | 187 | 28.6 | 24.0-33.3 | 479 | 25.0 | 22.4-27.6 |
| Less than \$15,000 | 278 | 86.6 | 81.1-92.0 | 113 | 75.1 | 64.8-85.3 | 391 | 82.3 | 77.1-87.5 |
| \$15,000-\$24,999 | 339 | 61.9 | 55.8-67.9 | 174 | 58.6 | 50.2-66.9 | 513 | 60.6 | 55.6-65.5 |
| \$25,000-\$34,999 | 132 | 36.9 | 29.7-44.1 | 74 | 43.4 | 32.5-54.3 | 206 | 39.5 | 33.4-45.6 |
| \$35,000-\$49,999 | 111 | 28.2 | 22.1-34.4 | 119 | 40.2 | 32.3-48.1 | 230 | 33.8 | 28.9-38.7 |
| \$50,000-\$74,999 | 86 | 28.9 | 21.7-36.2 | 82 | 26.9 | 19.3-34.5 | 168 | 27.8 | 22.4-33.1 |
| \$75,000+ | 90 | 12.7 | 9.6-15.9 | 95 | 15.6 | 11.8-19.4 | 185 | 14.3 | 11.8-16.7 |

(1) Unweighted number of cases
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group.
Note: Denominator excludes respondents with do not know/refused/missing responses

## AdVERSE CHILDHOOD EXPERIENCES: MENTAL ILLNESS IN HOUSEHOLD

Adverse childhood experiences (ACEs) are potentially traumatic events that occur in childhood. ${ }^{43}$ ACEs are common and have been linked to health across the lifespan. ${ }^{43}$ In 2019, the Mississippi BRFSS collected information about adverse childhood experiences related to household challenges (5

> ACEs - Mental Illness in Household Question:
> Before you were 18 years of age, did you live with anyone who was depressed, mentally ill, or suicidal?
questions) and abuse (3 questions). The results of select ACE questions are presented this this report.

The 2019 Mississippi BRFSS revealed that, during childhood, 16.0\% of respondents lived with someone who was depressed, mentally ill, or suicidal. Women had a higher rate (17.8\%) than did men (14.0\%). Respondents of other races had the highest rate of mental illness in the household during childhood (26.3\%), followed by White respondents (18.3\%), and Black respondents (10.2\%). In terms of race and sex, men of other races had the highest rate (29.1\%), while Black men had the lowest rate (9.2\%) (Fig. 95). The age group with the highest rate of mental illness in the household during childhood was 18-24 years with $29.9 \%$, while the 65 years or older age group reported the lowest rate with $4.9 \%$ (Fig. 96).

The relationships between the rate of mental illness in the household and education level or annual household income were not clear. Men who did not graduate high school reported the lowest rate (9.9\%), while women who completed some college or technical school reported the highest (22.5\%) (Fig. 97). In terms of income, men with an annual household income of $\$ 15,000$ to $\$ 24,999$ had the lowest rate (11.1\%), and men in the next income bracket ( $\$ 25,000$ to $\$ 34,999$ ) had the highest rate (22.4\%) (Fig. 98).


Figure 97. Percentage of Respondents with Mental Illness in Household by Education Level \& Sex


Figure 96. Percentage of Respondents with Mental Illness in Household by Age \& Sex


Figure 98. Percentage of Respondents with Mental Illness in Household by Household Income \& Sex


TABLE 25-A. Adverse Childhood Experiences: Mental Illness in the Household
Q: Before you were 18 years of age, did you live with anyone who was depressed, mentally ill, or suicidal?

| DEMOGRAPHIC GROUPS | RESPONDENTS |  | Yes |  |  | No |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \%(2) | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 4,549 | 1,981,576 | 602 | 16.0 | 14.5-17.6 | 3,947 | 84.0 | 82.4-85.5 |
| Male | 1,779 | 926,808 | 203 | 14.0 | 11.6-16.4 | 1,576 | 86.0 | 83.6-88.4 |
| Female | 2,770 | 1,054,768 | 399 | 17.8 | 15.8-19.8 | 2,371 | 82.2 | 80.2-84.2 |
| White/Non-Hisp. | 2,649 | 1,160,751 | 416 | 18.3 | 16.4-20.3 | 2,233 | 81.7 | 79.7-83.6 |
| Black or Afr. Am./Non-Hisp. | 1,726 | 698,541 | 152 | 10.2 | 8.2-12.3 | 1,574 | 89.8 | 87.7-91.8 |
| Other Races/Ethnicities** | 132 | 103,216 | 28 | 26.3 | 13.9-38.7 | 104 | 73.7 | 61.3-86.1 |
| 18-24 years | 240 | 256,323 | 71 | 29.9 | 22.9-36.9 | 169 | 70.1 | 63.1-77.1 |
| 25-34 years | 435 | 313,675 | 100 | 21.1 | 16.8-25.4 | 335 | 78.9 | 74.6-83.2 |
| 35-44 years | 551 | 311,846 | 112 | 19.4 | 15.5-23.4 | 439 | 80.6 | 76.6-84.5 |
| 45-54 years | 651 | 294,759 | 95 | 14.7 | 11.1-18.2 | 556 | 85.3 | 81.8-88.9 |
| 55-64 years | 952 | 340,005 | 125 | 14.3 | 11.4-17.2 | 827 | 85.7 | 82.8-88.6 |
| $65+$ years | 1,679 | 445,632 | 96 | 4.9 | 3.7-6.1 | 1,583 | 95.1 | 93.9-96.3 |
| Less than H.S. | 591 | 312,991 | 59 | 12.8 | 8.8-16.9 | 532 | 87.2 | 83.1-91.2 |
| H.S. or G.E.D. | 1,354 | 598,172 | 152 | 15.1 | 12.2-18.0 | 1,202 | 84.9 | 82.0-87.8 |
| Some Post-H.S. | 1,307 | 686,861 | 212 | 18.5 | 15.7-21.4 | 1,095 | 81.5 | 78.6-84.3 |
| College Graduate | 1,285 | 380,111 | 179 | 15.9 | 13.3-18.4 | 1,106 | 84.1 | 81.6-86.7 |
| Less than \$15,000 | 558 | 218,675 | 75 | 15.9 | 11.2-20.5 | 483 | 84.1 | 79.5-88.8 |
| \$15,000-\$24,999 | 867 | 384,985 | 117 | 15.8 | 12.6-19.1 | 750 | 84.2 | 80.9-87.4 |
| \$25,000-\$34,999 | 437 | 192,305 | 65 | 19.6 | 14.2-25.1 | 372 | 80.4 | 74.9-85.8 |
| \$35,000-\$49,999 | 540 | 243,263 | 74 | 14.9 | 11.1-18.7 | 466 | 85.1 | 81.3-88.9 |
| \$50,000-\$74,999 | 491 | 228,480 | 74 | 19.3 | 14.3-24.4 | 417 | 80.7 | 75.6-85.7 |
| \$75,000+ | 822 | 378,058 | 118 | 16.5 | 12.7-20.2 | 704 | 83.5 | 79.8-87.3 |

(1) Unweighted number
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group.
Note: Denominator excludes respondents with do not know/refused/missing responses

| Table 25-B. Mental Illness in the Household by Sex |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 277 | 21.5 | 18.7-24.2 | 139 | 14.9 | 12.2-17.7 | 416 | 18.3 | 16.4-20.3 |
| Black or Afr. Am./Non-Hisp. | 101 | 11.0 | 8.5-13.6 | 51 | 9.2 | 5.9-12.4 | 152 | 10.2 | 8.2-12.3 |
| Other Races/Ethnicities** | 16 | 21.3 | 9.7-32.9 | 12 | 29.1 | 11.1-47.2 | 28 | 26.3 | 13.9-38.7 |
| 18-24 years | 45 | 33.0 | 24.1-41.9 | 26 | 26.9 | 16.1-37.7 | 71 | 29.9 | 22.9-36.9 |
| 25-34 years | 65 | 24.2 | 18.3-30.0 | 35 | 18.1 | 11.9-24.4 | 100 | 21.1 | 16.8-25.4 |
| 35-44 years | 67 | 21.1 | 15.9-26.4 | 45 | 17.4 | 11.4-23.5 | 112 | 19.4 | 15.5-23.4 |
| 45-54 years | 69 | 20.9 | 15.2-26.5 | 26 | 7.7 | 4.3-11.2 | 95 | 14.7 | 11.1-18.2 |
| 55-64 years | 81 | 14.4 | 10.9-17.9 | 44 | 14.1 | 9.4-18.9 | 125 | 14.3 | 11.4-17.2 |
| 65+ years | 70 | 5.4 | 3.9-6.9 | 26 | 4.2 | 2.2-6.1 | 96 | 4.9 | 3.7-6.1 |
| Less than H.S. | 38 | 15.9 | 9.6-22.1 | 21 | 9.9 | 4.8-15.0 | 59 | 12.8 | 8.8-16.9 |
| H.S. or G.E.D. | 83 | 12.3 | 9.3-15.3 | 69 | 17.9 | 13.1-22.7 | 152 | 15.1 | 12.2-18.0 |
| Some Post-H.S. | 149 | 22.5 | 18.8-26.3 | 63 | 13.6 | 9.2-18.0 | 212 | 18.5 | 15.7-21.4 |
| College Graduate | 129 | 18.8 | 15.3-22.2 | 50 | 11.7 | 8.0-15.4 | 179 | 15.9 | 13.3-18.4 |
| Less than \$15,000 | 57 | 18.6 | 12.8-24.3 | 18 | 11.9 | 4.1-19.6 | 75 | 15.9 | 11.2-20.5 |
| \$15,000-\$24,999 | 84 | 19.0 | 14.5-23.6 | 33 | 11.1 | 6.7-15.5 | 117 | 15.8 | 12.6-19.1 |
| \$25,000-\$34,999 | 38 | 17.7 | 11.5-23.8 | 27 | 22.4 | 12.6-32.1 | 65 | 19.6 | 14.2-25.1 |
| \$35,000-\$49,999 | 45 | 15.3 | 10.2-20.4 | 29 | 14.5 | 8.8-20.1 | 74 | 14.9 | 11.1-18.7 |
| \$50,000-\$74,999 | 45 | 21.3 | 14.4-28.2 | 29 | 17.9 | 10.7-25.1 | 74 | 19.3 | 14.3-24.4 |
| \$75,000+ | 71 | 19.9 | 15.0-24.8 | 47 | 13.6 | 8.1-19.1 | 118 | 16.5 | 12.7-20.2 |
| (1) Unweighted number of <br> (2) Weighted percent <br> ${ }^{* *}$ Refer to Table B on p. 7 fo <br> Note: Denominator excludes | of nd | d eth do | es included ow/refused | $\begin{aligned} & \text { "Otr } \\ & \text { ing re } \end{aligned}$ | es an es | nicities" de | aphic |  |  |

## ADVERSE CHILDHOOD EXPERIENCES: ALCOHOL USE IN HOUSEHOLD

Adverse childhood experiences (ACEs) are potentially traumatic events that occur in childhood. ${ }^{43}$ ACEs are common and have been linked to health across the lifespan. ${ }^{43}$ In 2019, the Mississippi BRFSS collected information about adverse childhood experiences related to household challenges (5

> ACEs - Alcohol Use in Household Question:
> Before you were 18 years of age, did you live with anyone who was a problem drinker or alcoholic? questions) and abuse (3 questions). The results of select ACE questions are presented this this report.

Mississippi's 2019 BRFSS data showed that, during childhood, 24.0\% of respondents lived with someone who was a problem drinker or alcoholic. Women and men reported similar rates, with $24.6 \%$ and $23.2 \%$, respectively. Respondents of other races had the highest reported rates of problem alcohol use in the household as children (36.4\%), followed by White respondents (25.1\%), and Black respondents (20.0\%). In terms of race and sex, women of other races had the highest rate (39.0\%), while Black women had the lowest rate (19.8\%) (Fig. 99). The age groups with the highest rates of problem alcohol use in the household during childhood were $45-54$ years with $27.4 \%$ and $18-24$ years with $27.3 \%$, while the 65 years and older age group reported the lowest rate with 19.5\% (Fig. 100).

Respondents who did not graduate high school reported the highest rate (30.1\%), while those who graduated from a college or technical school reported the lowest (20.1\%) (Fig. 101). The rate of problem alcohol use in the household during childhood did not fluctuate greatly among annual household income groups; however, those whose households earned less than $\$ 25,000$ per year had higher rates than those who earned $\$ 25,000$ or more annually (Fig. 102).


Figure 101. Percentage of Respondents with Alcohol Use in Household by


Figure 100. Percentage of Respondents with Alcohol Use in Household by Age \& Sex


Figure 102. Percentage of Respondents with Alcohol Use in Household by Household Income \& Sex


| TABLE 26-A. Adverse Childhood Experiences: Alcohol Use in Household <br> Q: Before you were 18 years of age, did you live with anyone who was a problem drinker or alcoholic? |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC | RESPONDENTS |  | Yes |  |  | No |  |  |
| GROUPS | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 4,572 | 1,994,972 | 1,006 | 24.0 | 22.3-25.7 | 3,566 | 76.0 | 74.3-77.7 |
| Male | 1,799 | 938,481 | 371 | 23.2 | 20.5-26.0 | 1,428 | 76.8 | 74.0-79.5 |
| Female | 2,773 | 1,056,491 | 635 | 24.6 | 22.5-26.8 | 2,138 | 75.4 | 73.2-77.5 |
| White/Non-Hisp. | 2,665 | 1,171,521 | 622 | 25.1 | 23.0-27.2 | 2,043 | 74.9 | 72.8-77.0 |
| Black or Afr. Am./Non-Hisp. | 1,733 | 700,441 | 329 | 20.0 | 17.2-22.7 | 1,404 | 80.0 | 77.3-82.8 |
| Other Races/Ethnicities** | 133 | 104,054 | 47 | 36.4 | 24.3-48.6 | 86 | 63.6 | 51.4-75.7 |
| 18-24 years | 241 | 257,026 | 64 | 27.3 | 20.5-34.1 | 177 | 72.7 | 65.9-79.5 |
| 25-34 years | 437 | 314,839 | 95 | 23.5 | 18.6-28.3 | 342 | 76.5 | 71.7-81.4 |
| 35-44 years | 556 | 315,663 | 123 | 22.7 | 18.4-27.1 | 433 | 77.3 | 72.9-81.6 |
| 45-54 years | 653 | 297,921 | 171 | 27.4 | 23.0-31.8 | 482 | 72.6 | 68.2-77.0 |
| 55-64 years | 956 | 341,710 | 238 | 26.7 | 23.2-30.3 | 718 | 73.3 | 69.7-76.8 |
| 65+ years | 1,687 | 447,214 | 311 | 19.5 | 17.1-21.9 | 1,376 | 80.5 | 78.1-82.9 |
| Less than H.S. | 596 | 314,575 | 160 | 30.1 | 25.0-35.2 | 436 | 69.9 | 64.8-75.0 |
| H.S. or G.E.D. | 1,362 | 602,524 | 302 | 23.5 | 20.5-26.5 | 1,060 | 76.5 | 73.5-79.5 |
| Some Post-H.S. | 1,314 | 692,679 | 297 | 23.8 | 20.7-26.9 | 1,017 | 76.2 | 73.1-79.3 |
| College Graduate | 1,288 | 381,070 | 246 | 20.1 | 17.4-22.8 | 1,042 | 79.9 | 77.2-82.6 |
| Less than \$15,000 | 563 | 221,724 | 143 | 25.4 | 20.3-30.6 | 420 | 74.6 | 69.4-79.7 |
| \$15,000-\$24,999 | 871 | 387,081 | 221 | 27.8 | 23.7-31.9 | 650 | 72.2 | 68.1-76.3 |
| \$25,000-\$34,999 | 442 | 194,588 | 96 | 23.7 | 18.1-29.3 | 346 | 76.3 | 70.7-81.9 |
| \$35,000-\$49,999 | 542 | 243,863 | 111 | 22.8 | 17.8-27.7 | 431 | 77.2 | 72.3-82.2 |
| \$50,000-\$74,999 | 489 | 228,043 | 107 | 24.9 | 19.5-30.2 | 382 | 75.1 | 69.8-80.5 |
| \$75,000+ | 826 | 379,599 | 176 | 22.8 | 18.9-26.8 | 650 | 77.2 | 73.2-81.1 |
| (1) Unweighted number <br> (2) Weighted percent <br> **Refer to Table B on p. 7 for <br> Note: Denominator excludes | ist of rac pondent | nd ethnicities h do not know | ed in th ed $/ \mathrm{mis}$ | Rac ponse | Ethnicities | ograp |  |  |

Table 26-B. Alcohol Use in the Household by Sex

| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 391 | 26.5 | 23.8-29.3 | 231 | 23.5 | 20.3-26.7 | 622 | 25.1 | 23.0-27.2 |
| Black or Afr. Am./Non-Hisp. | 214 | 19.8 | 16.4-23.1 | 115 | 20.2 | 15.7-24.8 | 329 | 20.0 | 17.2-22.7 |
| Other Races/Ethnicities** | 25 | 39.0 | 23.9-54.1 | 22 | 34.9 | 17.9-51.9 | 47 | 36.4 | 24.3-48.6 |
| 18-24 years | 36 | 25.3 | 17.2-33.3 | 28 | 29.2 | 18.5-39.9 | 64 | 27.3 | 20.5-34.1 |
| 25-34 years | 51 | 22.6 | 16.1-29.2 | 44 | 24.3 | 17.1-31.4 | 95 | 23.5 | 18.6-28.3 |
| 35-44 years | 66 | 20.2 | 14.9-25.4 | 57 | 25.6 | 18.5-32.7 | 123 | 22.7 | 18.4-27.1 |
| 45-54 years | 114 | 31.5 | 25.4-37.7 | 57 | 22.7 | 16.4-28.9 | 171 | 27.4 | 23.0-31.8 |
| 55-64 years | 147 | 28.9 | 24.1-33.6 | 91 | 24.2 | 18.9-29.5 | 238 | 26.7 | 23.2-30.3 |
| 65+ years | 219 | 22.2 | 19.0-25.3 | 92 | 16.0 | 12.5-19.5 | 311 | 19.5 | 17.1-21.9 |
| Less than H.S. | 97 | 34.1 | 26.9-41.2 | 63 | 26.3 | 19.1-33.4 | 160 | 30.1 | 25.0-35.2 |
| H.S. or G.E.D. | 182 | 22.3 | 18.7-25.9 | 120 | 24.7 | 19.9-29.5 | 302 | 23.5 | 20.5-26.5 |
| Some Post-H.S. | 195 | 26.2 | 22.3-30.1 | 102 | 20.8 | 15.8-25.9 | 297 | 23.8 | 20.7-26.9 |
| College Graduate | 161 | 18.8 | 15.6-22.0 | 85 | 21.9 | 17.2-26.6 | 246 | 20.1 | 17.4-22.8 |
| Less than \$15,000 | 102 | 26.4 | 20.4-32.4 | 41 | 24.0 | 15.0-33.1 | 143 | 25.4 | 20.3-30.6 |
| \$15,000-\$24,999 | 145 | 29.0 | 23.7-34.2 | 76 | 26.2 | 19.6-32.8 | 221 | 27.8 | 23.7-31.9 |
| \$25,000-\$34,999 | 63 | 22.7 | 16.2-29.2 | 33 | 25.2 | 15.4-35.0 | 96 | 23.7 | 18.1-29.3 |
| \$35,000-\$49,999 | 61 | 21.0 | 14.8-27.3 | 50 | 24.5 | 16.8-32.1 | 111 | 22.8 | 17.8-27.7 |
| \$50,000-\$74,999 | 64 | 27.6 | 20.3-34.9 | 43 | 22.9 | 15.3-30.4 | 107 | 24.9 | 19.5-30.2 |
| \$75,000+ | 97 | 23.1 | 18.2-28.0 | 79 | 22.6 | 16.7-28.6 | 176 | 22.8 | 18.9-26.8 |

[^0]Adverse childhood experiences (ACEs) are potentially traumatic events that occur in childhood. ${ }^{43}$ ACEs are common and have been linked to health across the lifespan. ${ }^{43}$ In 2019, the Mississippi BRFSS

ACEs - Drug Use in Household Question:
Before you were 18
years of age, did you live with anyone who used illegal street
drugs or who abused
prescription medications? collected information about adverse childhood experiences related to household challenges (5 questions) and abuse (3 questions). The results of select ACE questions are presented this this report.

According to Mississippi's 2019 BRFSS data, during childhood, 10.7\% of respondents lived with someone who used illegal street drugs or misused prescription medications. Men had a higher rate (12.0\%) than did women (9.6\%). Respondents of other races had the highest rate of illicit drug use in the household during childhood (19.7\%). In terms of race and sex, men and women of other races had the highest rates, with $20.7 \%$ and $18.2 \%$, respectively, while Black women had the lowest rate with 9.0\% (Fig. 103). The reported rate of illicit drug use in the household during childhood generally decreased as age increased. The age group with the highest rate was $25-34$ years ( $21.2 \%$ ) while the 65 years and older age group had the lowest rate (1.9\%) (Fig. 104).

The relationships between illicit drug use in the household and education level or annual household income were not clear. Men who attended college or technical school reported the highest rate (14.7\%), while women who graduated high school reported the lowest (4.4\%) (Fig. 105). In terms of income, men with an annual household income of $\$ 25,000$ to $\$ 34,999$ had the highest rate (17.4\%), while men in the next income bracket ( $\$ 35,000$ to $\$ 49,999$ ) had the lowest rate ( $6.3 \%$ ) (Fig. 106).



Figure 105. Percentage of Respondents with Drug Use in Household by Education Level \& Sex


TABLE 27-A. Adverse Childhood Experiences: Drug Use in Household
Q: Before you were 18 years of age, did you live with anyone who used illegal street drugs or who abused prescription medications?

| DEMOGRAPHIC GROUPS | RESPONDENTS |  | Yes |  |  | No |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TOTAL | WEIGHTED | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| TOTAL | 4,575 | 1,988,424 | 357 | 10.7 | 9.4-12.1 | 4,218 | 89.3 | 87.9-90.6 |
| Male | 1,793 | 930,282 | 167 | 12.0 | 9.8-14.3 | 1,626 | 88.0 | 85.7-90.2 |
| Female | 2,782 | 1,058,142 | 190 | 9.6 | 8.0-11.2 | 2,592 | 90.4 | 88.8-92.0 |
| White/Non-Hisp. | 2,668 | 1,170,285 | 204 | 10.3 | 8.7-11.9 | 2,464 | 89.7 | 88.1-91.3 |
| Black or Afr. Am./Non-Hisp. | 1,732 | 697,542 | 130 | 10.2 | 8.0-12.4 | 1,602 | 89.8 | 87.6-92.0 |
| Other Races/Ethnicities** | 133 | 101,530 | 20 | 19.7 | 8.4-31.0 | 113 | 80.3 | 69.0-91.6 |
| 18-24 years | 240 | 252,675 | 46 | 19.1 | 13.0-25.3 | 194 | 80.9 | 74.7-87.0 |
| 25-34 years | 436 | 313,348 | 87 | 21.2 | 16.5-25.8 | 349 | 78.8 | 74.2-83.5 |
| 35-44 years | 555 | 314,359 | 77 | 13.8 | 10.3-17.3 | 478 | 86.2 | 82.7-89.7 |
| 45-54 years | 656 | 297,973 | 54 | 7.4 | 4.9-9.9 | 602 | 92.6 | 90.1-95.1 |
| 55-64 years | 958 | 342,112 | 63 | 7.2 | 5.1-9.4 | 895 | 92.8 | 90.6-94.9 |
| 65+ years | 1,688 | 447,358 | 30 | 1.9 | 1.1-2.8 | 1,658 | 98.1 | 97.2-98.9 |
| Less than H.S. | 596 | 314,478 | 45 | 11.0 | 7.2-14.7 | 551 | 89.0 | 85.3-92.8 |
| H.S. or G.E.D. | 1,362 | 601,432 | 85 | 7.9 | 5.8-10.1 | 1,277 | 92.1 | 89.9-94.2 |
| Some Post-H.S. | 1,316 | 687,042 | 132 | 14.1 | 11.3-16.9 | 1,184 | 85.9 | 83.1-88.7 |
| College Graduate | 1,288 | 381,237 | 94 | 8.9 | 6.8-10.9 | 1,194 | 91.1 | 89.1-93.2 |
| Less than \$15,000 | 564 | 218,964 | 55 | 11.3 | 7.5-15.2 | 509 | 88.7 | 84.8-92.5 |
| \$15,000-\$24,999 | 871 | 387,052 | 83 | 13.1 | 9.8-16.3 | 788 | 86.9 | 83.7-90.2 |
| \$25,000-\$34,999 | 441 | 193,671 | 39 | 13.4 | 8.3-18.5 | 402 | 86.6 | 81.5-91.7 |
| \$35,000-\$49,999 | 544 | 243,962 | 35 | 7.7 | 4.6-10.9 | 509 | 92.3 | 89.1-95.4 |
| \$50,000-\$74,999 | 491 | 228,317 | 43 | 12.5 | 8.1-16.9 | 448 | 87.5 | 83.1-91.9 |
| \$75,000+ | 824 | 378,779 | 65 | 11.0 | 7.5-14.5 | 759 | 89.0 | 85.5-92.5 |

(1) Unweighted number
(2) Weighted percent
**Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group.
Note: Denominator excludes respondents with do not know/refused/missing responses

| Table 27-B. Drug Use in the Household by Sex |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DEMOGRAPHIC GROUPS | Female |  |  | Male |  |  | Total |  |  |
|  | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) | $\mathrm{N}^{(1)}$ | \% ${ }^{(2)}$ | C.I. (95\%) |
| White/Non-Hisp. | 106 | 9.5 | 7.4-11.6 | 98 | 11.1 | 8.7-13.5 | 204 | 10.3 | 8.7-11.9 |
| Black or Afr. Am./Non-Hisp. | 75 | 9.0 | 6.6-11.5 | 55 | 11.7 | 7.8-15.7 | 130 | 10.2 | 8.0-12.4 |
| Other Races/Ethnicities** | 8 | 18.2 | 4.4-31.9 | 12 | 20.7 | 4.6-36.7 | 20 | 19.7 | 8.4-31.0 |
| 18-24 years | 27 | 20.1 | 12.3-27.8 | 19 | 18.2 | 8.6-27.9 | 46 | 19.1 | 13.0-25.3 |
| 25-34 years | 45 | 18.0 | 12.6-23.5 | 42 | 24.1 | 16.7-31.6 | 87 | 21.2 | 16.5-25.8 |
| 35-44 years | 41 | 12.9 | 8.4-17.5 | 36 | 14.8 | 9.4-20.1 | 77 | 13.8 | 10.3-17.3 |
| 45-54 years | 34 | 8.3 | 4.8-11.9 | 20 | 6.3 | 2.9-9.8 | 54 | 7.4 | 4.9-9.9 |
| 55-64 years | 25 | 4.3 | 2.3-6.4 | 38 | 10.7 | 6.7-14.6 | 63 | 7.2 | 5.1-9.4 |
| 65+ years | 18 | 2.2 | 1.0-3.5 | 12 | 1.5 | .4-2.6 | 30 | 1.9 | 1.1-2.8 |
| Less than H.S. | 25 | 12.3 | 6.7-17.8 | 20 | 9.7 | 4.8-14.6 | 45 | 11.0 | 7.2-14.7 |
| H.S. or G.E.D. | 34 | 4.4 | 2.7-6.0 | 51 | 11.5 | 7.6-15.3 | 85 | 7.9 | 5.8-10.1 |
| Some Post-H.S. | 76 | 13.6 | 10.3-16.9 | 56 | 14.7 | 10.0-19.4 | 132 | 14.1 | 11.3-16.9 |
| College Graduate | 55 | 7.9 | 5.5-10.4 | 39 | 10.2 | 6.7-13.7 | 94 | 8.9 | 6.8-10.9 |
| Less than \$15,000 | 33 | 9.7 | 5.9-13.5 | 22 | 13.8 | 6.2-21.5 | 55 | 11.3 | 7.5-15.2 |
| \$15,000-\$24,999 | 49 | 13.5 | 9.2-17.7 | 34 | 12.5 | 7.5-17.5 | 83 | 13.1 | 9.8-16.3 |
| \$25,000-\$34,999 | 20 | 10.6 | 5.3-15.8 | 19 | 17.4 | 7.8-27.1 | 39 | 13.4 | 8.3-18.5 |
| \$35,000-\$49,999 | 23 | 9.2 | 4.6-13.8 | 12 | 6.3 | 2.0-10.5 | 35 | 7.7 | 4.6-10.9 |
| \$50,000-\$74,999 | 18 | 9.7 | 3.9-15.4 | 25 | 14.6 | 8.3-20.9 | 43 | 12.5 | 8.1-16.9 |
| \$75,000+ | 32 | 9.0 | 5.6-12.4 | 33 | 12.7 | 7.0-18.4 | 65 | 11.0 | 7.5-14.5 |
| (1) Unweighted number of c <br> (2) Weighted percent ${ }^{* *}$ Refer to Table B on p. 7 fo Note: Denominator excludes | st of $r$ ponde | d eth do | es included ow/refused | $\begin{aligned} & \text { e "Otr } \\ & \text { ing re } \end{aligned}$ | an es | nicities" de | aphic |  |  |

MS BRFSS Appendices

## Appendix A: Explanations of Conditions and Risk Factors

Note: This section contains the terminology used by interviewers when administering the 2019 MS BRFSS survey to participants.

## Adverse Childhood Experiences

Alcohol Use in Household - Respondents who report that, before they were 18 years of age, they lived with someone who was a problem drinker or alcoholic.

Drug Use in Household - Respondents who report that, before they were 18 years of age, they lived with someone who used illegal street drugs or misused prescription medications.

Mental Illness in Household - Respondents who report that, before they were 18 years of age, they lived with someone who was depressed, mentally ill, or suicidal.

## Alcohol Consumption

Binge Drinking - Respondents who report that they have had at least five drinks (for men) or four drinks (for women) on one or more occasion during the past thirty days.

## Arthritis

Arthritis Awareness - Respondents who report ever being told by a doctor or other health professional that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia.

## Asthma

Asthma Awareness - Respondents who report ever being told that they had asthma by a doctor, nurse or other health professional.

## Cancer

Other Types of Cancer - Respondents who report ever being told that they had any other types of cancer, besides skin cancer, by a doctor, nurse or other health professional.

Skin Cancer - Respondents who report ever being told that they had skin cancer by a doctor, nurse or other health professional.

## Cardiovascular Disease

Coronary Heart Disease - Respondents who report ever being told they had angina or coronary heart disease by a doctor, nurse or other health professional.

Stroke - Respondents who report ever being told they had a stroke by a doctor, nurse or other health professional.

## Cholesterol

Cholesterol Awareness - Respondents who report ever being told they had high cholesterol by a doctor, nurse or other health professional.

## Cigarette Smoking

Cigarette Smoker - Respondents who have ever smoked 100 cigarettes in their lifetime and report currently smoking every day or some days. [Note: This does not include electronic cigarettes, herbal cigarettes, cigars, cigarillos, little cigars, pipes, bidis, kreteks, water pipes (hookahs), or marijuana.]

## Diabetes

Diabetes Awareness - Respondents who report that they have ever been told by a doctor, nurse or other health professional that they have diabetes. Female respondents diagnosed with diabetes only during pregnancy are not included.

Prediabetes - Respondents who report that they have ever been told by a doctor, nurse or other health professional that they have prediabetes or borderline diabetes.

## Exercise

Exercise in Last 30 Days - Respondents who report that, excluding their regular job, in the past 30 days they participated in any physical activity or exercise such as running, walking, calisthenics, golf, or gardening.

## Health Insurance

Health Care Access - Respondents who report they needed to see a doctor within the past 12 months but were unable because of the cost.

Health Care Coverage - Respondents who report they have no health care coverage, including health insurance, Health Maintenance Organizations, or Medicare.

Source of Health Care Coverage - Respondents who report their source of health insurance coverage to be private (purchased through employer/union or purchased by self/family member) or public (Medicare, Medicaid or other state program, TRICARE/VA/military, or Alaska Native/Indian Health Service/Tribal Health Services)

## Health Status

Self-Reported Health Status - Respondents who report that their general health status is fair or poor.

## Healthy Days

Mental Health - Respondents who report more than seven days during the past month when their mental health was not good.

Physical Health - Respondents who report more than seven days during the past month when their physical health was not good.

## HIV/AIDS

Ever Tested for HIV - Respondents who report that they have ever been tested for HIV, excluding tests done as part of a blood donation.

## Hypertension

Hypertension Awareness - Respondents who have ever been told they have high blood pressure by a doctor, nurse or other health professional.

## Immunization

Flu Shots - Respondents aged 65 years and older who report receiving a flu shot or the flu spray vaccine within the last twelve months.

Pneumonia Shots - Respondents aged 65 years and older who report ever receiving a vaccination for pneumonia.

## Lung Disease

COPD/Emphysema/Chronic Bronchitis - Respondents who report ever being told they had chronic obstructive pulmonary disease (COPD), emphysema, or chronic bronchitis.

## Mental Health

Depression Awareness - Respondents who report ever being told they had a depressive disorder by a doctor, nurse or other health professional.

## Weight

Body Mass Index (BMI) - Self-reported weight in kilograms divided by self-reported height in meters squared (kg/m2).

Healthy Weight - Respondents with a BMI $18.5 \leq$ BMI $\leq 24.9$. Healthy People 2020 Objective 19.1 Target $\geq 60 \%$.

Obese - Respondents with a BMI $\geq 30.0$. This measures Healthy People 2020 Objective 19.2 - Target $\leq 15 \%$.

Overweight - Respondents with a BMI $25.0 \leq \operatorname{BMI} \leq 29.9$.

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[^0]:    (1) Unweighted number of cases
    (2) Weighted percent
    **Refer to Table B on p. 7 for a list of races and ethnicities included in the "Other Races and Ethnicities" demographic group.
    Note: Denominator excludes respondents with do not know/refused/missing responses

