Mississippi Behavioral Risk Factor Surveillance System (BRFSS)

## 2011-2020 <br> Trend Report

June 28, 2023

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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.

## Methodology

A. 2020 Sampling Design, Data Collection, Weighting, Sample Size

The Mississippi BRFSS (MS 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.

In 2020, all MS BRFSS interviews were conducted according to BRFSS protocols by a private survey research company and a state university 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 ultra-fast 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. In the 2020 MS BRFSS, 6,479 adults were included in the final sample.

## B. Questionnaire

The BRFSS questionnaire, designed through cooperative agreements with 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 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. States also have the option to include state-added questions, which are designed by the state rather than CDC.

## C. Data Analysis

After CDC completed data editing, weighting procedures, and analysis, it sent each state an initial descriptive analysis report that included 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 2020 Nielsen and ACS Adult Population Report for Mississippi population estimates to accurately reflect the state's demographics. The results presented in this report were produced by epidemiologists at MSDH and are weighted according to population characteristics.

Logistic regression analysis was used to test for changes over time from 2011 to 2020. The regression models control for changes in distributions by sex, race/ethnicity, age group, education, and annual household income and assess linear and quadratic time effect by including time variables that use the appropriate number of years of data for each measure. Some measures were not collected in every year from 2011 to 2020, so not all trend analyses included every year.

The term "significant" means that the increase or decrease in a measure over time was statistically significant ( $p$-value <0.05). $P$ values for significant findings are listed in the corresponding tables. If there was a significant linear trend, it was described as "increased from 2011 to 2020" or "decreased from 2011 to 2020." If there was a significant quadratic trend, additional analysis was conducted using Joinpoint Regression to determine the year where a change of trend
occurred. If a significant quadratic trend was identified, both segments of the trend were reported (for example, "increased from 2011 to 2016; decreased from 2016 to 2020"). If there was no significant linear or quadratic trend, it was described as "no change from 2011 to 2020." A minimum of three years of data were required to test for a linear change, and a minimum of six years were required to test for a quadratic change using Joinpoint; if either of these criteria were not met, then it was reported as " $N / A$ " (not applicable).

A Chi-square test was used to evaluate change in prevalence from 2019 to 2020.

## 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.

NOTE: Only select MS 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 MS BRFSS Coordinator at BRFSS@msdh.ms.gov.

## Section 1: Health Status

## Percentage of adults who reported fair or poor health

The percentage of adults who reported that, in general, their health was fair or poor significantly decreased from 2019 to 2020.


## Percentage of adults who said that their physical health was not good for 14+ days of past 30 days

The percentage of adults who reported that their physical health was not good for 14 or more days in the past 30 days significantly increased from 2011 to 2018 and then significantly decreased from 2018 to 2020.


Percentage of adults who said that their mental health was not good for 14+ days of past $\mathbf{3 0}$ days

The percentage of adults who reported that their mental health was not good for 14 or more days in the past 30 days significantly decreased from 2019 to 2020.


Table 1. Health status indicators, Mississippi BRFSS, 2011-2020

| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Linear ${ }^{(2)}$ Change | Quadratic ${ }^{(3)}$ Change | $\begin{aligned} & \text { Change }{ }^{(4)} \\ & \text { 2019-2020 } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent <br> (95\% Confidence Interval) ${ }^{(1)}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Percentage of adults who reported that, in general, their health was fair or poor |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 23.7 \\ (22.4-24.9) \end{gathered}$ | $\begin{gathered} 23.4 \\ (22.1-24.6) \end{gathered}$ | $\begin{gathered} 24.4 \\ (23.1-25.8) \end{gathered}$ | $\begin{gathered} 22.0 \\ (20.4-23.7) \end{gathered}$ | $\begin{gathered} 23.6 \\ (22.1-25.1) \end{gathered}$ | $\begin{gathered} 23.2 \\ (21.7-24.7) \end{gathered}$ | $\begin{gathered} 25.3 \\ (23.6-27.0) \end{gathered}$ | $\begin{gathered} 23.3 \\ (22.0-24.7) \end{gathered}$ | $\begin{gathered} 23.6 \\ (22.1-25.0) \end{gathered}$ | $\begin{gathered} 19.9 \\ (18.7-21.1) \end{gathered}$ | No | No | Decreased ( $p<0.001$ ) |
| Percentage of adults who reported that their physical health was not good for 14 or more days in the past $\mathbf{3 0}$ days |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 14.3 \\ (13.3-15.3) \end{gathered}$ | $\begin{gathered} 15.1 \\ (14.0-16.2) \end{gathered}$ | $\begin{gathered} 15.8 \\ (14.6-17.0) \end{gathered}$ | $\begin{gathered} 13.5 \\ (12.1-14.8) \end{gathered}$ | $\begin{gathered} 15.0 \\ (13.8-16.2) \end{gathered}$ | $\begin{gathered} 14.8 \\ (13.5-16.1) \end{gathered}$ | $\begin{gathered} 16.6 \\ (15.1-18.1) \end{gathered}$ | $\begin{gathered} 15.4 \\ (14.2-16.6) \end{gathered}$ | $\begin{gathered} 14.0 \\ (12.8-15.2) \end{gathered}$ | $\begin{gathered} 10.3 \\ (9.4-11.2) \end{gathered}$ | No | $\begin{gathered} \text { Yes }^{(5)} \\ (\mathrm{p}<0.001) \end{gathered}$ | Decreased ( $p<0.001$ ) |
| Percentage of adults who reported that their mental health was not good for 14 or more days in the past $\mathbf{3 0}$ days |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 14.4 \\ (13.3-15.5) \end{gathered}$ | $\begin{gathered} 14.3 \\ (13.1-15.5) \end{gathered}$ | $\begin{gathered} 14.2 \\ (13.0-15.4) \end{gathered}$ | $\begin{gathered} 13.7 \\ (12.1-15.3) \end{gathered}$ | $\begin{gathered} 15.0 \\ (13.6-16.4) \end{gathered}$ | $\begin{gathered} 14.1 \\ (12.7-15.5) \end{gathered}$ | $\begin{gathered} 15.9 \\ (14.2-17.5) \end{gathered}$ | $\begin{gathered} 15.5 \\ (14.2-16.8) \end{gathered}$ | $\begin{gathered} 17.3 \\ (15.8-18.7) \end{gathered}$ | $\begin{gathered} 14.4 \\ (13.1-15.6) \end{gathered}$ | Increased ( $p<0.001$ ) | No | Decreased ( $\mathrm{p}=0.003$ ) |

${ }^{(1)}$ A confidence interval provides a measure of estimate precision; the wider the interval, the more imprecise the estimate.
${ }^{(2)}$ Linear change - Indicates whether there was a significant linear change in prevalence during 2011-2020. That is, did the prevalence increase, decrease, or stay the same?
${ }^{(3)}$ Quadratic change - Indicates whether there was a significant change in the direction of prevalence during 2011-2020.
${ }^{(4)}$ Change from 2019-2020 - Indicates whether there was a significant increase or decrease in prevalence between 2019 and 2020.
${ }^{\text {(5) }}$ Increased from 2011 to 2018 ( $\mathrm{p}<0.001$ ); decreased from 2018 to 2020 ( $\mathrm{p}<0.001$ ).

## Section 2: Health Care Coverage and Access

Percentage of adults who had any kind of health coverage

The percentage of adults who had any kind of health coverage significantly increased from 2011 to 2016 and then decreased from 2016 to 2020.


Percentage of adults who needed to see a doctor in the past 12 months but could not due to cost

The percentage of adults who needed to see a doctor in the past 12 months but could not due to cost decreased significantly from 2011 to 2020.


Table 2. Health care coverage and access, Mississippi BRFSS, 2011-2020

| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Linear(2) Change | Quadratic ${ }^{(3)}$ Change | $\begin{aligned} & \text { Change }{ }^{(4)} \\ & \text { 2019-2020 } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent <br> (95\% Confidence Interval) ${ }^{(1)}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Percentage of adults who had any kind of health coverage |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 74.1 \\ (72.6-75.6) \end{gathered}$ | $\begin{gathered} 77.4 \\ (75.9-78.9) \end{gathered}$ | $\begin{gathered} 76.8 \\ (75.3-78.4) \end{gathered}$ | $\begin{gathered} 81.2 \\ (79.3-83.1) \end{gathered}$ | $\begin{gathered} 82.3 \\ (80.7-83.9) \end{gathered}$ | $\begin{gathered} 83.4 \\ (81.9-85.0) \end{gathered}$ | $\begin{gathered} 82.8 \\ (80.9-84.6) \end{gathered}$ | $\begin{gathered} 83.9 \\ (82.5-85.3) \end{gathered}$ | $\begin{gathered} 82.5 \\ (80.9-84.1) \end{gathered}$ | $\begin{gathered} 82.7 \\ (81.3-84.0) \end{gathered}$ | Increased ( $\mathrm{p}<0.001$ ) | $\begin{gathered} \mathrm{Yes}^{(5)} \\ (\mathrm{p}<0.001) \end{gathered}$ | No |
| Percentage of adults who needed to see a doctor in the past 12 months but could not due to cost |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 23.5 \\ (22.1-24.8) \end{gathered}$ | $\begin{gathered} 21.7 \\ (20.3-23.1) \end{gathered}$ | $\begin{gathered} 21.7 \\ (20.2-23.2) \end{gathered}$ | $\begin{gathered} 19.4 \\ (17.6-21.2) \end{gathered}$ | $\begin{gathered} 18.7 \\ (17.2-20.3) \end{gathered}$ | $\begin{gathered} 19.2 \\ (17.7-20.7) \end{gathered}$ | $\begin{gathered} 18.2 \\ (16.6-19.9) \end{gathered}$ | $\begin{gathered} 17.6 \\ (16.2-18.9) \end{gathered}$ | $\begin{gathered} 17.2 \\ (15.8-18.7) \end{gathered}$ | $\begin{gathered} 13.9 \\ (12.7-15.1) \end{gathered}$ | Decreased ( $p<0.001$ ) | No | Decreased ( $p<0.001$ ) |

${ }^{(1)}$ A confidence interval provides a measure of estimate precision; the wider the interval, the more imprecise the estimate.
${ }^{(2)}$ Linear change - Indicates whether there was a significant linear change in prevalence during 2011-2020. That is, did the prevalence increase, decrease, or stay the same?
${ }^{(3)}$ Quadratic change - Indicates whether there was a significant change in the direction of prevalence during 2011-2020.
${ }^{(4)}$ Change from 2019-2020 - Indicates whether there was a significant increase or decrease in prevalence between 2019 and 2020.
${ }^{(5)}$ Increased from 2011 to 2016 ( $p<0.001$ ); decreased from 2016 to 2020 ( $p=0.005$ ).

## Section 3: Health Behaviors

Percentage of adults who did not participate in any physical activities or exercise outside of work in the past month
The percentage of adults who did not participate in any physical activity outside of work in the past month significantly decreased from 2019 to 2020.


## Percentage of adults who were current cigarette smokers

The percentage of adults who were current smokers significantly decreased from 2011 to 2020.


## Percentage of adults who were binge drinkers

The percentage of adults who were binge drinkers significantly decreased from 2011 to 2013 and then significantly increased from 2013 to 2020


Table 3. Health behavior indicators, Mississippi BRFSS, 2011-2020

| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Linear ${ }^{(2)}$ Change | Quadratic ${ }^{(3)}$ Change | $\begin{aligned} & \text { Change }{ }^{(4)} \\ & \text { 2019-2020 } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent$\left(95 \%\right.$ Confidence Interval) ${ }^{(1)}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Percentage of adults who did not participate in any physical activities or exercises outside of work in the past month |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 36.1 \\ (34.6-37.6) \end{gathered}$ | $\begin{gathered} 30.8 \\ (29.3-32.3) \end{gathered}$ | $\begin{gathered} 38.1 \\ (36.4-39.8) \end{gathered}$ | $\begin{gathered} 31.6 \\ (29.6-33.6) \end{gathered}$ | $\begin{gathered} 36.8 \\ (35.0-38.7) \end{gathered}$ | $\begin{gathered} 30.3 \\ (28.6-32.0) \end{gathered}$ | $\begin{gathered} 33.2 \\ (31.1-35.2) \end{gathered}$ | $\begin{gathered} 32.0 \\ (30.4-33.6) \end{gathered}$ | $\begin{gathered} 37.7 \\ (36.0-39.5) \end{gathered}$ | $\begin{gathered} 30.0 \\ (28.5-31.5) \end{gathered}$ | No | No | Decreased ( $p<0.001$ ) |
| Percentage of adults who were current smokers |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 25.7 \\ (24.3-27.2) \end{gathered}$ | $\begin{gathered} 24.0 \\ (22.5-25.5) \end{gathered}$ | $\begin{gathered} 24.8 \\ (23.3-26.4) \end{gathered}$ | $\begin{gathered} 23.0 \\ (21.0-24.9) \end{gathered}$ | $\begin{gathered} 22.5 \\ (20.9-24.2) \end{gathered}$ | $\begin{gathered} 22.7 \\ (21.0-24.4) \end{gathered}$ | $\begin{gathered} 22.2 \\ (20.4-24.0) \end{gathered}$ | $\begin{gathered} 20.5 \\ (19.1-22.0) \end{gathered}$ | $\begin{gathered} 20.4 \\ (18.8-22.0) \end{gathered}$ | $\begin{gathered} 20.1 \\ (18.7-21.5) \end{gathered}$ | $\begin{aligned} & \text { Decreased } \\ & (p=0.004) \end{aligned}$ | No | No |
| Percentage of adults who were binge drinkers |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 14.6 \\ (13.3-15.8) \end{gathered}$ | $\begin{gathered} 12.1 \\ (10.9-13.4) \end{gathered}$ | $\begin{gathered} 12.4 \\ (11.1-13.6) \end{gathered}$ | $\begin{gathered} 12.8 \\ (11.2-14.4) \end{gathered}$ | $\begin{gathered} 11.9 \\ (10.4-13.3) \end{gathered}$ | $\begin{gathered} 12.3 \\ (10.9-13.7) \end{gathered}$ | $\begin{gathered} 12.6 \\ (11.1-14.2) \end{gathered}$ | $\begin{gathered} 12.7 \\ (11.4-14.1) \end{gathered}$ | $\begin{gathered} 13.4 \\ (11.9-14.9) \end{gathered}$ | $\begin{gathered} 13.4 \\ (12.1-14.6) \end{gathered}$ | No | $\begin{gathered} \text { Yes }^{(5)} \\ (\mathrm{p}=0.002) \end{gathered}$ | No |

${ }^{(1)}$ A confidence interval provides a measure of estimate precision; the wider the interval, the more imprecise the estimate.
${ }^{(2)}$ Linear change - Indicates whether there was a significant linear change in prevalence during 2011-2020. That is, did the prevalence increase, decrease, or stay the same?
${ }^{(3)}$ Quadratic change - Indicates whether there was a significant change in the direction of prevalence during 2011-2020.
${ }^{(4)}$ Change from 2019-2020 - Indicates whether there was a significant increase or decrease in prevalence between 2019 and 2020.
${ }^{(5)}$ Decreased from 2011 to 2013 ( $\mathrm{p}=0.021$ ); increased from 2013 to 2020 ( $\mathrm{p}=0.038$ ).

## Section 4: Use of Preventive Services

## Percentage of women aged 50-74 years who have ever had a mammogram

There were no significant changes in the percentage of women aged 50-74 years who had ever had a mammogram from 2012 to 2020.

| $73.7 \%$ | $69.6 \%$ | $71.7 \%$ | $70.5 \%$ | $73.5 \%$ |
| :---: | :---: | :---: | :---: | :---: |
| 2012 | 2014 | 2016 | 2018 | 2020 |

Percentage of women aged 21-65 years who had ever had a Pap test

There were no significant changes in the percentage of women aged
81.6\% 83.5\%
83.0\%
82.3\%
82.3\%

21-65 years who had ever had a Pap test from 2012 to 2020.

| 2012 | 2014 | 2016 | 2018 |
| :---: | :---: | :---: | :---: |

## Percentage of adults aged 50-75 years who had ever had a colonoscopy

The percentage of adults aged 50-75 years who had ever had a colonoscopy significantly increased from 2012 to 2018.

| $55.0 \%$ |  | $56.4 \%$ | $58.0 \%$ | $57.7 \%$ |  | $60.1 \%$ <br> $\bullet$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |

## Percentage of men aged 40+ years who have ever had a PSA test

The percentage of men aged 40+ years who had ever had a PSA test significantly decreased from 2012 to 2020.

| $46.5 \%$ | $47.3 \%$ | $43.6 \%$ | $35.4 \%$ | $37.0 \%$ |
| :---: | :---: | :---: | :---: | :---: |
| 2012 | 2014 | 2016 | 2018 | 2020 |

## Percentage of adults aged 65+ years who had a flu vaccine during the past 12 months

The percentage of adults aged 65+ years who had a flu vaccine during the past 12 months significantly decreased from 2011 to 2018 and then significantly increased from 2018 to 2020.


## Percentage of adults aged 65+ years who have ever had a pneumonia shot

There were no significant changes in the percentage of adults aged 65+ years who have ever had a pneumonia shot from 2011 to 2020.


## Percentage of adults who have ever been tested for HIV

The percentage of adults who have ever been tested for HIV significantly decreased from 2019 to 2020.


Table 4. Use of preventive service indicators, Mississippi BRFSS, 2011-2020

| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Linear ${ }^{(2)}$ Change | Quadratic ${ }^{(3)}$ Change | $\begin{gathered} \hline \text { Change }{ }^{(4)} \\ \text { 2019-2020 } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent (95\% Confidence Interval) ${ }^{(1)}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Percentage of adults who have ever had a mammogram |  |  |  |  |  |  |  |  |  |  |  |  |
| No data | $\begin{gathered} 73.7 \\ (71.5-75.9) \\ \hline \end{gathered}$ | No data | $\begin{gathered} 69.6 \\ (66.3-72.9) \end{gathered}$ | No data | $\begin{gathered} 71.7 \\ (68.6-74.8) \end{gathered}$ | No data | $\begin{gathered} \hline 70.5 \\ (67.7-73.4) \\ \hline \end{gathered}$ | No data | $\begin{gathered} \hline 73.5 \\ (70.7-76.4) \end{gathered}$ | No | N/A | N/A |
| Percentage of adults who have ever had a PAP test |  |  |  |  |  |  |  |  |  |  |  |  |
| No data | $\begin{gathered} 81.6 \\ (79.4-83.8) \end{gathered}$ | No data | $\begin{gathered} 83.5 \\ (80.6-86.4) \end{gathered}$ | No data | $\begin{gathered} 83.0 \\ (80.2-85.9) \end{gathered}$ | No data | $\begin{gathered} 82.3 \\ (79.9-84.8) \end{gathered}$ | No data | $\begin{gathered} 82.3 \\ (79.9-84.7) \end{gathered}$ | No | N/A | N/A |
| Percentage of adults who have ever had a colonoscopy |  |  |  |  |  |  |  |  |  |  |  |  |
| No data | $\begin{gathered} 55.0 \\ (53.0-57.1) \end{gathered}$ | No data | $\begin{gathered} 56.4 \\ (53.6-59.3) \end{gathered}$ | $\begin{gathered} 58.0 \\ (55.6-60.5) \end{gathered}$ | $\begin{gathered} 57.7 \\ (55.2-60.2) \end{gathered}$ | No data | $\begin{gathered} \hline 60.1 \\ (57.7-62.4) \\ \hline \end{gathered}$ | No data | No data | Increased $(\mathrm{p}=0.003)$ | N/A | N/A |
| Percentage of adults who have ever had a PSA test |  |  |  |  |  |  |  |  |  |  |  |  |
| No data | $\begin{gathered} \hline 46.5 \\ (43.7-49.3) \end{gathered}$ | No data | $\begin{gathered} \hline 47.3 \\ (43.5-51.1) \end{gathered}$ | No data | $\begin{gathered} 43.6 \\ (40.3-46.9) \end{gathered}$ | No data | $\begin{gathered} 35.4 \\ (32.5-38.2) \end{gathered}$ | No data | $\begin{gathered} 37.0 \\ (34.4-39.7) \end{gathered}$ | Decreased ( $\mathrm{p}<0.001$ ) | N/A | N/A |
| Percentage of adults ( $65+$ ) who had the flu vaccine during the past 12 months |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} \hline 65.7 \\ (63.2-68.1) \\ \hline \end{gathered}$ | $\begin{gathered} 62.4 \\ (60.1-64.6) \\ \hline \end{gathered}$ | $\begin{gathered} 63.0 \\ (60.3-65.7) \end{gathered}$ | $\begin{gathered} \hline 66.7 \\ (63.6-69.8) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 63.3 \\ (60.5-66.0) \\ \hline \end{gathered}$ | $\begin{gathered} 61.5 \\ (58.5-64.5) \\ \hline \end{gathered}$ | $\begin{gathered} 55.1 \\ (52.0-58.2) \\ \hline \end{gathered}$ | $\begin{gathered} 60.0 \\ (57.2-62.8) \end{gathered}$ | $\begin{gathered} \hline 63.8 \\ (61.0-66.6) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 66.1 \\ (63.7-68.5) \end{gathered}$ | No | $\begin{gathered} \text { Yes }^{(5)} \\ (\mathrm{p}<0.001) \\ \hline \end{gathered}$ | No |
| Percentage of adults (65+) who have ever had a pneumonia shot |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 69.1 \\ (66.7-71.5) \end{gathered}$ | $\begin{gathered} 65.8 \\ (63.5-68.1) \end{gathered}$ | $\begin{gathered} 66.2 \\ (63.4-68.9) \end{gathered}$ | $\begin{gathered} 67.2 \\ (64.1-70.4) \end{gathered}$ | $\begin{gathered} 65.3 \\ (62.6-68.1) \end{gathered}$ | $\begin{gathered} 65.6 \\ (62.6-68.5) \end{gathered}$ | $\begin{gathered} 71.8 \\ (69.0-74.6) \\ \hline \end{gathered}$ | $\begin{gathered} 68.7 \\ (66.0-71.4) \end{gathered}$ | $\begin{gathered} 66.6 \\ (63.9-69.4) \end{gathered}$ | $\begin{gathered} 66.6 \\ (64.2-69.0) \end{gathered}$ | No | No | No |
| Percentage of adults who have ever been tested for HIV |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 38.0 \\ (36.5-39.6) \end{gathered}$ | $\begin{gathered} \hline 39.7 \\ (38.0-41.4) \end{gathered}$ | $\begin{gathered} 41.3 \\ (39.5-43.1) \end{gathered}$ | $\begin{gathered} 37.8 \\ (35.6-40.1) \end{gathered}$ | $\begin{gathered} \hline 40.6 \\ (38.6-42.6) \end{gathered}$ | $\begin{gathered} 41.2 \\ (39.3-43.2) \end{gathered}$ | $\begin{gathered} 39.1 \\ (36.8-41.3) \end{gathered}$ | $\begin{gathered} \hline 41.0 \\ (39.2-42.8) \end{gathered}$ | $\begin{gathered} \hline 43.5 \\ (41.6-45.5) \end{gathered}$ | $\begin{gathered} \hline 37.6 \\ (35.9-39.3) \end{gathered}$ | Increased ( $\mathrm{p}<0.001$ ) | No | Decreased ( $p<0.001$ ) |

[^0]
## Section 5: Health Conditions

## Percentage of adults ever told by a health professional that they had high blood pressure

The percentage of adults who have ever been told by a health professional that they had high blood pressure significantly increased from 2011 to 2019.

| $39.1 \%$ | $40.2 \%$ | $42.4 \%$ | $40.8 \%$ | $43.6 \%$ |
| :---: | :---: | :---: | :---: | :---: |
| 2011 | 2013 | 2015 | 2017 | 2019 |

## Percentage of adults ever told by a health professional that they had high blood cholesterol

The percentage of adults who have ever been told by a health professional that they had high blood cholesterol significantly decreased from 2011 to 2019.


Percentage of adults who were overweight or obese
The percentage of adults who were overweight or obese significantly increased from 2011 to 2020.


Percentage of adults ever told by a health professional that they had a cardiovascular disease
There were no significant changes in the percentage of adults aged who have ever been told that they had a cardiovascular disease from 2011 to 2020.


## Percentage of adults ever told by a health professional that they had asthma

The percentage of adults who have ever been told by a health professional that they had asthma significantly increased from 2011 to 2020.


## Percentage of adults ever told by a health professional that they had arthritis

There were no significant changes in the percentage of adults who have ever been told by a health professional that they had arthritis


## Percentage of adults ever told by a health professional that they had skin cancer

There were no significant changes in the percentage of adults who have ever been told by a health professional that they had skin cancer from 2011 to 2020.


## Percentage of adults ever told by a health professional that they had any other types of cancer (other than skin cancer)

There were no significant changes in the percentage of adults who have ever been told by a health professional that they had any other types of cancer (other than skin cancer) from 2011 to 2020.


Percentage of adults ever told by a health professional that they had COPD, emphysema, or chronic bronchitis
The percentage of adults who have ever been told by a health professional that they had COPD, emphysema, or chronic


## Percentage of adults ever told by a health professional that they had a depressive disorder

The percentage of adults who have ever been told by a health professional that they had a depressive disorder significantly


## Percentage of adults ever told by a health professional that they had prediabetes

The percentage of adults who have ever been told by a health professional that they had prediabetes significantly increased from 2011 to 2020.


## Percentage of adults ever told by a health professional that they had diabetes

The percentage of adults who have ever been told by a health professional that they had diabetes significantly increased from 2011 to 2020.


Table 5. Health conditions, Mississippi BRFSS, 2011-2020

| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Linear ${ }^{(2)}$ <br> Change | Quadratic ${ }^{(3)}$ Change | $\begin{gathered} \text { Change }{ }^{(4)} \\ \text { 2019-2020 } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent <br> (95\% Confidence Interval) ${ }^{(1)}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Percentage of adults who have ever been told by a health professional that they had high blood pressure |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 39.1 \\ (37.7-40.5) \end{gathered}$ | No data | $\begin{gathered} \hline 40.2 \\ (38.6-41.8) \end{gathered}$ | No data | $\begin{gathered} 42.4 \\ (40.6-44.1) \end{gathered}$ | No data | $\begin{gathered} 40.8 \\ (38.8-42.7) \end{gathered}$ | No data | $\begin{gathered} \hline 43.6 \\ (41.9-45.4) \end{gathered}$ | No data | Increased ( $p<0.001$ ) | N/A | N/A |
| Percentage of adults who have ever been told by a health professional that they had high blood cholesterol |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 42.5 \\ (40.9-44.1) \end{gathered}$ | No data | $\begin{gathered} 41.9 \\ (40.2-43.7) \end{gathered}$ | No data | $\begin{gathered} 38.7 \\ (36.9-40.6) \end{gathered}$ | No data | $\begin{gathered} 36.6 \\ (34.6-38.5) \end{gathered}$ | No data | $\begin{gathered} 33.9 \\ (32.2-35.6) \end{gathered}$ | No data | $\begin{gathered} \text { Decreased } \\ (p<0.001) \end{gathered}$ | N/A | N/A |
| Percentage of adults who were overweight or obese |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 69.2 \\ (67.7-70.7) \end{gathered}$ | $\begin{gathered} 68.9 \\ (67.3-70.5) \end{gathered}$ | $\begin{gathered} 69.3 \\ (67.6-70.9) \end{gathered}$ | $\begin{gathered} 70.7 \\ (68.6-72.7) \end{gathered}$ | $\begin{gathered} 70.1 \\ (68.3-71.9) \\ \hline \end{gathered}$ | $\begin{gathered} 71.3 \\ (69.5-73.1) \end{gathered}$ | $\begin{gathered} 69.9 \\ (67.9-71.9) \end{gathered}$ | $\begin{gathered} 73.3 \\ (71.6-75.0) \end{gathered}$ | $\begin{gathered} 72.7 \\ (71.0-74.5) \end{gathered}$ | $\begin{gathered} 72.8 \\ (71.2-74.3) \end{gathered}$ | Increased ( $p<0.001$ ) | No | No |
| Percentage of adults who have ever been told by a health professional that they had a cardiovascular disease |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} \hline 10.6 \\ (9.8-11.4) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 11.0 \\ (10.1-11.8) \\ \hline \end{gathered}$ | $\begin{gathered} 10.5 \\ (9.6-11.5) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 10.8 \\ (9.7-11.9) \\ \hline \end{gathered}$ | $\begin{gathered} 11.2 \\ (10.2-12.3) \end{gathered}$ | $\begin{gathered} 12.1 \\ (11.0-13.2) \\ \hline \end{gathered}$ | $\begin{gathered} 11.5 \\ (10.4-12.6) \end{gathered}$ | $\begin{gathered} 11.6 \\ (10.6-12.6) \end{gathered}$ | $\begin{gathered} 11.3 \\ (10.2-12.3) \\ \hline \end{gathered}$ | $\begin{gathered} 11.7 \\ (10.8-12.7) \end{gathered}$ | No | No | No |
| Percentage of adults who have ever been told by a health professional that they had asthma |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 12.5 \\ (11.5-13.6) \end{gathered}$ | $\begin{gathered} 11.7 \\ (10.6-12.7) \end{gathered}$ | $\begin{gathered} 12.5 \\ (11.4-13.6) \end{gathered}$ | $\begin{gathered} 12.5 \\ (11.1-14.0) \end{gathered}$ | $\begin{gathered} 12.2 \\ (10.9-13.6) \end{gathered}$ | $\begin{gathered} 12.7 \\ (11.4-14.0) \end{gathered}$ | $\begin{gathered} 12.8 \\ (11.4-14.2) \end{gathered}$ | $\begin{gathered} 15.2 \\ (13.9-16.5) \end{gathered}$ | $\begin{gathered} 14.4 \\ (13.0-15.7) \end{gathered}$ | $\begin{gathered} 14.2 \\ (13.1-15.4) \end{gathered}$ | Increased ( $p<0.001$ ) | No | No |
| Percentage of adults who have ever been told by a health professional that they had arthritis |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 28.9 \\ (27.7-30.2) \end{gathered}$ | $\begin{gathered} 30.8 \\ (29.4-32.1) \end{gathered}$ | $\begin{gathered} 30.0 \\ (28.5-31.4) \end{gathered}$ | $\begin{gathered} 29.2 \\ (27.5-31.0) \end{gathered}$ | $\begin{gathered} \hline 28.6 \\ (27.1-30.1) \end{gathered}$ | $\begin{gathered} 31.3 \\ (29.7-32.9) \end{gathered}$ | $\begin{gathered} 29.2 \\ (27.5-30.9) \end{gathered}$ | $\begin{gathered} 32.2 \\ (30.7-33.7) \end{gathered}$ | $\begin{gathered} 28.9 \\ (27.4-30.4) \end{gathered}$ | $\begin{gathered} \hline 30.4 \\ (29.1-31.8) \\ \hline \end{gathered}$ | No | No | No |

${ }^{(1)}$ A confidence interval provides a measure of estimate precision; the wider the interval, the more imprecise the estimate.
${ }^{(2)}$ Linear change - Indicates whether there was a significant linear change in prevalence during 2011-2020. That is, did the prevalence increase, decrease, or stay the same?
${ }^{(3)}$ Quadratic change - Indicates whether there was a significant change in the direction of prevalence during 2011-2020.
${ }^{(4)}$ Change from 2019-2020 - Indicates whether there was a significant increase or decrease in prevalence between 2019 and 2020.

Table 5. (continued) Health conditions, Mississippi BRFSS, 2011-2020

| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Linear ${ }^{(2)}$ <br> Change | Quadratic ${ }^{(3)}$ Change | $\begin{gathered} \hline \text { Change }{ }^{(4)} \\ \text { 2019-2020 } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent <br> (95\% Confidence Interval) ${ }^{(1)}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Percentage of adults who have ever been told by a health professional that they had skin cancer |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 5.7 \\ (5.2-6.2) \end{gathered}$ | $\begin{gathered} 5.7 \\ (5.1-6.2) \end{gathered}$ | $\begin{gathered} 5.9 \\ (5.3-6.4) \end{gathered}$ | $\begin{gathered} 5.7 \\ (4.9-6.4) \end{gathered}$ | $\begin{gathered} 6.1 \\ (5.4-6.8) \end{gathered}$ | $\begin{gathered} 5.9 \\ (5.2-6.7) \end{gathered}$ | $\begin{gathered} 5.4 \\ (4.7-6.1) \end{gathered}$ | $\begin{gathered} 6.0 \\ (5.3-6.7) \end{gathered}$ | $\begin{gathered} 6.3 \\ (5.5-7.0) \end{gathered}$ | $\begin{gathered} 5.6 \\ (5.0-6.3) \end{gathered}$ | No | No | No |
| Percentage of adults who have ever been told by a health professional that they had other types of cancer (other than skin cancer) |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 6.1 \\ (5.5-6.7) \end{gathered}$ | $\begin{gathered} 6.4 \\ (5.8-7.1) \end{gathered}$ | $\begin{gathered} 6.7 \\ (6.0-7.4) \end{gathered}$ | $\begin{gathered} 6.4 \\ (5.6-7.3) \end{gathered}$ | $\begin{gathered} 6.9 \\ (6.1-7.7) \end{gathered}$ | $\begin{gathered} 6.4 \\ (5.6-7.1) \end{gathered}$ | $\begin{gathered} 7.1 \\ (6.2-8.0) \end{gathered}$ | $\begin{gathered} 7.1 \\ (6.3-7.9) \end{gathered}$ | $\begin{gathered} 6.6 \\ (5.9-7.4) \end{gathered}$ | $\begin{gathered} 6.7 \\ (5.9-7.4) \end{gathered}$ | No | No | No |
| Percentage of adults who have ever been told by a health professional that they had COPD, emphysema, or chronic bronchitis |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 8.3 \\ (7.5-9.1) \end{gathered}$ | $\begin{gathered} 6.7 \\ (6.0-7.4) \end{gathered}$ | $\begin{gathered} 8.7 \\ (7.8-9.6) \end{gathered}$ | $\begin{gathered} 7.4 \\ (6.4-8.4) \end{gathered}$ | $\begin{gathered} 7.8 \\ (6.8-8.7) \end{gathered}$ | $\begin{gathered} 8.3 \\ (7.3-9.2) \end{gathered}$ | $\begin{gathered} 8.2 \\ (7.2-9.2) \end{gathered}$ | $\begin{gathered} 9.7 \\ (8.8-10.6) \end{gathered}$ | $\begin{gathered} 9.4 \\ (8.4-10.4) \end{gathered}$ | $\begin{gathered} 8.6 \\ (7.8-9.5) \end{gathered}$ | Increased <br> ( $\mathrm{p}<0.001$ ) | No | No |
| Percentage of adults who have ever been told by a health professional that they had a depressive disorder |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} \hline 18.8 \\ (17.6-20.0) \end{gathered}$ | $\begin{gathered} 18.4 \\ (17.2-19.7) \end{gathered}$ | $\begin{gathered} 19.2 \\ (17.9-20.5) \end{gathered}$ | $\begin{gathered} 19.9 \\ (18.2-21.7) \end{gathered}$ | $\begin{gathered} 18.2 \\ (16.8-19.7) \end{gathered}$ | $\begin{gathered} \hline 18.8 \\ (17.4-20.3) \end{gathered}$ | $\begin{gathered} 20.7 \\ (19.0-22.3) \end{gathered}$ | $\begin{gathered} 21.7 \\ (20.3-23.1) \end{gathered}$ | $\begin{gathered} 20.6 \\ (19.2-22.1) \end{gathered}$ | $\begin{gathered} 20.9 \\ (19.5-22.2) \end{gathered}$ | Increased ( $p<0.001$ ) | No | No |
| Percentage of adults who have ever been told by a health professional that they had prediabetes |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 6.7 \\ (5.9-7.5) \end{gathered}$ | $\begin{gathered} 6.5 \\ (5.8-7.3) \end{gathered}$ | $\begin{gathered} 7.3 \\ (6.5-8.2) \end{gathered}$ | $\begin{gathered} 7.5 \\ (6.4-8.6) \end{gathered}$ | No data | $\begin{gathered} 8.4 \\ (7.3-9.5) \end{gathered}$ | $\begin{gathered} 8.2 \\ (7.1-9.3) \end{gathered}$ | $\begin{gathered} 8.3 \\ (7.4-9.3) \end{gathered}$ | $\begin{gathered} 9.2 \\ (8.2-10.3) \end{gathered}$ | $\begin{gathered} 10.5 \\ (9.5-11.6) \end{gathered}$ | Increased ( $\mathrm{p}<0.001$ ) | No | No |
| Percentage of adults who have ever been told by a health professional that they had diabetes |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 12.3 \\ (11.4-13.2) \end{gathered}$ | $\begin{gathered} 12.5 \\ (11.6-13.4) \end{gathered}$ | $\begin{gathered} 12.9 \\ (11.9-13.8) \end{gathered}$ | $\begin{gathered} 13.0 \\ (11.7-14.2) \end{gathered}$ | $\begin{gathered} 14.7 \\ (13.6-15.9) \end{gathered}$ | $\begin{gathered} 13.6 \\ (12.4-14.7) \end{gathered}$ | $\begin{gathered} 14.2 \\ (13.0-15.4) \end{gathered}$ | $\begin{gathered} 14.3 \\ (13.3-15.4) \end{gathered}$ | $\begin{gathered} 14.8 \\ (13.7-15.9) \end{gathered}$ | $\begin{gathered} 14.6 \\ (13.6-15.7) \end{gathered}$ | Increased ( $\mathrm{p}<0.001$ ) | No | No |

${ }^{(1)}$ A confidence interval provides a measure of estimate precision; the wider the interval, the more imprecise the estimate.
${ }^{(2)}$ Linear change - Indicates whether there was a significant linear change in prevalence during 2011-2020. That is, did the prevalence increase, decrease, or stay the same?
${ }^{(3)}$ Quadratic change - Indicates whether there was a significant change in the direction of prevalence during 2011-2020.
${ }^{(4)}$ Change from 2019-2020-Indicates whether there was a significant increase or decrease in prevalence between 2019 and 2020.


[^0]:    ${ }^{\text {(1) }}$ A confidence interval provides a measure of estimate precision; the wider the interval, the more imprecise the estimate.
    ${ }^{(2)}$ Linear change - Indicates whether there was a significant linear change in prevalence during 2011-2020. That is, did the prevalence increase, decrease, or stay the same?
    ${ }^{(3)}$ ) quadratic change - Indicates whether there was a significant change in the direction of prevalence during 2011-2020.
    ${ }^{(4)}$ Change from 2019-2020 - Indicates whether there was a significant increase or decrease in prevalence between 2019 and 2020 .
    ${ }^{(5)}$ Decreased from 2011 to $2018(p<0.001)$; increased from 2018 to $2020(p=0.002)$.

