# APPENDIX C

## **GLOSSARY**

## **DEMOGRAPHICS**

#### **TOTAL POPULATION**

## **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different. Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

## Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Population density is a measurement of persons per square mile. Area demographic statistics are measured as a percentage of the total population based on the following formula:

## Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

### **Notes**

## Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. Total population counts are reported in the ACS public use files by combined race and ethnicity; social and economic data are reported by race or ethnicity alone.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

#### **CHANGE IN TOTAL POPULATION**

### **Data Background**

The U.S. Census counts every resident in the United States. It is mandated by Article I, Section 2 of the Constitution and takes place every 10 years. The census collects information about the age, sex, race, and ethnicity of every person in the United States. The data collected by the decennial census determine the number of seats each state has in the U.S. House of Representatives and is also used to distribute billions in federal funds to local communities. For more information about this source, refer to the United States Census 2010 website.

## Methodology

Population data for years 2000 and 2010 from the U.S. Census Bureau Decennial Census. Mapped data are summarized to 2010 census tract boundaries. Population change is calculated using the following formula:

Total Change = [Total Population 2010] - [Total Population 2000]

Rate Change = ( ( [Total Population 2010] - [Total Population 2000] ) / [Total Population 2000] ) \*

100

#### **Notes**

## Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the US Decennial Census based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the 2010 Census are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity.

## **FAMILIES WITH CHILDREN**

## **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

### Methodology

Population counts by household type are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries.

A household includes all the people who occupy a housing unit. (People not living in households are classified as living in group quarters.) Households are classified by type according to the sex of the householder and the presence of relatives. Two types of householders are distinguished: a family householder and a nonfamily householder. A family householder is a householder living with one or more individuals related to him or her by birth, marriage\*, or adoption. The householder and all people

in the household related to him or her are family members. A nonfamily householder is a householder living alone or with non-relatives only. Figures for this indicator are measured as a percentage of total population based on the following formula:

## Percentage = [Population by Family Type] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

\*Note: In Census Bureau tabulations, beginning in 2019, unless otherwise specified, the terms "spouse", "married couple" and "marriage" include same-sex couples and marriages.

#### **Notes**

## Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

### **MEDIAN AGE**

#### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

### Methodology

Median age data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. The median divides the income distribution into two equal parts: one-half of the cases falling below the median income and one-half above the median. Due to the nature of medians, report areas based on multiple counties or custom areas will return "no data".

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### **Notes**

## Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

### **MALE POPULATION**

#### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

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For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

## Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population based on the following formula:

### Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### **Notes**

#### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community

Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

## **FEMALE POPULATION**

## **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

#### Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population based on the following formula:

## Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### **Notes**

#### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may

only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

### **POPULATION AGE 0-4**

## **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

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For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

#### Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population based on the following formula:

## Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

### **Notes**

## Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This

is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

## **POPULATION AGE 5-17**

## **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

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For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

### Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population based on the following formula:

## Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### Notes

## Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

## **POPULATION UNDER AGE 18**

#### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an

annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

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For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

## Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population based on the following formula:

## Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### **Notes**

#### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

#### **POPULATION AGE 18-64**

### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS

estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

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For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

## Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population based on the following formula:

## Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### **Notes**

## **Race and Ethnicity**

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

#### **POPULATION AGE 18-24**

### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

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For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

## Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population based on the following formula:

## Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

## **Notes**

### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

## **POPULATION AGE 25-34**

### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

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For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

#### Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are

measured as a percentage of the total population based on the following formula:

## Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### Notes

#### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

## **POPULATION AGE 35-44**

#### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

#### Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population based on the following formula:

Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### Notes

## Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

#### **POPULATION AGE 45-54**

### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

#### Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population based on the following formula:

## Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### **Notes**

### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are:

White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

#### **POPULATION AGE 55-64**

### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

#### Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population based on the following formula:

### Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### **Notes**

#### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

#### **POPULATION AGE 65+**

## **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

## Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population based on the following formula:

## Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### **Notes**

#### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

### POPULATION WITH ANY DISABILITY

## **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

### Methodology

Counts of population subgroups and total area population data are acquired from the U.S. Census Bureau's American Community Survey (ACS). Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Disability status is classified in the ACS according to yes/no responses to questions (17 - 19) about six types of disability concepts. For children under 5 years old, hearing and vision difficulty are used to determine disability status. For children between the ages of 5 and 14, disability status is determined from hearing, vision, cognitive, ambulatory, and self-care difficulties. For people aged 15 years and older, they are considered to have a disability if they have difficulty with any one of the six difficulty types. Indicator statistics are measured as a percentage of the total universe (non-institutionalized) population using the following formula:

## Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### **Notes**

#### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

#### **FOREIGN-BORN POPULATION**

## **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

## Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population based on the following formula:

## Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### **Notes**

#### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### HISPANIC POPULATION

## **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

## Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population based on the following formula:

## Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### **Notes**

## Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

## NON-HISPANIC WHITE POPULATION

## **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

#### Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-

2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population based on the following formula:

## Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### **Notes**

## Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

#### **BLACK OR AFRICAN AMERICAN POPULATION**

## **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

### Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population based on the following formula:

### Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### **Notes**

### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

#### **CITIZENSHIP STATUS**

### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

#### Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population based on the following formula:

## Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

## **VETERAN POPULATION**

### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time

as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

## Methodology

Counts for population subgroups and total area population data are acquired from the U.S. Census Bureau's American Community Survey (ACS). Data represent estimates for the 5 year period 2014-2019. Data are summarized to 2010 census tract boundaries. Veteran status is classified in the ACS according to yes/no responses to questions 26 and 27. ACS data define civilian veteran as a person 18 years old and over who served (even for a short time), but is not now serving on acting duty in the U.S. Army, Navy, Air Force, Marine Corps or Coast Guard, or who served as a Merchant Marine seaman during World War II. Individuals who have training for Reserves or National Guard but no active duty service are not considered veterans in the ACS. Indicator statistics are measured as a percentage of the population aged 18 years and older using the following formula:

## Percentage = [Veteran Population] / [Total Population Age 18+] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### **Notes**

### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

## **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations have age and sex distributions that are very different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on demographic distribution. This is particularly true for areas with a substantial GQ population (like areas with military bases, colleges, or jails).

#### **Trends Over Time**

Trends over time are produced using single-year data from the American Community Survey. Single-year data are only available for geographic regions with 100,000 population or more. Because many counties have less than 100,000 population, data are reported for the total United States, states, and Public Use Microdata Area (PUMA) regions. Starting in 2012, PUMA boundaries for many areas changed. To accommodate this change, single-year data for survey years prior to 2012 are disaggregated to the county level using population weighted proportions, and then re-summarized to current PUMA boundaries. Single-year time trend estimates should not be compared to 5-year aggregate estimates.

#### **URBAN AND RURAL POPULATION**

## **Data Background**

The U.S. Census counts every resident in the United States. It is mandated by Article I, Section 2 of the Constitution and takes place every 10 years. The census collects information about the age, sex, race, and ethnicity of every person in the United States. The data collected by the decennial census determine the number of seats each state has in the U.S. House of Representatives and is also used to distribute billions in federal funds to local communities. For more information about this source, refer to the United States Census 2010 website.

## Methodology

Data are from the US 2010 Decennial Census, which provides urban and rural attributes for all geographic areas. by the 2010 Census definition, urban areas are comprised of a densely settled core of census tracts and/or census blocks that

meet minimum population density requirements and/or land use requirements. The Census Bureau identifies two types of urban areas:

- Urbanized Areas (UAs) of 50,000 or more people;
- Urban Clusters (UCs) of at least 2,500 and less than 50,000 people.

To qualify as an urban area, the territory identified according to criteria must encompass at least 2,500 people, at least 1,500 of which reside outside institutional group quarters. Areas adjacent to urban areas and cores are also designated as urban when they are non-residential, but contain urban land uses, or when they contain low population, but link outlying densely settled territory with the densely settled core. "Rural" areas consist of all territory, population, and housing units located outside UAs and UCs. Geographic entities, such as metropolitan areas, counties, minor civil divisions, places, and census tracts, often contain both urban and rural territory, population, and housing units. Indicator data tables display the percentage of population in areas designated either urban or rural based on the following formula:

## Percentage = [Urban or Rural Population] / [Total Population] \* 100

For more information, please visit the US Census Bureau's 2010 Urban and Rural Classification web page.

#### **Notes**

#### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the US Decennial Census based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the 2010 Census are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity.

## PHYSICAL ENVIRONMENT

## **FOOD ACCESS - LOW FOOD ACCESS**

## **Data Background**

The Food Access Research Atlas (FARA) presents a spatial overview of food access indicators for populations using different measures of supermarket accessibility. The FARA is a compliment to the USDA's Food Environment Atlas, which houses county-level food-related data. The FARA provides census-tract level detail of the food access measures, including food desert census tracts. Estimates in the latest version of the Food Access Research Atlas draw from various sources, including the 2019 STARS (Store Tracking and Redemption System) directory of stores authorized to accept SNAP benefits and the 2019 Trade Dimensions TDLinx directory of stores, the 2010 Decennial Census, and the 2014-18 American Community Survey. FARA estimates are released approximately every 5 years, allowing for comparisons of the food environment for years 2010, 2015, and 2019.

For more information about this source, including the methodology and data definitions please visit the Food Access Research Atlas web page.

## Methodology

This indicator reports the percentage of population without access to a supermarket or large grocery store. Census tract- level data was acquired from the USDA Food Access Research Atlas (FARA) and aggregated to generate county and state- level estimates.

The Food Access Research Atlas provides data which is derived from the analysis of multiple datasets. First, a directory of supermarkets and large grocery stores within the United States, including Alaska and Hawaii, was created by merging the 2019 STARS directory of stores authorized to accept SNAP benefits and the Trade Dimensions TDLinx directory of stores. Stores met the definition of a supermarket or large grocery store if they reported at least \$2 million in annual sales and contained all the major food departments found in a traditional supermarket, including fresh meat and poultry, dairy, dry and packaged foods, and frozen foods. The combined list of supermarkets and large grocery stores was converted into a GIS-usable format by geocoding the street address into store-point locations. Population data are obtained at the block level from the 2010 Census of Population and Housing, while data on income are drawn at the block group-level from the 2014-18 American Community Survey. Distance to nearest supermarket was determined for population blocks. These numbers and shares are then similarly aerially allocated down to the ½-kilometer-square grid level. For each ½-kilometer- square grid cell, the distance was calculated from its geographic center to the center of the grid cell with the nearest supermarket. Then, the number of households and population living more than 1, 10, and 20 miles from a supermarket or large grocery store was aggregated to the tract level and divided by the underlying population.

Rural or urban status is determined using population size. A census tract is considered rural if the population-weighted centroid of that tract is located in an area with a population of less than 2,500; all other tracts are considered urban tracts. Low-income is defined as annual family income of less than or equal to 200 percent of the Federal poverty threshold given family size.

For more information, please refer to the Food Access Research Atlas Documentation.

## **Notes**

## **Race and Ethnicity**

Statistics by race and ethnicity are not provided for this indicator from the data source. Detailed race/ ethnicity data may be available at a broader geographic level, or from a local source.

## **AIR & WATER QUALITY - RESPIRATORY HAZARD INDEX**

## **Data Background**

According to the Environmental Protection Agency (EPA), the National Air Toxic Assessment (NATA): "Assembles information on air toxics, characterizes emissions, and prioritizes air toxics and locations that merit more refined analysis and investigation. This information is used to plan, and assist with the implementation of, national, regional, and local efforts to reduce toxic air pollution. Using general information about sources to develop estimates of risks, NATA provides screening - level estimates of the risk of cancer and other potentially serious health effects as a result of inhaling air toxics. The resulting

risk estimates are purposefully more likely to be overestimates of health impacts than underestimates, and thus they are health protective.

NATA uses emissions data compiled for a single year as inputs for modeling ambient air concentrations and estimating health risks. Results include estimates of ambient concentrations and exposure concentrations (ECs) of air toxics and estimates of cancer risks and potential noncancer health effects associated with chronic inhalation exposure to air toxics. The estimates are generated within each state, at both county and census - tract levels."

The assessment includes four steps:

- · Compiling a national emissions inventory of air toxics emissions from outdoor sources
- Estimating ambient concentrations of air toxics across the United States
- Estimating population exposures across the United States
- Characterizing potential public health risk due to inhalation of air toxics including both cancer and non-cancer effects For more information, please see the NATA 2011 website or the NATA Technical Documentation.

## Methodology

This indicator reports the modelled non-cancer health risks associated with air toxics exposure. Figures represent the likelihood of hazardous exposure per 1 million population. Data are from the 2011 EPA National Air Toxic Assessment - Modeled Ambient Concentrations, Exposures and Risks data files. EPA combines the census tract level exposure concentration estimates with available unit risk estimates and inhalation reference concentrations to calculate risks and hazard quotients, respectively, for each pollutant.

The toxicity values used for NATA are quantitative expressions used to estimate the likelihood of adverse health effects given an estimated level and duration of exposure. These toxicity values are based on the results of dose - response assessments, which estimate the relationship between the dose and the frequency or prevalence of a response in a population or the probability of a response in any individual. Because NATA is focused on long - term exposures , the toxicity values used in NATA are based on the results of chronic dose - response studies when such data are available.

Chronic dose - response assessments can be used to help evaluate the specific 70 - year - average (i.e., "lifetime") EC s associated with cancer prevalence rates, or, for noncancer effects, the concentrations at which noncancer adverse health effects might occur given exposure over an extended period of time (possibly a lifetime, but the time frame also can be shorter). For more information, please see the Assessment Methods page or in the Technical Support Document.

## **BUILT ENVIRONMENT - BROADBAND ACCESS**

#### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

## Methodology

Counts of households are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. The data on internet access are obtained from Housing Question 9 and 10 in the 2019 American Community Survey (ACS) and used by CARES to calculate the rate of households with no or slow internet access. Both questions are asked at occupied housing units. The data on Question 9 show whether any member of the household has access to the internet, regardless of whether or not they pay for the service. For a response of either "Yes, without paying a cell phone company or Internet service provider" or "No access to the Internet at this house, apartment, or mobile home", they are counted by CARES into "No or SLow Internet". If a responder answers "Yes, by paying a cell phone company or Internet service provider", they are asked to select the type of internet service in Question 10, including cellular data plan for a smartphone, high speed broadband, satellite, dial-up, and other service. For the person who reports dial-up with no other type of Internet subscription, they are also counted as "No or Slow Internet". Therefore, households with no or slow internet are composed of three types of households - using dial-up only, having internet access without a subscription, and with no internet access. For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

## **INCOME & ECONOMICS**

### **POVERTY - POPULATION BELOW 200% FPL**

#### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

### Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population based on the following formula:

## Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

## **Notes**

## **Trends Over Time**

The American Community Survey multi-year estimates are based on data collected over 5 years. For any given consecutive release of ACS 5-year estimates, 4 of the 5 years overlap. The Census Bureau discourages direct comparisons between estimates for overlapping periods; use caution when interpreting this data.

#### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

## **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. The part of the group quarters population in the poverty universe (for example, people living in group homes or those living in agriculture workers' dormitories) is many times more likely to be in poverty than people living in households. Direct comparisons of the data would likely result in erroneous conclusions about changes in the poverty status of all people in the poverty universe.

#### **POVERTY - CHILDREN BELOW 200% FPL**

#### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

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For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

## Methodology

Population counts for demographic groups and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population based on the following formula:

## Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### **Notes**

#### **Trends Over Time**

The American Community Survey multi-year estimates are based on data collected over 5 years. For any given consecutive release of ACS 5-year estimates, 4 of the 5 years overlap. The Census Bureau discourages direct comparisons between estimates for overlapping periods; use caution when interpreting this data.

#### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

## **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. The part of the group quarters population in the poverty universe (for example, people living in group homes or those living in agriculture workers' dormitories) is many times more likely to be in poverty than people living in households. Direct comparisons of the data would likely result in erroneous conclusions about changes in the poverty status of all people in the poverty universe.

#### **INCOME - PER CAPITA INCOME**

#### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million

addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

## Methodology

Total income and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Per capita income is the mean money income received in the past 12 months computed for every man, woman, and child in a geographic area. It is derived by dividing the total income of all people 15 years old and over in a geographic area by the total population in that area based on the following formula:

## Per Capita Income = [Total Income of Population Age 16+] / [Total Population]

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

## **Notes**

### **Trends Over Time**

The American Community Survey multi-year estimates are based on data collected over 5 years. For any given consecutive release of ACS 5-year estimates, 4 of the 5 years overlap. The Census Bureau discourages direct comparisons between estimates for overlapping periods; use caution when interpreting this data.

### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. The part of the group quarters population in the poverty universe (for example, people living in group homes or those living in agriculture workers' dormitories) is many times more likely to be in poverty than people living in

households. Direct comparisons of the data would likely result in erroneous conclusions about changes in the poverty status of all people in the poverty universe.

## Index of Disparity (ID)

The Index of Disparity (ID) used with this indicator was adopted by researchers at the National Center for Health Statistics (NCHS) and the National Institute of Health (NIH) for use with Healthy People 2010 and 2020 guidelines. This index measures the magnitude of variation in indicator percentages across groups in this case racial and ethnic groups.

Specifically, the index of disparity is defined as "the average of the absolute differences between rates for specific groups within a population and the overall population rate, divided by the rate for the overall population and expressed as a percentage". The ID values for the indicator displayed here are calculated from American Community Survey 2008-12 5-year estimates using the following four population subgroups: Non-Hispanic White; Hispanic or Latino; Black or African American; and Other Race. The Other Race category includes Asian, Native American / Alaskan Native, Native Hawaiian / Pacific Islander, Multiple Race, and Some Other Race populations.

The ID can be expressed using the following formula:

Index of Disparity = 
$$100.0 * ((SUM (|r - R|) / n) / R)$$

...where r is the sub-group rate and R is the total population rate. Index values range from 0 (where all sub-groups are equal) to infinity. Index values are heavily dependent on the total population value (R), so comparisons should be made across geographic areas (county vs. state vs. nation), and not across indicators.

For more information on the index of disparity, please see the NIH research article A Summary Measure of Health Disparity.

### **EMPLOYMENT - UNEMPLOYMENT RATE**

## **Data Background**

The Bureau of Labor Statistics (BLS) is the principal Federal agency responsible for measuring labor market activity, working conditions, and price changes in the economy. Its mission is to collect, analyze, and disseminate essential economic information to support public and private decision-making. As an independent statistical agency, BLS serves its diverse user communities by providing products and services that are objective, timely, accurate, and relevant.

#### Methodology

Unemployment statistics are downloaded from the US Bureau of Labor Statistics (BLS) Local Area Unemployment Statistics (LAUS) database. The LAUS is dataset consists of modelled unemployment estimates. It is described by the BLS as follows:

The concepts and definitions underlying LAUS data come from the Current Population Survey (CPS), the household survey that is the official measure of the labor force for the nation. State monthly model estimates are controlled in "real time" to sum to national monthly labor force estimates from the CPS. These models combine current and historical data from the CPS, the Current Employment Statistics (CES) program, and State unemployment insurance (UI) systems. Estimates for seven large areas and their respective balances of State are also model-based. Estimates for the remainder of the sub-state labor market areas are produced through a building-block approach known as the "Handbook method." This procedure also uses data from several sources, including the CPS, the CES program, State UI systems, and the decennial census, to create estimates that are adjusted to the statewide measures of employment and unemployment. Below the labor market area level, estimates are prepared using disaggregation techniques based on inputs from the decennial census, annual population estimates, and current UI data.

From the LAUS estimates, unemployment is recalculated as follows:

Unemployment Rate = [Total Unemployed] / [Total Labor Force] \* 100

For more information, please visit the Bureau of Labor Statistics Local Area Unemployment Statistics web page.

## Notes

## Race and Ethnicity

Statistics by race and ethnicity are not provided for this indicator from the data source. Detailed race/ ethnicity data may be available at a broader geographic level, or from a local source.

## **HOUSING & FAMILIES**

## **HOUSING COST - COST BURDEN, SEVERE (50%)**

## **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

### Methodology

Counts of total households and households by monthly housing cost are acquired from the U.S. Census Bureau's American Community Survey (ACS). Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. The data for monthly housing costs as a percentage of household income are developed from a distribution of "Selected Monthly Owner Costs as a Percentage of Household Income" for owner-occupied and "Gross Rent as a Percentage of Household Income" for renter-occupied units. The owner-occupied categories are further separated into those with a mortgage and those without a mortgage. Indicator statistics are measured as a percentage total households using the following formula:

## [Households with Costs Exceeding 30% of Income] / [Total Households] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

### **HOUSING QUALITY - SUBSTANDARD HOUSING**

## **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

#### Methodology

Counts of housing units by age and condition are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2012-2016. Mapped data are summarized to 2010 census tract boundaries. Area estimates are developed at the U.S. Census Bureau, and given as a value for each geographic area. Raw counts are not provided, inhibiting the ability to produce median ages for report areas.

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2016 Code Lists, Definitions, and Accuracy.

### AFFORDABLE HOUSING

## **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

#### Methodology

This indicator reports the number of housing units available to families with different income levels. Income levels are based on various percentages of Area Median Income (AMI). AMI is acquired for each county using data from the 2015-19 American Community Survey (ACS). AMI is then used to determine affordable monthly housing payments at various income levels relative to AMI. For this assessment, affordability assumes that a family should pay no more than 30% of their income toward mortgage or gross rent. For example, the AMI for Washington, DC is \$64,267. In DC, a family earning 40% of AMI earns \$22,494 per year, or \$1,875 per month. For this family to live in affordable housing, total monthly housing costs should not exceed \$562.

Using these assumptions, the number of units affordable at each income level is estimated using ACS data on household value (for owner-occupied households) and gross rent (for renter-occupied households)\*. In the ACS, this data are presented in the form of counts of units that fall in certain value ranges. For example, in Washington, DC there are 4,563 units with gross rents between \$500 and \$600. To determine unit counts affordable at certain income levels, a proportional allocation method is used. Using the example above, the total number of rental units affordable to a family that should spend no more than \$562 on housing expenses is calculated as follows:

Units with GR under \$562 = [# GR \$1.00 - \$100] + [# GR \$100 - \$200] + [# GR \$200 - \$300] + [# GR \$300 - \$400] + [# GR \$400 - \$500] + [# GR \$500 -\$600] \* [(562 - 500) / 100]

Thus all units with gross rent (GR) in the ranges 0-100, 100-200, 200-300, 300-400, and 400-500 are counted, and around 60% of those units in the 500-600 range. Using this method, the data shows that there are approximately 20,024 units available to families earning 40% of AMI in Washington, DC.

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### **Notes**

## Race and Ethnicity

Statistics by race and ethnicity are not provided for this indicator.

#### **HOUSEHOLDS - OVERVIEW**

## **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

## Methodology

Counts of households by type and relationship are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. A household includes all the people who occupy a housing unit. (People not living in households are classified as living in group quarters.) Households are classified by type according to the sex of the householder and the presence of relatives. Two types of householders are distinguished: a family householder and a nonfamily householder. A family householder is a householder living with one or more individuals related to him or her by birth, marriage, or adoption. The householder and all people in the household related to him or her are family members. A nonfamily householder is a householder living alone or with non-relatives only. Figures for this indicator are measured as a percentage of total households based on the following formula:

### Percentage = [Households by Composition or Type] / [Total Households] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### **Notes**

#### Race and Ethnicity

Statistics by race and ethnicity are not provided for this indicator.

## **EDUCATION**

## ATTAINMENT - NO HIGH SCHOOL DIPLOMA

## **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

### Methodology

Population counts for population by educational attainment and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population aged 25+ based on the following formula:

## Percentage = [Subgroup Population] / [Total Population Age 25+] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

## **Notes**

## **Trends Over Time**

The American Community Survey multi-year estimates are based on data collected over 5 years. For any given consecutive release of ACS 5-year estimates, 4 of the 5 years overlap. The Census Bureau discourages direct comparisons between estimates for overlapping periods; use caution when interpreting this data.

#### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations may have educational attainment distributions that are different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on the educational attainment distribution. This is particularly true for areas with a substantial GQ population.

### **ATTAINMENT - HIGH SCHOOL GRADUATION RATE**

## **Data Background**

EDFacts is a U. S. Department of Education (ED) initiative to collect, analyze, report on, and promote the use of high-quality, kindergarten through grade 12 (K–12) performance data for use in education planning, policymaking, and management and budget decision-making to improve outcomes for students. EDFacts centralizes data provided by state education agencies, local education agencies, and schools, and provides users with the ability to easily analyze and report on submitted data. ED collects performance data at the school and school-district levels and provides public use files containing data that have been modified to protect against the ability to determine personally identifiable information on students.

## Methodology

Graduation rates are acquired for all US school-districts in the United States from US Department of Education (ED) EdFacts 2018-19 data tables. States are required to report graduation data to the US Department of Education under Title I, Part A of the Elementary and Secondary Education Act (ESEA). Specifically, states are required to report rates based on a cohort method, which would provide a more uniform and accurate measure of the high school graduation rate that improved comparability across states. The cohort graduation rate is defined as "the number of students who graduate in four years with a regular high school diploma divided by the number of students who form the adjusted cohort for the graduating class." From the beginning of 9th grade (or the earliest high school grade), students who are entering that grade for the first time form a cohort that is "adjusted" by adding any students who subsequently transfer into the cohort and subtracting any students who subsequently transfer out, emigrate to another country, or die.

County-level summaries are calculated by CARES using small-area estimation technique based on the proportion of the population aged 15-19 in each school district/county. The population figures for this calculation are based on data from the 2010 US Decennial Census at the census block geographic level.

For more information please consult the original data the original data or download the complete EdFacts Data Documentation.

#### **Notes**

### Race and Ethnicity

Statistics by race and ethnicity are not provided for this indicator.

#### **Data Limitations**

Graduation rates for some school districts are provided by EdFacts as ranges; range mid-points were calculated by CARES to facilitate data manipulation.

## ATTAINMENT - ASSOCIATE'S LEVEL DEGREE OR HIGHER

#### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

## Methodology

Population counts for population by educational attainment and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population aged 25+ based on the following formula: Percentage = [Subgroup Population] / [Total Population Age 25+] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

#### **Notes**

#### **Trends Over Time**

The American Community Survey multi-year estimates are based on data collected over 5 years. For any given consecutive release of ACS 5-year estimates, 4 of the 5 years overlap. The Census Bureau discourages direct comparisons between estimates for overlapping periods; use caution when interpreting this data.

### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations may have educational attainment distributions that are different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on the educational attainment distribution. This is particularly true for areas with a substantial GQ population.

## ATTAINMENT - BACHELOR'S DEGREE OR HIGHER

#### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

#### Methodology

Population counts for population by educational attainment and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. Area demographic statistics are measured as a percentage of the total population aged 25+ based on the following formula:

## Percentage = [Subgroup Population] / [Total Population Age 25+] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

### **Notes**

#### **Trends Over Time**

The American Community Survey multi-year estimates are based on data collected over 5 years. For any given consecutive release of ACS 5-year estimates, 4 of the 5 years overlap. The Census Bureau discourages direct comparisons between estimates for overlapping periods; use caution when interpreting this data.

## Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

#### **Data Limitations**

Beginning in 2006, the population in group quarters (GQ) was included in the ACS. Some types of GQ populations may have educational attainment distributions that are different from the household population. The inclusion of the GQ population could therefore have a noticeable impact on the educational attainment distribution. This is particularly true for areas with a substantial GQ population.

## **CHRONIC ABSENCE RATE**

## **Data Background**

Since 1968, the U.S. Department of Education Civil Rights Data Collection (CRDC), formerly the Elementary and Secondary School Survey, has collected data on key education and civil rights issues in our nation's public schools. The data are used by the U.S. Department of Education's Office for Civil Rights (OCR) in its enforcement and monitoring efforts, by other Department of Education offices and federal agencies, and by policymakers and researchers outside the Department of Education. The CRDC collects information about school characteristics and about programs, services, and outcomes for students. Most student data are disaggregated by race/ethnicity, sex, English-learner status, and disability status.

The CRDC is a biennial survey (i.e., it is conducted every other school year), and response to the survey is required by law. The CRDC collects data from the universe of all LEAs and schools, including long-term secure juvenile justice facilities, charter schools, alternative schools, and schools serving students with disabilities.

The CRDC is a longstanding and critical aspect of the overall enforcement and monitoring strategy used by OCR to ensure that recipients of the Department of Education's federal financial assistance do not discriminate on the basis of race, color, national origin, sex, or disability status. Fore more information, please visit the U.S. Department of Education CRDC Data Collection website.

#### Methodology

Data for this indicator are obtained from the U.S. Department of Education Civil Rights Data Collection

(CRDC). According to the CRDC, a chronically absent student is a student who is absent 15 or more school days during the school year. A student is absent if he or she is not physically on school grounds and is not participating in instruction or instruction-related

activities at an approved off-grounds location for at least half the school day. Each day that a student is absent for 50 percent or more of the school day should be counted. Any day that a student is absent for less than 50 percent of the school day should not be counted. The number of absences is based on the total number of school days absent. Chronically absent students include students who are absent for any reason (e.g., illness, suspension, the need to care for a family member), regardless of whether absences are excused or unexcused.

School-district data are aggregated from school-level records. Calculated percentages only reflect chronic absenteeism among schools within the district with valid (unsuppressed) data. For more information, please see the definitions for Chronic Student Absenteeism from the CRDC Survey.

# OTHER SOCIAL & ECONOMIC FACTORS

# **HOMELESS CHILDREN & YOUTH**

## **Data Background**

EDFacts is a U. S. Department of Education (ED) initiative to collect, analyze, report on, and promote the use of high-quality, kindergarten through grade 12 (K–12) performance data for use in education planning, policymaking, and management and budget decision-making to improve outcomes for students. EDFacts centralizes data provided by state education agencies, local education agencies, and schools, and provides users with the ability to easily analyze and report on submitted data. ED collects performance data at the school and school-district levels and provides public use files containing data that have been modified to protect against the ability to determine personally identifiable information on students.

## Methodology

This indicator reports the number and percentage of homeless children and youth enrolled in the public school system during the latest report year. According to the data source definitions, homelessness is defined as lacking a fixed, regular, and adequate nighttime residence. Those who are homeless may be sharing the housing of other persons, living in motels, hotels, or camping grounds, in emergency transitional shelters, or may be unsheltered. County-level summaries are calculated by CARES using small-area estimation technique based on the proportion of the population aged 5-17 in each school district/county. The population figures for this calculation are based on data from the 2010 US Decennial Census at the census block geographic level.

### Notes:

- 1. Data is suppressed for school districts when the count of students is less than 3.
- 2. Data is missing for a number of school districts. The percentage of districts with data, and the percentage of students in
- 3. districts with data are reported to aid with interpretation.
- 4. Use caution when comparing data across states due to discrepancies in reporting. For more information please consult the original data or download the complete EdFacts Data Documentation.

### HOUSEHOLDS WITH NO MOTOR VEHICLE

### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

# Methodology

Counts of housing units are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Mapped data are summarized to 2010 census tract boundaries. The data on vehicles available were obtained from Housing Question 11 in the 2019 American Community Survey (ACS). The question was asked at occupied housing units. These data show the number of passenger cars, vans, and pickup or panel trucks of one-ton capacity or less kept

at home and available for the use of household members. Vehicles rented or leased for one month or more, company vehicles, and police and government vehicles are included if kept at home and used for non-business purposes. Dismantled or immobile vehicles are excluded. Vehicles kept at home but used only for business purposes also are excluded. For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

# **INSURANCE - UNINSURED ADULTS (SAHIE)**

## **Data Background**

The Small Area Health Insurance Estimates (SAHIE) program was created to develop model-based estimates of health insurance coverage for counties and states. It is currently the only dataset providing complete health-insurance coverage estimates. The models predict state and county level insurance estimates for total populations, as well as population groups defined by age, sex, race and income.

The SAHIE program models health insurance coverage by combining survey data with population estimates and administrative records. SAHIE estimates are a product of the US Census Bureau with funding from the Centers for Disease Control and Prevention.

The SAHIE health insurance models use data from the following sources:

- American Community Survey
- Internal Revenue Service: Federal Tax Returns
- Supplemental Nutrition Assistance Program (SNAP): Participation
- Records County Business Patterns
- Medicaid and Children's Health Insurance Program (CHIP): Participation
- Records US Census 2010

# Methodology

Counts of the number of persons without medical insurance are modelled for the Small Area Income and Health Insurance Estimates (SAHIE) datasets by the Census Bureau using both survey and census data. In this reporting platform, indicator percentages are summarized from the SAHIE estimates based on the following formula:

# Percentage = SUM [Uninsured Population] / SUM [Total Population] \* 100

For more information about the data used in these estimates, please visit the Small Area Health Insurance Estimates website and view the provided Data Inputs page.

## **Notes**

# Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Data reported from the US Census Bureau's Small Area Health Insurance Estimates (SAHIE) program is available by combined race and ethnicity, and is reported only for state and national data summaries. County level statistics by race and ethnicity are not provided for this indicator from the data source. Detailed race/ethnicity data may be available from a local source.

# **INSURANCE - UNINSURED CHILDREN (SAHIE)**

# **Data Background**

The Small Area Health Insurance Estimates (SAHIE) program was created to develop model-based estimates of health insurance coverage for counties and states. It is currently the only dataset providing complete health-insurance coverage estimates. The models predict state and county level insurance estimates for total populations, as well as population groups defined by age, sex, race and income.

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- Supplemental Nutrition Assistance Program (SNAP): Participation
- Records County Business Patterns
- Medicaid and Children's Health Insurance Program (CHIP): Participation
- Records US Census 2010

# Methodology

Counts of the number of persons without medical insurance are modelled for the Small Area Income and Health Insurance Estimates (SAHIE) datasets by the Census Bureau using both survey and census data. In this reporting platform, indicator percentages are summarized from the SAHIE estimates based on the following formula:

# Percentage = SUM [Uninsured Population] / SUM [Total Population] \* 100

For more information about the data used in these estimates, please visit the Small Area Health Insurance Estimates website and view the provided Data Inputs page.

### **Notes**

# Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Data reported from the US Census Bureau's Small Area Health Insurance Estimates (SAHIE) program is available by combined race and ethnicity, and is reported only for state and national data summaries. County level statistics by race and ethnicity are not provided for this indicator from the data source. Detailed race/ethnicity data may be available from a local source.

# **SOCIAL VULNERABILITY INDEX**

# Methodology

# About the Social Vulnerability Index (SVI)

The degree to which a community exhibits certain social conditions, including high poverty, low percentage of vehicle access, or crowded households, may affect that community's ability to prevent human suffering and financial loss in the event of disaster. These factors describe a community's social vulnerability.

The Geospatial Research, Analysis & Services Program (GRASP) created the Centers for Disease Control and Prevention Social Vulnerability Index (CDC SVI or simply SVI, hereafter) to help public health officials and emergency response planners identify and map the communities that will most likely need support before, during, and after a hazardous event. SVI indicates the relative vulnerability of every U.S. Census tract. Census tracts are subdivisions of counties for which the Census collects statistical data. SVI ranks the tracts on 15 social factors, including unemployment, minority status, and disability, and further groups them into four related themes. Thus, each tract receives a ranking for each Census variable and for each of the four themes, as well as an overall ranking. In addition to tract-level rankings, SVI 2010, 2014, 2016, and 2018 also have corresponding rankings at the county level. Notes below that describe "tract" methods also refer to county methods. How can CDC SVI help communities be better prepared for hazardous events? SVI provides specific socially and spatially relevant information to help public health officials and local planners better prepare communities to respond to emergency events such as severe weather, floods, disease outbreaks, or chemical exposure.

# **INSURANCE - POPULATION RECEIVING MEDICAID**

### **Data Background**

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April

1. The Census Bureau combines 5 consecutive years of ACS data to produce estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months. Because the ACS is based on a sample, rather than all housing units and people, ACS estimates have a degree of uncertainty associated with them, called sampling error. In general, the larger the sample, the smaller the level of sampling error. Data users should be careful in drawing conclusions about small differences between two ACS estimates because they may not be statistically different.

Citation: Citation: U.S. Census Bureau: UNDERSTANDING AND USING AMERICAN COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW (2018).

For more information about this source, including data collection methodology and definitions, refer to the American Community Survey data users website.

# Methodology

Counts of the population by health insurance status and total area population data are acquired from the U.S. Census Bureau's American Community Survey. Data represent estimates for the 5 year period 2014-2019. Data are aggregate summaries based on 2010 Census Tract boundaries. Health insurance coverage status is classified in the ACS according to yes/no responses to questions (16a - 16h) representing eight categories of health insurance, including: Employer-based, Directly-purchased, Medicare, Medicaid/Medical Assistance, TRICARE, VA health care, Indian Health Service, and Other. An eligibility edit was applied to give Medicaid, Medicare, and TRICARE coverage to individuals based on program eligibility rules. People were considered insured if they reported at least one "yes" to Questions 16a - 16f. Indicator statistics are measured as a percentage of the universe population using the following formula:

# Percentage = [Subgroup Population] / [Total Population] \* 100

For more information on the data reported in the American Community Survey, please see the complete American Community Survey 2019 Subject Definitions.

### **Notes**

# Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories in the American Community Survey (ACS) based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Indicator race and ethnicity statistics are generated from self-identified survey responses. Using the OMB standard, the available race categories in the ACS are: White, Black, American Indian/Alaskan Native, Asian, and Other. An ACS survey respondent may identify as one race alone, or may choose multiple races. Respondents selecting multiple categories are racially identified as "Two or More Races". The minimum ethnicity categories are: Hispanic or Latino, and Not Hispanic or Latino. Respondents may only choose one ethnicity. All social and economic data are reported in the ACS public use files by race alone, ethnicity alone, and for the white non-Hispanic population.

## **Data Limitations**

The population 'universe' for most health insurance coverage estimates is the civilian noninstitutionalized population, which excludes active-duty military personnel and the population living in correctional facilities and nursing homes. Some noninstitutionalized group quarters (GQ) populations have health insurance coverage distributions that are different from the household population (e.g., the prevalence of private health insurance among residents of college dormitories is higher than the household population). The proportion of the universe that is in the noninstitutionalized GQ populations could therefore have a noticeable impact on estimates of the health insurance coverage. Institutionalized GQ populations may also have health insurance coverage distributions that are different from the civilian noninstitutionalized population, the distributions in the published tables may differ slightly from how they would look if the total population were represented.

# **VIOLENT CRIME - TOTAL**

### **Data Background**

The Federal Bureau of Investigation (FBI) is a governmental agency belonging to the United States Department of Justice that serves to protect and defend the United States against terrorist and foreign

intelligence threats, to uphold and enforce the criminal laws of the United States, and to provide leadership and criminal justice services to federal, state, municipal, and international agencies and partners. The FBI's Uniform Crime Reporting (UCR) Program has been the starting place for law enforcement executives, students of criminal justice, researchers, members of the media, and the public at large seeking information on crime in the nation. The program was conceived in 1929 by the International Association of Chiefs of Police to meet the need for reliable uniform crime statistics for the nation. In 1930, the FBI was tasked with collecting, publishing, and archiving those statistics.

Today, four annual publications, Crime in the United States, National Incident-Based Reporting System, Law Enforcement Officers Killed and Assaulted, and Hate Crime Statistics are produced from data received from over 18,000 city, university/college, county, state, tribal, and federal law enforcement agencies voluntarily participating in the program. The crime data are submitted either through a state UCR Program or directly to the FBI's UCR Program. For more information, please visit the FBI's Uniform Crime Reports website.

# Methodology

Crime totals, population figures, and crime rates are multi-year county-level estimates created by the National Archive of Criminal Justice Data (NACJD) based on agency-level\* records in a file obtained from the FBI, which also provides aggregated county totals. NACJD imputes missing data and then aggregates the data to the county-level. Violent crimes consist of homicide, forcible rape, robbery, and aggravated assault. Rates are reported as the number of crimes per 100,000 population using the following formula:

# Crime Rate = [Number Violent Crimes] / [Total Population] \*100,000

\*Police jurisdictions may be defined by the boundary of a county, county subdivision, or city. Regional police departments may consist of multiple cities or subdivisions.

Access to the complete methodology is available through the Inter-university Consortium for Political and Social Research (IPSCOR), a repository for the NAJDC Uniform Crime Reporting Program Data Series.

#### **Notes**

### Race and Ethnicity

Statistics by race and ethnicity are not provided for this indicator from the data source. Detailed race/ethnicity data may be available at a broader geographic level, or from a local source. Data Limitations

- 1. Participation by law enforcement agencies in the UCR program is voluntary. Sub-state data and maps do not necessarily represent an exhaustive list of crimes due to gaps in reporting.
- 2. Data for forcible rape was not consistently reported by city and county agencies in the state of Minnesota. Forcible rapes are not included in the violent crime summaries for cities and counties in that state.
- 3. Some institutions of higher education have their own police departments, which handle offenses occurring within campus grounds. These offenses are not included in the violent crime statistics, but can be obtained from the Uniform Crime Reports Universities and Colleges data tables.

# **Data Suppression**

Suppression is used to avoid misinterpretation when rates are unreliable or unstable. When the FBI determines that an agency's data collection methodology does not comply with national UCR guidelines, the figure(s) for that agency's offense(s) are not be included. For further details please see the original data tables available online through the FBI Crime in the US website.

# **HEALTH BEHAVIORS**

# **ALCOHOL - BINGE DRINKING**

# **Data Background**

The Behavioral Risk Factor Surveillance System (BRFSS) is a collaborative project of the Centers for Disease Control and Prevention (CDC) and U.S. states and territories. The BRFSS, administered and supported by CDC's Behavioral Risk Factor Surveillance Branch, is an ongoing data collection program designed to measure behavioral risk factors for the adult population (18 years of age or older) living in households. The health characteristics estimated from the BRFSS include data pertaining to health behaviors, chronic conditions, access and utilization of healthcare, and general health. Surveys are administered to populations at the state level and then delivered to the CDC. BRFSS annual survey data are publicly available and maintained on the CDC's BRFSS Annual Survey Data web page.

In 2015, The Robert Wood Johnson Foundation and CDC Foundation launched the 500 Cities Project in partnership with the Centers for Disease Control and Prevention (CDC). The 500 city project seeks to identify, analyze, and report city and census tract-level data, obtained using small area estimation methods, for 27 chronic disease measures for the 500 largest American cities.

# PHYSICAL INACTIVITY

## **Data Background**

The Centers for Disease Control and Prevention's National Center for Chronic Disease Prevention and Health Promotion monitors the health of the Nation and produces publically available data to promote general health. The division maintains the Diabetes Data and Trends data system, which includes the National Diabetes Fact Sheet and the National Diabetes Surveillance System. These programs provide resources documenting the public health burden of diabetes and its complications in the United States. The surveillance system also includes county-level estimates of diagnosed diabetes and selected risk factors for all U.S. counties to help target and optimize the resources for diabetes control and prevention.

Citation: Centers for Disease Control and Prevention, Diabetes Data & Trends: Frequently Asked Questions (FAQ). (2012).

### Methodology

Data for the total adult population and the estimated population with inadequate physical activity are acquired from the County Level Estimates of Diagnosed Diabetes, a service of the Centers for Disease Control and Prevention's National

Diabetes Surveillance Program. Diabetes and other risk factor prevalence is estimated using the following formula:

## Percent Prevalence = [Risk Factor Population] / [Total Population] \* 100.

All data are estimates modelled by the CDC using the methods described below:

The National Diabetes Surveillance system produces data estimating the prevalence of diagnosed diabetes and population obesity by county using data from CDC's Behavioral Risk Factor Surveillance System (BRFSS) and data from the U.S. Census Bureau's Population Estimates Program. The BRFSS is an ongoing, monthly, state-based telephone survey of the adult population. The survey provides state-specific information on behavioral risk factors and preventive health practices. Respondents were considered to have diabetes if they responded "yes" to the question, "Has a doctor ever told you that you have diabetes?" Women who indicated that they only had diabetes during pregnancy were not considered to have diabetes. Respondents were considered obese if their body mass index was 30 or greater. Body mass index (weight [kg]/height [m]2) was derived from self-report of height and weight. Respondents were considered to be physically inactive if they answered "no" to the 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?"

Three years of data were used to improve the precision of the year-specific county-level estimates of diagnosed diabetes and selected risk factors. For example, 2003, 2004, and 2005 were used for the 2004

estimate and 2004, 2005, and 2006 were used for the 2005 estimate. Estimates were restricted to adults 20 years of age or older to be consistent with population estimates from the U.S. Census Bureau. The U.S. Census Bureau provides year-specific county population estimates by demographic characteristics—age, sex, race, and Hispanic origin.

The county-level estimates were based on indirect model-dependent estimates. The model-dependent approach employs a statistical model that "borrows strength" in making an estimate for one county from BRFSS data collected in other counties. Bayesian multilevel modeling techniques were used to obtain these estimates. Separate models were developed for each of the four census regions: West, Midwest, Northeast and South. Multilevel Poisson regression models with random effects of demographic variables (age 20–44, 45–64, 65+; race; sex) at the county-level were developed. State was included as a county-level covariate.

Citation: Centers for Disease Control and Prevention, Diabetes Data & Trends: Methods and References for County-Level Estimates and Ranks. (2012).

Rates are age adjusted by the CDC for the following three age groups: 20-44, 45-64, 65+. Additional information, including the complete methodology and data definitions, can be found at the CDC's Diabetes Data and Statistics website.

### **Notes**

## Race and Ethnicity

Statistics by race and ethnicity are not provided for this indicator from the data source. Detailed race/ ethnicity data may be available at a broader geographic level, or from a local source.

# STI - CHLAMYDIA INCIDENCE

# **Data Background**

The National Center for HIV/AIDS, Viral Hepatitis, Sexually Transmitted Disease (STD), and Tuberculosis (TB) Prevention (NCHHSTP) is the branch of the Centers for Disease Control and Prevention (CDC) responsible for public health surveillance, prevention research, and programs to prevent and control HIV and AIDS, other STDs, viral hepatitis, and TB. NCHHSTP developed a set of indicators to monitor the prevalence and track its progress toward ending these diseases in each state, and regularly reports its progress. The NCHHSTEP program includes data from new patient case reports from 56 areas (all 50 states, the District of Columbia, American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands).

# Methodology

Cases of a given STD refer to confirmed diagnoses during a given time period. For example, the 2010 data on gonorrhea infection would include persons with laboratory-confirmed infection diagnosed between January 1, 2010 and December 31, 2010, and reported to CDC through June 8, 2011. Rates per 100,000 population were calculated for each STD. The population denominators used to compute these rates for the 50 states and the District of Columbia were based on the National Center for Health Statistics (NCHS) bridged-race population counts for the 2000–2010. These estimates are a modification of the U.S. Census Bureau population estimates in which the 31 race categories used by the Census Bureau are bridged into the five race/ethnicity groups that have been historically used to report race data for STD cases. Each rate was calculated by dividing the number of cases for the calendar year by the population for that calendar year and then multiplying the number by 100,000.

For more information, visit the NCHHSTP Atlas and click on the "About these data and footnotes" link.

## **Notes**

### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories by state departments of health based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Data reported from the CDC National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) is available by combined race and ethnicity, and is reported only for state and national data summaries. County level statistics by race and ethnicity are not provided for this indicator from the data source. Detailed race/ethnicity data may be available from a local source.

#### STI - GONORRHEA INCIDENCE

# **Data Background**

The National Center for HIV/AIDS, Viral Hepatitis, Sexually Transmitted Disease (STD), and Tuberculosis (TB) Prevention (NCHHSTP) is the branch of the Centers for Disease Control and Prevention (CDC) responsible for public health surveillance, prevention research, and programs to prevent and control HIV and AIDS, other STDs, viral hepatitis, and TB. NCHHSTP developed a set of indicators to monitor the prevalence and track its progress toward ending these diseases in each state, and regularly reports its progress. The NCHHSTEP program includes data from new patient case reports from 56 areas (all 50 states, the District of Columbia, American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands).

## Methodology

Cases of a given STD refer to confirmed diagnoses during a given time period. For example, the 2010 data on gonorrhea infection would include persons with laboratory-confirmed infection diagnosed between January 1, 2010 and December 31, 2010, and reported to CDC through June 8, 2011. Rates per 100,000 population were calculated for each STD. The population denominators used to compute these rates for the 50 states and the District of Columbia were based on the National Center for Health Statistics (NCHS) bridged-race population counts for the 2000–2010. These estimates are a modification of the U.S. Census Bureau population estimates in which the 31 race categories used by the Census Bureau are bridged into the five race/ethnicity groups that have been historically used to report race data for STD cases. Each rate was calculated by dividing the number of cases for the calendar year by the population for that calendar year and then multiplying the number by 100,000.

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# Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories by state departments of health based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Data reported from the CDC National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) is available by combined race and ethnicity, and is reported only for state and national data summaries. County level statistics by race and ethnicity are not provided for this indicator from the data source. Detailed race/ethnicity data may be available from a local source.

## STI - HIV PREVALENCE

## **Data Background**

The National Center for HIV/AIDS, Viral Hepatitis, Sexually Transmitted Disease (STD), and Tuberculosis (TB) Prevention (NCHHSTP) is the branch of the Centers for Disease Control and Prevention (CDC) responsible for public health surveillance, prevention research, and programs to prevent and control HIV and AIDS, other STDs, viral hepatitis, and TB. NCHHSTP developed a set of indicators to monitor the prevalence and track its progress toward ending these diseases in each state, and regularly reports its progress. The NCHHSTEP program includes data from new patient case reports from 56 areas (all 50 states, the District of Columbia, American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands).

# Methodology

Cases of a given STD refer to confirmed diagnoses during a given time period. For example, the 2010 data on gonorrhea infection would include persons with laboratory-confirmed infection diagnosed between January 1, 2010 and December 31, 2010, and reported to CDC through June 8, 2011. Rates per 100,000 population were calculated for each STD. The population denominators used to compute these rates for the 50 states and the District of Columbia were based on the National Center for Health Statistics (NCHS) bridged-race population counts for the 2000–2010. These estimates are a modification of the U.S. Census Bureau population estimates in which the 31 race categories used by the Census Bureau are bridged into the five race/ethnicity groups that have been historically used to report race data for STD cases. Each rate was calculated by dividing the number of cases for the calendar year by the population for that calendar year and then multiplying the number by 100,000.

For more information, visit the NCHHSTP Atlas and click on the "About these data and footnotes" link.

#### **Notes**

## Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories by state departments of health based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. Data reported from the CDC National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) is available by combined race and ethnicity, and is reported only for state and national data summaries. County level statistics by race and ethnicity are not provided for this indicator from the data source. Detailed race/ethnicity data may be available from a local source.

## **TOBACCO USAGE - CURRENT SMOKERS**

# **Data Background**

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### FRUIT/VEGETABLE EXPENDITURES

# **Data Background**

Nielsen is a publicly held information company and a primary supplier of consumer spending data around the world, using both statistical analysis and field sampling techniques to produce accurate and timely information. Published annually, SiteReports provide market analysis to Nielsen customers at multiple geographic levels, spanning a wide range of topics including population demographics, household spending, and market potential. The SiteReports Consumer Buying Power (CBP) database is created using statistical models estimated from the Bureau of Labor Statistics' Consumer Expenditure Surveys (CEX). This survey provides information on the buying habits of American consumers, including expenditures, income, and other characteristics of the consumer unit (families and single consumers). The Consumer Expenditure Survey consists of two surveys: the quarterly Interview survey and the weekly Diary Survey. The surveys target the total non-institutionalized population (urban and rural) of the United States. The data is collected from the independent quarterly interview and weekly diary surveys of approximately 7,500 sample households. Each survey has its own independent sample, and each collects data on household income and socioeconomic characteristics. The current Nielsen Consumer Buying Power data uses a rolling five years of data from the Consumer Expenditure Survey, administered from 2005 through 2009. In addition to this data, the Nielsen Consumer Buying Power database also incorporates information from the following sources:

- Nielsen Demographic Update
- Nielsen Cartographics
- U.S. Census Bureau: Census of Retail Trade.

For more information, please visit the Nielsen website.

#### Methodology

Census tract level average and aggregated total household expenditures and category expenditures were acquired from the 2011 Nielsen Consumer Buying Power (CBP) SiteReports. Tract-level and county-level expenditure estimates are proprietary Nielsen data restricted from public distribution and subject to terms of use agreements. Indicator data tables contain state and national ranks for counties, and percent expenditure estimates based on aggregated tract-level data. The percent expenditure figures calculated for custom geographic areas can be expressed using the following formula:

Percent Expenditures = [Category Expenditures] / [Total Area Expenditures] \* 100

To generate acceptable county-level output for indicator report pages, percent expenditures for each food-at-home category were sorted and ranked by county. Each county's within-state rank and that rank's percentile are displayed in the indicator data table. This information is not available for custom geographic areas, for states, or for the total United States. County percentiles are calculated using the following formula:

# Percentile = [County Within State Rank] / [Total Number of Counties in State] \* 100

To generate acceptable map output in compliance with the Nielsen terms of use agreement, percent expenditures for each tract were sorted and ranked; quintiles were assigned to each tract based on national rank and symbolized within the map. Additional attributes include each tract's within-state rank and quintile. Definitions for food-at-home categories used for consumer spending indicators are based on categories in the BLS Consumer Expenditure Survey (CEX), and are listed below.

- Soft drinks: Soft drink expenditures included in this category are any non-alcoholic carbonated beverages purchased for consumption at home. Soft drinks purchased at restaurants and other dining establishments are not included.
- Alcoholic beverages: Alcohol expenditures included in this category are any beer, wine, and liquor purchased for consumption at home. Alcohol purchased at restaurants and bars is not included.
- **Fruit and vegetables:** Fruit and vegetables expenditures included in this category are all fresh, frozen and canned fruits and vegetables purchased for consumption at home.
- Tobacco: Tobacco expenditures included in this category are cigarettes only; cigars and other tobacco products are not included.

Further details about the analysis used by Nielsen group can be found in the Consumer Buying Power Methodology.

### **Notes**

# Race and Ethnicity

Statistics by race and ethnicity are not provided for this indicator.

# **HEALTH OUTCOMES**

# POOR OR FAIR HEALTH

# **Data Background**

The Behavioral Risk Factor Surveillance System (BRFSS) is

"... a collaborative project of the Centers for Disease Control and Prevention (CDC) and U.S. states and territories. The BRFSS, administered and supported by CDC's Behavioral Risk Factor Surveillance Branch, is an ongoing data collection program designed to measure behavioral risk factors for the adult population (18 years of age or older) living in households."

Citation: Centers for Disease Control and Prevention, Office of Surveillance, Epidemiology, and Laboratory Services. Overview: BRFSS 2010.

The health characteristics estimated from the BRFSS include data pertaining to health behaviors, chronic conditions, access and utilization of healthcare, and general health. Surveys are administered to populations at the state level and then delivered to the CDC and tabulated into county estimates by the BRFSS analysis team. Beginning with the 2016 County Health Rankings, the CDC produces county estimates using single-year BRFSS data and a multilevel modeling approach based on respondent answers and their age, sex, and race/ethnicity, combined with county-level poverty, as well as county-and state-level contextual effects. To produce estimates for those counties where there were no or limited data, the modeling approach borrowed information from the entire BRFSS sample as well as Census Vintage 2014 population estimates. CDC used a parametric bootstrapping method to produce standard errors and confidence intervals for those point estimates. This estimation methodology was validated for all U.S. counties, including those with no or small (<50 respondents) samples.

# Methodology

Indicator percentages are acquired for year 2015 from Behavioral Risk Factor Surveillance System (BRFSS) prevalence data, accessible through the University of Wisconsin's County Health Rankings. Data are based on the percentage of respondents answering the following question: "Would you say that in general your health is— Excellent, Very good, Good, Fair, Or Poor?" Percentages are ageadjusted and only pertain to the non-institutionalized population aged 18 and up. Additional detailed information about the BRFSS, including questionnaires, data collection procedures, and data processing methodologies are available on the BRFSS web site. For additional information about the single-year estimates displayed here, please visit the County Health Rankings website.

# **POOR MENTAL HEALTH**

# **Data Background**

The Behavioral Risk Factor Surveillance System (BRFSS) is a collaborative project of the Centers for Disease Control and Prevention (CDC) and U.S. states and territories. The BRFSS, administered and supported by CDC's Behavioral Risk Factor Surveillance Branch, is an ongoing data collection program designed to measure behavioral risk factors for the adult population (18 years of age or older) living in households. The health characteristics estimated from the BRFSS include data pertaining to health behaviors, chronic conditions, access and utilization of healthcare, and general health. Surveys are administered to populations at the state level and then delivered to the CDC. BRFSS annual survey data are publicly available and maintained on the CDC's BRFSS Annual Survey Data web page.

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# **POOR PHYSICAL HEALTH**

# **Data Background**

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behaviors, chronic conditions, access and utilization of healthcare, and general health. Surveys are administered to populations at the state level and then delivered to the CDC. BRFSS annual survey data are publicly available and maintained on the CDC's BRFSS Annual Survey Data web page.

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## **CANCER INCIDENCE - ALL SITES**

# **Data Background**

The State Cancer Profiles website provides statistics to help guide and prioritize cancer control activities at the state and local levels. State Cancer Profiles are a collaborative effort of the National Cancer Institute (NCI) and the Centers for Disease Control and Prevention (CDC). The incidence rates tables accessed through the State Cancer Profiles website provide incidence statistics compiled from state and local cancer registries. Statistics are available for those states with cancer registries whose data have met the criteria required for inclusion in the US Cancer Statistics. Data is provided for use in assessing the burden and risk for a major cancer site for the US overall or for a selected state and its counties. State-based cancer registries are data systems that collect, manage, and analyze data about cancer cases and cancer deaths. In each state, medical facilities (including hospitals, physicians' offices, therapeutic radiation facilities, freestanding surgical centers, and pathology laboratories) report these data to a central cancer registry. State cancer registries receive funding and program guidance through the CDC's National Program of Cancer Registries and the National Cancer Institute's Surveillance, Epidemiology and End Results (SEER) program.

For more information, please visit the State Cancer Profiles website.

# Methodology

Annual incidence rates are acquired for all US states and counties as an average for years 2013-2017 from the State Cancer Profiles Incidence Rates Tables. This source provides the average annual incidence of new cancer cases, as well as incidence rates, age adjusted to the 2010 US standard population. The new case counts (incidence) used to generate the State Cancer Profiles data tables are provided by the National Program of Cancer Registries Cancer Surveillance System (NPCR-CSS), the Centers for Disease Control and Prevention, CDC's National Program of Cancer Registries Cancer Surveillance System (NPCR-CSS), and by the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) Program.

In order to perform aggregate (multi-county or service area) incidence rate estimates with the data provided, age-adjusted total populations are first back-calculated using the following formula:

Adj. Population = ([Cancer Incidence] / ([Adj. Incidence Rate] / 100,000))

This estimated population figure is then used in the formula to re-calculate age-adjusted cancer rates as follows:

Adj. Incidence Rate = 100,000 \* ([Cancer Incidence] / [Adj. Population])

For more information about the State Cancer Profiles data, including age-adjustment and data suppression, please visit the SEER\*Stat website.

## **Notes**

# **Data Limitations**

- 1. County-level data are not available for the states of Kansas and Minnesota because of state legislation and regulations which prohibit the release of county level data to outside entities.
- 2. Data for the state of Michigan do not include cases diagnosed in other states because data exchange agreements prohibit the release of data to third parties.

Cancer statistics from the State Cancer Profiles database are reported by race alone (White, Black, Amer. Indian/AK Native, and Asian) or by ethnicity alone (Hispanic), or for the white Hispanic and white non-Hispanic population. NHIA (NAACCR Hispanic Identification Algorithm) was used to determine Hispanic ethnicity. See the Technical Notes section of the 2003 United States Cancer Statistics Report for more information.

# **Data Suppression**

Suppression is used to avoid misinterpretation when rates are unstable. Data are suppressed when the number of cases is less than 16 (for each county/cancer/population group combination) over the time period monitored, or when the total population (per race-ethnicity-sex grouping) of the report area is less than 50,000

## **CHRONIC CONDITIONS - ALZHEIMER'S DISEASE**

# **Data Background**

The Centers for Medicare & Medicaid Services (CMS), a branch of the Department of Health and Human Services (HHS), is the federal agency that runs the Medicare Program and monitors Medicaid programs offered by each state. Medicare is a type of federally-funded health insurance available to disabled persons and the population age 65 and older. The Office of Enterprise Data and Analytics within the Centers for Medicare & Medicaid Services (CMS) developed a public use file to support further analysis of the geographic variation in the amount and quality of the health care services that Medicare beneficiaries receive. For more information, please see the Geographic Variation Public Use File Methodology document.

# Methodology

Indicator percentages are acquired for 2007 - 2018 from Centers for Medicare and Medicaid Services (CMS) Chronic Conditions Warehouse. The data used in the chronic condition reports are based upon CMS administrative enrollment and claims data for Medicare beneficiaries enrolled in the fee-for-service program. Beneficiaries who died during the year are included up to their date of death if they meet the other inclusion criteria. Chronic condition prevalence estimates are calculated by CMS by taking the beneficiaries with a particular condition divided by the total number of beneficiaries in our fee-for-service population, expressed as a percentage. For more information and to

Enrollment data are acquired for 2007 - 2018 from Centers for Medicare and Medicaid Services (CMS) Medicare Geographic Variation Public Use File. This CMS table has developed data that enables researchers and policy-makers to evaluate geographic variation in the utilization and quality of health care services for the Medicare fee-for-service population. data are aggregated into a Geographic Variation Public Use File that has demographic, spending, utilization, and quality indicators at the state level (including the District of Columbia, Puerto Rico, and the Virgin Islands), hospital referral region (HRR) level, and county level. For more information and to view the original data, please visit the CMS Medicare Geographic Variation web page.

# **CHRONIC CONDITIONS - ASTHMA PREVALENCE (ADULT)**

view the original data, please visit the CMS Chronic Conditions web page.

# **Data Background**

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## **CHRONIC CONDITIONS - COPD (ADULT)**

# **Data Background**

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# **CHRONIC CONDITIONS - HEART DISEASE (ADULT)**

# **Data Background**

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# CHRONIC CONDITIONS - HIGH BLOOD PRESSURE (ADULT)

## **Data Background**

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# CHRONIC CONDITIONS - HIGH CHOLESTEROL (ADULT)

### **Data Background**

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# **MORTALITY - CANCER**

## **Data Background**

The Division of Vital Statistics is a branch of the Centers for Disease Control and Prevention (CDC) National Center for Health Statistics (NCHS) responsible for maintaining birth and death records for the nation. Data are compiled for the National Vital Statistics System (NVSS) through a joint effort between the NCHS and various state and local health agencies, who are responsible for registering vital events – births, deaths, marriages, divorces, and fetal deaths. NVSS statistics are released annually in various data warehouses, including CDC WONDER, VitalStats, and the Health Indicator Warehouse.

# Methodology

County population figures and death statistics are acquired using CDC WONDER from the Underlying Cause of Death database. Conditions were queried for years 2015-2019 based on a selection of codes from the International Classification of Diseases (ICD) 10th revision. The ICD-10 is the current global health information standard for mortality and morbidity statistics. The ICD has been maintained by the World Health Organization since its conception in 1948. A searchable, detailed list of current ICD-10 Codes (Version 2019) is available from the World Health Organization.

Mortality rates were acquired from the source age-adjusted to the year 2000 U.S. standard. To recalculate age-adjusted mortality rates for unique service areas and aggregated county groupings, the following formula was used:

# Mortality Rate = 100,000 \* SUM [(Total Population) \* ((Age-Adjusted Rate)/100,000)] / SUM(Total Population).

The specific codes used for reported mortality indicators are listed below (notice that motor vehicle crash, firearm, and poisoning are listed as part of the injury mechanism for all kinds of deaths and thus are not related with any specific codes).

- Assault (homicide): U01-U02, X85-Y09, Y87.1
- Cerebrovascular disease (stroke): I60-I69
- Coronary (Ischaemic) heart disease: I20-I25
- Chronic lower respiratory disease (lung disease): J40-J47
- Heart disease: I00-I09, I11, I13, I20-I51
- Intentional self-harm (suicide): U03, X60-X84, Y87.0
- Malignant neoplasm (cancer): C00-C97
- Unintentional injury (accident): V01-X59, Y85-Y86
- Influenza and pneumonia: J09-J18
- Opioid overdose: T40.0-T40.4

### **Notes**

# **Data Suppression**

Suppression is used to avoid misinterpretation when rates are unstable. Data are suppressed when the total number of cases is less than 10 (for each county/cause of death/population group) over the time period monitored. Rates should be considered unreliable when calculated with a numerator (number of cases) less than 20.

## **Trends Over Time**

Race and ethnicity (Hispanic origin) are collected as two separate categories by state vital statistics registries based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. All mortality statistics from the CDC WONDER databases are available by race alone (White, Black, Amer. Indian/AK Native, and Asian) ethnicity alone (Hispanic, Non-Hispanic), or by combined race and ethnicity. Data are reported here in combination, and thus may be subject to higher suppression than if reported separately.

## **MORTALITY - DRUG POISONING**

# **Data Background**

The Division of Vital Statistics is a branch of the Centers for Disease Control and Prevention (CDC) National Center for Health Statistics (NCHS) responsible for maintaining birth and death records for the nation. Data are compiled for the National Vital Statistics System (NVSS) through a joint effort between the NCHS and various state and local health agencies, who are responsible for registering vital events – births, deaths, marriages, divorces, and fetal deaths. NVSS statistics are released annually in various data warehouses, including CDC WONDER, VitalStats, and the Health Indicator Warehouse.

# Methodology

County population figures and death statistics are acquired using CDC WONDER from the Underlying Cause of Death database. Conditions were queried for years 2015-2019 based on a selection of codes from the International Classification of Diseases (ICD) 10th revision. The ICD-10 is the current global health information standard for mortality and morbidity statistics. The ICD has been maintained by the World Health Organization since its conception in 1948. A searchable, detailed list of current ICD-10 Codes (Version 2019) is available from the World Health Organization.

Mortality rates were acquired from the source age-adjusted to the year 2000 U.S. standard. To recalculate age-adjusted mortality rates for unique service areas and aggregated county groupings, the following formula was used:

# Mortality Rate = 100,000 \* SUM [(Total Population) \* ((Age-Adjusted Rate)/100,000)] / SUM(Total Population).

The specific codes used for reported mortality indicators are listed below (notice that motor vehicle crash, firearm, and poisoning are listed as part of the injury mechanism for all kinds of deaths and thus are not related with any specific codes).

- Assault (homicide): U01-U02, X85-Y09, Y87.1
- Cerebrovascular disease (stroke): I60-I69
- Coronary (Ischaemic) heart disease: I20-I25
- Chronic lower respiratory disease (lung disease): J40-J47
- Heart disease: I00-I09, I11, I13, I20-I51
- Intentional self-harm (suicide): U03, X60-X84, Y87.0
- Malignant neoplasm (cancer): C00-C97
- Unintentional injury (accident): V01-X59, Y85-Y86
- Influenza and pneumonia: J09-J18
- Opioid overdose: T40.0-T40.4

# **Notes**

## **Data Suppression**

Suppression is used to avoid misinterpretation when rates are unstable. Data are suppressed when the total number of cases is less than 10 (for each county/cause of death/population group) over the time period monitored. Rates should be considered unreliable when calculated with a numerator (number of cases) less than 20.

## **Trends Over Time**

Race and ethnicity (Hispanic origin) are collected as two separate categories by state vital statistics registries based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. All mortality statistics from the CDC WONDER databases are available by race alone (White, Black, Amer. Indian/AK Native, and Asian) ethnicity alone (Hispanic, Non-Hispanic), or by combined race and ethnicity. Data are reported here in combination, and thus may be subject to higher suppression than if reported separately.

### **MORTALITY - HEART DISEASE**

# **Data Background**

The Division of Vital Statistics is a branch of the Centers for Disease Control and Prevention (CDC) National Center for Health Statistics (NCHS) responsible for maintaining birth and death records for the nation. Data are compiled for the National Vital Statistics System (NVSS) through a joint effort between the NCHS and various state and local health agencies, who are responsible for registering vital events – births, deaths, marriages, divorces, and fetal deaths. NVSS statistics are released annually in various data warehouses, including CDC WONDER, VitalStats, and the Health Indicator Warehouse.

# Methodology

County population figures and death statistics are acquired using CDC WONDER from the Underlying Cause of Death database. Conditions were queried for years 2015-2019 based on a selection of codes from the International Classification of Diseases (ICD) 10th revision. The ICD-10 is the current global health information standard for mortality and morbidity statistics. The ICD has been maintained by the World Health Organization since its conception in 1948. A searchable, detailed list of current ICD-10 Codes (Version 2019) is available from the World Health Organization.

Mortality rates were acquired from the source age-adjusted to the year 2000 U.S. standard. To recalculate age-adjusted mortality rates for unique service areas and aggregated county groupings, the following formula was used:

# Mortality Rate = 100,000 \* SUM [(Total Population) \* ((Age-Adjusted Rate)/100,000)] / SUM(Total Population).

The specific codes used for reported mortality indicators are listed below (notice that motor vehicle crash, firearm, and poisoning are listed as part of the injury mechanism for all kinds of deaths and thus are not related with any specific codes).

- Assault (homicide): U01-U02, X85-Y09, Y87.1
- Cerebrovascular disease (stroke): I60-I69
- Coronary (Ischaemic) heart disease: I20-I25
- Chronic lower respiratory disease (lung disease): J40-J47
- Heart disease: I00-I09, I11, I13, I20-I51
- Intentional self-harm (suicide): U03, X60-X84, Y87.0
- Malignant neoplasm (cancer): C00-C97
- Unintentional injury (accident): V01-X59, Y85-Y86
- Influenza and pneumonia: J09-J18
- Opioid overdose: T40.0-T40.4

# **Notes**

# **Data Suppression**

Suppression is used to avoid misinterpretation when rates are unstable. Data are suppressed when the total number of cases is less than 10 (for each county/cause of death/population group) over the time period monitored. Rates should be considered unreliable when calculated with a numerator (number of cases) less than 20.

## **Trends Over Time**

Race and ethnicity (Hispanic origin) are collected as two separate categories by state vital statistics registries based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. All mortality statistics from the CDC WONDER databases are available by race alone (White, Black, Amer. Indian/AK Native, and Asian) ethnicity alone (Hispanic, Non-Hispanic), or by combined race and ethnicity. Data are reported here in combination, and thus may be subject to higher suppression than if reported separately.

### **MORTALITY - HOMICIDE**

# **Data Background**

The Division of Vital Statistics is a branch of the Centers for Disease Control and Prevention (CDC) National Center for Health Statistics (NCHS) responsible for maintaining birth and death records for the nation. Data are compiled for the National Vital Statistics System (NVSS) through a joint effort between the NCHS and various state and local health agencies, who are responsible for registering vital events – births, deaths, marriages, divorces, and fetal deaths. NVSS statistics are released annually in various data warehouses, including CDC WONDER, VitalStats, and the Health Indicator Warehouse.

# Methodology

County population figures and death statistics are acquired using CDC WONDER from the Underlying Cause of Death database. Conditions were queried for years 2015-2019 based on a selection of codes from the International Classification of Diseases (ICD) 10th revision. The ICD-10 is the current global health information standard for mortality and morbidity statistics. The ICD has been maintained by the World Health Organization since its conception in 1948. A searchable, detailed list of current ICD-10 Codes (Version 2019) is available from the World Health Organization.

Mortality rates were acquired from the source age-adjusted to the year 2000 U.S. standard. To recalculate age-adjusted mortality rates for unique service areas and aggregated county groupings, the following formula was used:

# Mortality Rate = 100,000 \* SUM [(Total Population) \* ((Age-Adjusted Rate)/100,000)] / SUM(Total Population).

The specific codes used for reported mortality indicators are listed below (notice that motor vehicle crash, firearm, and poisoning are listed as part of the injury mechanism for all kinds of deaths and thus are not related with any specific codes).

- Assault (homicide): U01-U02, X85-Y09, Y87.1
- Cerebrovascular disease (stroke): I60-I69
- Coronary (Ischaemic) heart disease: I20-I25
- Chronic lower respiratory disease (lung disease): J40-J47
- Heart disease: I00-I09, I11, I13, I20-I51
- Intentional self-harm (suicide): U03, X60-X84, Y87.0
- Malignant neoplasm (cancer): C00-C97
- Unintentional injury (accident): V01-X59, Y85-Y86
- Influenza and pneumonia: J09-J18
- Opioid overdose: T40.0-T40.4

# **Notes**

## **Data Suppression**

Suppression is used to avoid misinterpretation when rates are unstable. Data are suppressed when the total number of cases is less than 10 (for each county/cause of death/population group) over the time period monitored. Rates should be considered unreliable when calculated with a numerator (number of cases) less than 20.

## **Trends Over Time**

Race and ethnicity (Hispanic origin) are collected as two separate categories by state vital statistics registries based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. All mortality statistics from the CDC WONDER databases are available by race alone (White, Black, Amer. Indian/AK Native, and Asian) ethnicity alone (Hispanic, Non-Hispanic), or by combined race and ethnicity. Data are reported here in combination, and thus may be subject to higher suppression than if reported separately.

## **MORTALITY - CORONARY HEART DISEASE**

# **Data Background**

The Division of Vital Statistics is a branch of the Centers for Disease Control and Prevention (CDC) National Center for Health Statistics (NCHS) responsible for maintaining birth and death records for the nation. Data are compiled for the National Vital Statistics System (NVSS) through a joint effort between the NCHS and various state and local health agencies, who are responsible for registering vital events – births, deaths, marriages, divorces, and fetal deaths. NVSS statistics are released annually in various data warehouses, including CDC WONDER, VitalStats, and the Health Indicator Warehouse.

# Methodology

County population figures and death statistics are acquired using CDC WONDER from the Underlying Cause of Death database. Conditions were queried for years 2015-2019 based on a selection of codes from the International Classification of Diseases (ICD) 10th revision. The ICD-10 is the current global health information standard for mortality and morbidity statistics. The ICD has been maintained by the World Health Organization since its conception in 1948. A searchable, detailed list of current ICD-10 Codes (Version 2019) is available from the World Health Organization.

Mortality rates were acquired from the source age-adjusted to the year 2000 U.S. standard. To recalculate age-adjusted mortality rates for unique service areas and aggregated county groupings, the following formula was used:

# Mortality Rate = 100,000 \* SUM [(Total Population) \* ((Age-Adjusted Rate)/100,000)] / SUM(Total Population).

The specific codes used for reported mortality indicators are listed below (notice that motor vehicle crash, firearm, and poisoning are listed as part of the injury mechanism for all kinds of deaths and thus are not related with any specific codes).

- Assault (homicide): U01-U02, X85-Y09, Y87.1
- Cerebrovascular disease (stroke): I60-I69
- Coronary (Ischaemic) heart disease: I20-I25
- Chronic lower respiratory disease (lung disease): J40-J47
- Heart disease: I00-I09, I11, I13, I20-I51
- Intentional self-harm (suicide): U03, X60-X84, Y87.0
- Malignant neoplasm (cancer): C00-C97
- Unintentional injury (accident): V01-X59, Y85-Y86
- Influenza and pneumonia: J09-J18
- Opioid overdose: T40.0-T40.4

# Notes

# **Data Suppression**

Suppression is used to avoid misinterpretation when rates are unstable. Data are suppressed when the total number of cases is less than 10 (for each county/cause of death/population group) over the time period monitored. Rates should be considered unreliable when calculated with a numerator (number of cases) less than 20.

## **Trends Over Time**

Race and ethnicity (Hispanic origin) are collected as two separate categories by state vital statistics registries based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. All mortality statistics from the CDC WONDER databases are available by race alone (White, Black, Amer. Indian/AK Native, and Asian) ethnicity alone (Hispanic, Non-Hispanic), or by combined race and ethnicity. Data are reported here in combination, and thus may be subject to higher suppression than if reported separately.

### **MORTALITY - LUNG DISEASE**

# **Data Background**

The Division of Vital Statistics is a branch of the Centers for Disease Control and Prevention (CDC) National Center for Health Statistics (NCHS) responsible for maintaining birth and death records for the nation. Data are compiled for the National Vital Statistics System (NVSS) through a joint effort between the NCHS and various state and local health agencies, who are responsible for registering vital events – births, deaths, marriages, divorces, and fetal deaths. NVSS statistics are released annually in various data warehouses, including CDC WONDER, VitalStats, and the Health Indicator Warehouse.

# Methodology

County population figures and death statistics are acquired using CDC WONDER from the Underlying Cause of Death database. Conditions were queried for years 2015-2019 based on a selection of codes from the International Classification of Diseases (ICD) 10th revision. The ICD-10 is the current global health information standard for mortality and morbidity statistics. The ICD has been maintained by the World Health Organization since its conception in 1948. A searchable,

detailed list of current ICD-10 Codes (Version 2019) is available from the World Health Organization. Mortality rates were acquired from the source age-adjusted to the year 2000 U.S. standard. To recalculate age-adjusted mortality rates for unique service areas and aggregated county groupings, the following formula was used:

# Mortality Rate = 100,000 \* SUM [(Total Population) \* ((Age-Adjusted Rate)/100,000)] / SUM(Total Population).

The specific codes used for reported mortality indicators are listed below (notice that motor vehicle crash, firearm, and poisoning are listed as part of the injury mechanism for all kinds of deaths and thus are not related with any specific codes).

- Assault (homicide): U01-U02, X85-Y09, Y87.1
- Cerebrovascular disease (stroke): I60-I69
- Coronary (Ischaemic) heart disease: I20-I25
- Chronic lower respiratory disease (lung disease): J40-J47
- Heart disease: I00-I09, I11, I13, I20-I51
- Intentional self-harm (suicide): U03, X60-X84, Y87.0
- Malignant neoplasm (cancer): C00-C97
- Unintentional injury (accident): V01-X59, Y85-Y86
- Influenza and pneumonia: J09-J18
- Opioid overdose: T40.0-T40.4

# **Notes**

# **Data Suppression**

Suppression is used to avoid misinterpretation when rates are unstable. Data are suppressed when the total number of cases is less than 10 (for each county/cause of death/population group) over the time period monitored. Rates should be considered unreliable when calculated with a numerator (number of cases) less than 20.

## **Trends Over Time**

Race and ethnicity (Hispanic origin) are collected as two separate categories by state vital statistics registries based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. All mortality statistics from the CDC WONDER databases are available by race alone (White, Black, Amer. Indian/AK Native, and Asian) ethnicity alone (Hispanic, Non-Hispanic), or by combined race and ethnicity. Data are reported here in combination, and thus may be subject to higher suppression than if reported separately.

### **MORTALITY - STROKE**

# **Data Background**

The Division of Vital Statistics is a branch of the Centers for Disease Control and Prevention (CDC) National Center for Health Statistics (NCHS) responsible for maintaining birth and death records for the nation. Data are compiled for the National Vital Statistics System (NVSS) through a joint effort between the NCHS and various state and local health agencies, who are responsible for registering vital events – births, deaths, marriages, divorces, and fetal deaths. NVSS statistics are released annually in various data warehouses, including CDC WONDER, VitalStats, and the Health Indicator Warehouse.

## Methodology

County population figures and death statistics are acquired using CDC WONDER from the Underlying Cause of Death database. Conditions were queried for years 2015-2019 based on a selection of codes from the International Classification of Diseases (ICD) 10th revision. The ICD-10 is the current global health information standard for mortality and morbidity statistics. The ICD has been maintained by the World Health Organization since its conception in 1948. A searchable, detailed list of current ICD-10 Codes (Version 2019) is available from the World Health Organization.

Mortality rates were acquired from the source age-adjusted to the year 2000 U.S. standard. To recalculate age-adjusted mortality rates for unique service areas and aggregated county groupings, the following formula was used:

# Mortality Rate = 100,000 \* SUM [(Total Population) \* ((Age-Adjusted Rate)/100,000)] / SUM(Total Population).

The specific codes used for reported mortality indicators are listed below (notice that motor vehicle crash, firearm, and poisoning are listed as part of the injury mechanism for all kinds of deaths and thus are not related with any specific codes).

- Assault (homicide): U01-U02, X85-Y09, Y87.1
- Cerebrovascular disease (stroke): I60-I69
- Coronary (Ischaemic) heart disease: I20-I25
- Chronic lower respiratory disease (lung disease): J40-J47
- Heart disease: I00-I09, I11, I13, I20-I51
- Intentional self-harm (suicide): U03, X60-X84, Y87.0
- Malignant neoplasm (cancer): C00-C97
- Unintentional injury (accident): V01-X59, Y85-Y86
- Influenza and pneumonia: J09-J18
- Opioid overdose: T40.0-T40.4

### **Notes**

# **Data Suppression**

Suppression is used to avoid misinterpretation when rates are unstable. Data are suppressed when the total number of cases is less than 10 (for each county/cause of death/population group) over the time period monitored. Rates should be considered unreliable when calculated with a numerator (number of cases) less than 20.

## **Trends Over Time**

Trends over time are produced using single-year mortality data from the CDC WONDER query system. Use caution when comparing single-year mortality rates with 5-year aggregate mortality rates. Trend data are available for states and for the

total US; county-level data are not provided due to data suppression / low numerator counts.

### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories by state vital statistics

registries based on methods established by the U.S. Office of Management and Budget (OMB) in 1997. All mortality statistics from the CDC WONDER databases are available by race alone (White, Black, Amer. Indian/AK Native, and Asian) ethnicity alone (Hispanic, Non-Hispanic), or by combined race and ethnicity. Data are reported here in combination, and thus may be subject to higher suppression than if reported separately.

# **MORTALITY-SUICIDE**

## **Data Background**

The Division of Vital Statistics is a branch of the Centers for Disease Control and Prevention (CDC) National Center for Health Statistics (NCHS) responsible for maintaining birth and death records for the nation. Data are compiled for the National Vital Statistics System (NVSS) through a joint effort between the NCHS and various state and local health agencies, who are responsible for registering vital events – births, deaths, marriages, divorces, and fetal deaths. NVSS statistics are released annually in various data warehouses, including CDC WONDER, VitalStats, and the Health Indicator Warehouse.

# Methodology

County population figures and death statistics are acquired using CDC WONDER from the Underlying Cause of Death database. Conditions were queried for years 2015-2019 based on a selection of codes from the International Classification of Diseases (ICD) 10th revision. The ICD-10 is the current global health information standard for mortality and morbidity statistics. The ICD has been maintained by the World Health Organization since its conception in 1948. A searchable, detailed list of current ICD-10 Codes (Version 2019) is available from the World Health Organization.

Mortality rates were acquired from the source age-adjusted to the year 2000 U.S. standard. To recalculate age-adjusted mortality rates for unique service areas and aggregated county groupings, the following formula was used:

# Mortality Rate = 100,000 \* SUM [(Total Population) \* ((Age-Adjusted Rate)/100,000)] / SUM(Total Population).

The specific codes used for reported mortality indicators are listed below (notice that motor vehicle crash, firearm, and poisoning are listed as part of the injury mechanism for all kinds of deaths and thus are not related with any specific codes).

- Assault (homicide): U01-U02, X85-Y09, Y87.1
- Cerebrovascular disease (stroke): I60-I69
- Coronary (Ischaemic) heart disease: I20-I25
- Chronic lower respiratory disease (lung disease): J40-J47
- Heart disease: I00-I09, I11, I13, I20-I51
- Intentional self-harm (suicide): U03, X60-X84, Y87.0
- Malignant neoplasm (cancer): C00-C97
- Unintentional injury (accident): V01-X59, Y85-Y86
- Influenza and pneumonia: J09-J18
- Opioid overdose: T40.0-T40.4

# **Notes**

# **Data Suppression**

Suppression is used to avoid misinterpretation when rates are unstable. Data are suppressed when the total number of cases is less than 10 (for each county/cause of death/population group) over the time period monitored. Rates should be considered unreliable when calculated with a numerator (number of cases) less than 20.

# **Trends Over Time**

Trends over time are produced using single-year mortality data from the CDC WONDER query system. Use caution when comparing single-year mortality rates with 5-year aggregate mortality rates. Trend data are available for states and for the total US; county-level data are not provided due to data suppression / low numerator counts.

### Race and Ethnicity

Race and ethnicity (Hispanic origin) are collected as two separate categories by state vital statistics registries based on methods established by the U.S. Office of Management and Budget (OMB) in 1997.

All mortality statistics from the CDC WONDER databases are available by race alone (White, Black, Amer. Indian/AK Native, and Asian) ethnicity alone (Hispanic, Non-Hispanic), or by combined race and ethnicity. Data are reported here in combination, and thus may be subject to higher suppression than if reported separately.

# **OBESITY**

# **Data Background**

The Centers for Disease Control and Prevention's National Center for Chronic Disease Prevention and Health Promotion monitors the health of the Nation and produces publicly available data to promote general health. The division maintains the Diabetes Data and Trends data system, which includes the National Diabetes Fact Sheet and the National Diabetes Surveillance System. These programs provide resources documenting the public health burden of diabetes and its complications in the United States. The surveillance system also includes county-level estimates of diagnosed diabetes and selected risk factors for all U.S. counties to help target and optimize the resources for diabetes control and prevention.

Citation: Centers for Disease Control and Prevention, Diabetes Data & Trends: Frequently Asked Questions (FAQ). (2012).

# Methodology

Data for total population and estimated obese population data are acquired from the County Level Estimates of Diagnosed Diabetes, a service of the Centers for Disease Control and Prevention's National Diabetes Surveillance Program. Diabetes and other risk factor prevalence is estimated using the following formula:

# Percent Prevalence = [Risk Factor Population] / [Total Population] \* 100.

All data are estimates modelled by the CDC using the methods described below:

The National Diabetes Surveillance system produces data estimating the prevalence of diagnosed diabetes and population obesity by county using data from CDC's Behavioral Risk Factor Surveillance System (BRFSS) and data from the U.S. Census Bureau's Population Estimates Program. The BRFSS is an ongoing, monthly, state-based telephone survey of the adult population. The survey provides state- specific information on behavioral risk factors and preventive health practices. Respondents were considered to have diabetes if they responded "yes" to the question, "Has a doctor ever told you that you have diabetes?" Women who indicated that they only had diabetes during pregnancy were not considered to have diabetes. Respondents were considered obese if their body mass index was 30 or greater. Body mass index (weight [kg]/height [m]2) was derived from self-report of height and weight. Respondents were considered to be physically inactive if they answered "no" to the 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?"

Three years of data were used to improve the precision of the year-specific county-level estimates of diagnosed diabetes and selected risk factors. For example, 2003, 2004, and 2005 were used for the 2004 estimate and 2004, 2005, and 2006 were used for the 2005 estimate. Estimates were restricted to adults 20 years of age or older to be consistent with population estimates from the U.S. Census Bureau. The U.S. Census Bureau provides year-specific county population estimates by demographic characteristics—age, sex, race, and Hispanic origin.

The county-level estimates were based on indirect model-dependent estimates. The model-dependent approach employs a statistical model that "borrows strength" in making an estimate for one county from BRFSS data collected in other counties. Bayesian multilevel modeling techniques were used to obtain these estimates. Separate models were developed for each of the four census regions: West, Midwest, Northeast and South. Multilevel Poisson regression models with random effects of demographic variables (age 20–44, 45–64, 65+; race; sex) at the county-level were developed. State was included as a county-level covariate.

Citation: Centers for Disease Control and Prevention, Diabetes Data & Trends: Methods and References for County-Level Estimates and Ranks. (2012).

Rates are age adjusted by the CDC for the following three age groups: 20-44, 45-64, 65+. Additional information, including the complete methodology and data definitions, can be found at the CDC's Diabetes Data and Statistics website.

## **Notes**

# Race and Ethnicity

Statistics by race and ethnicity are not provided for this indicator from the data source. Detailed race/ethnicity data may be available at a broader geographic level, or from a local source.

# **DEPRESSION (MEDICARE POPULATION)**

# **Data Background**

The Centers for Medicare & Medicaid Services (CMS), a branch of the Department of Health and Human Services (HHS), is the federal agency that runs the Medicare Program and monitors Medicaid programs offered by each state. Medicare is a type of federally-funded health insurance available to disabled persons and the population age 65 and older. The Office of Enterprise Data and Analytics within the Centers for Medicare & Medicaid Services (CMS) developed a public use file to support further analysis of the geographic variation in the amount and quality of the health care services that Medicare beneficiaries receive. For more information, please see the Geographic Variation Public Use File Methodology document.

# Methodology

Indicator percentages are acquired for 2007 - 2018 from Centers for Medicare and Medicaid Services (CMS) Chronic Conditions Warehouse. The data used in the chronic condition reports are based upon CMS administrative enrollment and claims data for Medicare beneficiaries enrolled in the fee-for-service program. Beneficiaries who died during the year are included up to their date of death if they meet the other inclusion criteria. Chronic condition prevalence estimates are calculated by CMS by taking the beneficiaries with a particular condition divided by the total number of beneficiaries in our fee-for-service population, expressed as a percentage. For more information and to view the original data, please visit the CMS Chronic Conditions web page.

Enrollment data are acquired for 2007 - 2018 from Centers for Medicare and Medicaid Services (CMS) Medicare Geographic Variation Public Use File. This CMS table has developed data that enables researchers and policy-makers to evaluate geographic variation in the utilization and quality of health care services for the Medicare fee-for-service population. data are aggregated into a Geographic Variation Public Use File that has demographic, spending, utilization, and quality indicators at the state level (including the District of Columbia, Puerto Rico, and the Virgin Islands), hospital referral region (HRR) level, and county level. For more information and to view the original data, please visit the CMS Medicare Geographic Variation web page.

### **DIABETES (ADULT)**

# **Data Background**

The Centers for Disease Control and Prevention's National Center for Chronic Disease Prevention and Health Promotion monitors the health of the Nation and produces publicly available data to promote general health. The division maintains the Diabetes Data and Trends data system, which includes the National Diabetes Fact Sheet and the National Diabetes Surveillance System. These programs provide resources documenting the public health burden of diabetes and its complications in the United States. The surveillance system also includes county-level estimates of diagnosed diabetes and selected risk factors for all U.S. counties to help target and optimize the resources for diabetes control and prevention. Citation: Centers for Disease Control and Prevention, Diabetes Data & Trends: Frequently Asked Questions (FAQ). (2012).

## Methodology

Data for total population and estimated obese population data are acquired from the County Level Estimates of Diagnosed Diabetes, a service of the Centers for Disease Control and Prevention's National Diabetes Surveillance Program. Diabetes and other risk factor prevalence is estimated using the following formula:

# Percent Prevalence = [Risk Factor Population] / [Total Population] \* 100.

All data are estimates modelled by the CDC using the methods described below:

The National Diabetes Surveillance system produces data estimating the prevalence of diagnosed diabetes and population obesity by county using data from CDC's Behavioral Risk Factor Surveillance System (BRFSS) and data from the U.S. Census Bureau's Population Estimates Program. The BRFSS is an ongoing, monthly, state-based telephone survey of the adult population. The survey provides state-specific information on behavioral risk factors and preventive health practices. Respondents were considered to have diabetes if they responded "yes" to the question, "Has a doctor ever told you that you have diabetes?" Women who indicated that they only had diabetes during pregnancy were not considered to have diabetes. Respondents were considered obese if their body mass index was 30 or greater. Body mass index (weight [kg]/height [m]2) was derived from self-report of height and weight. Respondents were considered to be physically inactive if they answered "no" to the 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?"

Three years of data were used to improve the precision of the year-specific county-level estimates of diagnosed diabetes and selected risk factors. For example, 2003, 2004, and 2005 were used for the 2004 estimate and 2004, 2005, and 2006 were used for the 2005 estimate. Estimates were restricted to adults 20 years of age or older to be consistent with population estimates from the U.S. Census Bureau. The U.S. Census Bureau provides year-specific county population estimates by demographic characteristics—age, sex, race, and Hispanic origin.

The county-level estimates were based on indirect model-dependent estimates. The model-dependent approach employs a statistical model that "borrows strength" in making an estimate for one county from BRFSS data collected in other counties. Bayesian multilevel modeling techniques were used to obtain these estimates. Separate models were developed for each of the four census regions: West, Midwest, Northeast and South. Multilevel Poisson regression models with random effects of demographic variables (age 20–44, 45–64, 65+; race; sex) at the county-level were developed. State was included as a county-level covariate.

Citation: Centers for Disease Control and Prevention, Diabetes Data & Trends: Methods and References for County-Level Estimates and Ranks. (2012).

Rates are age adjusted by the CDC for the following three age groups: 20-44, 45-64, 65+. Additional information, including the complete methodology and data definitions, can be found at the CDC's Diabetes Data and Statistics website.

### **Notes**

### Race and Ethnicity

Statistics by race and ethnicity are not provided for this indicator from the data source. Detailed race/ ethnicity data may be available at a broader geographic level, or from a local source.

# SUBSTANCE USE DISORDER (MEDICARE POPULATION)

# **Data Background**

The Centers for Medicare & Medicaid Services (CMS), a branch of the Department of Health and Human Services (HHS), is the federal agency that runs the Medicare Program and monitors Medicaid programs offered by each state. Medicare is a type of federally-funded health insurance available to disabled persons and the population age 65 and older. The Office of Enterprise Data and Analytics within the Centers for Medicare & Medicaid Services (CMS) developed a public use file to support further analysis of the geographic variation in the amount and quality of the health care services that Medicare beneficiaries receive. For more information, please see the Geographic Variation Public Use File Methodology document.

# Methodology

Indicator percentages are acquired for 2007 - 2018 from Centers for Medicare and Medicaid Services (CMS) Chronic Conditions Warehouse. The data used in the chronic condition reports are based upon CMS administrative enrollment and claims data for Medicare beneficiaries enrolled in the fee-for-service

program. Beneficiaries who died during the year are included up to their date of death if they meet the other inclusion criteria. Chronic condition prevalence estimates are calculated by CMS by taking the beneficiaries with a particular condition divided by the total number of beneficiaries in our fee-for-service population, expressed as a percentage. For more information and to view the original data, please visit the CMS Chronic Conditions web page.

Enrollment data are acquired for 2007 - 2018 from Centers for Medicare and Medicaid Services (CMS) Medicare Geographic Variation Public Use File. This CMS table has developed data that enables researchers and policy-makers to evaluate geographic variation in the utilization and quality of health care services for the Medicare fee-for-service population. data are aggregated into a Geographic Variation Public Use File that has demographic, spending, utilization, and quality indicators at the state level (including the District of Columbia, Puerto Rico, and the Virgin Islands), hospital referral region (HRR) level, and county level. For more information and to view the original data, please visit the CMS Medicare Geographic Variation web page.

# ALCOHOL USE DISORDER (MEDICARE POPULATION)

# **Data Background**

The Centers for Medicare & Medicaid Services (CMS), a branch of the Department of Health and Human Services (HHS), is the federal agency that runs the Medicare Program and monitors Medicaid programs offered by each state. Medicare is a type of federally-funded health insurance available to disabled persons and the population age 65 and older. The Office of Enterprise Data and Analytics within the Centers for Medicare & Medicaid Services (CMS) developed a public use file to support further analysis of the geographic variation in the amount and quality of the health care services that Medicare beneficiaries receive. For more information, please see the Geographic Variation Public Use File Methodology document.

## Methodology

Indicator percentages are acquired for 2007 - 2018 from Centers for Medicare and Medicaid Services (CMS) Chronic Conditions Warehouse. The data used in the chronic condition reports are based upon CMS administrative enrollment and claims data for Medicare beneficiaries enrolled in the fee-for-service program. Beneficiaries who died during the year are included up to their date of death if they meet the other inclusion criteria. Chronic condition prevalence estimates are calculated by CMS by taking the beneficiaries with a particular condition divided by the total number of beneficiaries in our fee-for-service population, expressed as a percentage. For more information and to view the original data, please visit the CMS Chronic Conditions web page.

Enrollment data are acquired for 2007 - 2018 from Centers for Medicare and Medicaid Services (CMS) Medicare Geographic Variation Public Use File. This CMS table has developed data that enables researchers and policy-makers to evaluate geographic variation in the utilization and quality of health care services for the Medicare fee-for-service population. data are aggregated into a Geographic Variation Public Use File that has demographic, spending, utilization, and quality indicators at the state level (including the District of Columbia, Puerto Rico, and the Virgin Islands), hospital referral region (HRR) level, and county level. For more information and to view the original data, please visit the CMS Medicare Geographic Variation web page.

# CLINICAL CARE & PREVENTION

# **CANCER SCREENING - PAP SMEAR TEST**

## **Data Background**

The Behavioral Risk Factor Surveillance System (BRFSS) is a collaborative project of the Centers for Disease Control and Prevention (CDC) and U.S. states and territories. The BRFSS, administered and supported by CDC's Behavioral Risk Factor Surveillance Branch, is an ongoing data collection program designed to measure behavioral risk factors for the adult population (18 years of age or older) living in households. The health characteristics estimated from the BRFSS include data pertaining to health behaviors, chronic conditions, access and utilization of healthcare, and general health. Surveys are administered to populations at the state level and then delivered to the CDC. BRFSS annual survey data are publicly available and maintained on the CDC's BRFSS Annual Survey Data web page.

In 2015, The Robert Wood Johnson Foundation and CDC Foundation launched the 500 Cities Project in partnership with the Centers for Disease Control and Prevention (CDC). The 500 city project seeks to identify, analyze, and report city and census tract-level data, obtained using small area estimation methods, for 27 chronic disease measures for the 500 largest American cities.

# **CANCER SCREENING - SIGMOIDOSCOPY OR COLONOSCOPY**

# **Data Background**

The Behavioral Risk Factor Surveillance System (BRFSS) is a collaborative project of the Centers for Disease Control and Prevention (CDC) and U.S. states and territories. The BRFSS, administered and supported by CDC's Behavioral Risk Factor Surveillance Branch, is an ongoing data collection program designed to measure behavioral risk factors for the adult population (18 years of age or older) living in households. The health characteristics estimated from the BRFSS include data pertaining to health behaviors, chronic conditions, access and utilization of healthcare, and general health. Surveys are administered to populations at the state level and then delivered to the CDC. BRFSS annual survey data are publicly available and maintained on the CDC's BRFSS Annual Survey Data web page.

In 2015, The Robert Wood Johnson Foundation and CDC Foundation launched the 500 Cities Project in partnership with the Centers for Disease Control and Prevention (CDC). The 500 city project seeks to identify, analyze, and report city and census tract-level data, obtained using small area estimation methods, for 27 chronic disease measures for the 500 largest American cities.

# **CANCER SCREENING - MAMMOGRAM (ADULT)**

## **Data Background**

The Behavioral Risk Factor Surveillance System (BRFSS) is a collaborative project of the Centers for Disease Control and Prevention (CDC) and U.S. states and territories. The BRFSS, administered and supported by CDC's Behavioral Risk Factor Surveillance Branch, is an ongoing data collection program designed to measure behavioral risk factors for the adult population (18 years of age or older) living in households. The health characteristics estimated from the BRFSS include data pertaining to health behaviors, chronic conditions, access and utilization of healthcare, and general health. Surveys are administered to populations at the state level and then delivered to the CDC. BRFSS annual survey data are publicly available and maintained on the CDC's BRFSS Annual Survey Data web page.

In 2015, The Robert Wood Johnson Foundation and CDC Foundation launched the 500 Cities Project in partnership with the Centers for Disease Control and Prevention (CDC). The 500 city project seeks to identify, analyze, and report city and census tract-level data, obtained using small area estimation methods, for 27 chronic disease measures for the 500 largest American cities.

# **DENTAL CARE UTILIZATION**

# **Data Background**

The Behavioral Risk Factor Surveillance System (BRFSS) is a collaborative project of the Centers for Disease Control and Prevention (CDC) and U.S. states and territories. The BRFSS, administered and supported by CDC's Behavioral Risk Factor Surveillance Branch, is an ongoing data collection program designed to measure behavioral risk factors for the adult population (18 years of age or older) living in households. The health characteristics estimated from the BRFSS include data pertaining to health

behaviors, chronic conditions, access and utilization of healthcare, and general health. Surveys are administered to populations at the state level and then delivered to the CDC. BRFSS annual survey data are publicly available and maintained on the CDC's BRFSS Annual Survey Data web page. In 2015, The Robert Wood Johnson Foundation and CDC Foundation launched the 500 Cities Project in partnership with the Centers for Disease Control and Prevention (CDC). The 500 city project seeks to identify, analyze, and report city and census tract-level data, obtained using small area estimation methods, for 27 chronic disease measures for the 500 largest American cities.

### **DIABETES MANAGEMENT - HEMOGLOBIN A1C TEST**

# **Data Background**

The Dartmouth Atlas of Healthcare is an online repository of health data and maps based on information included in the massive Medicare database maintained by the Center for Medicare and Medicaid Services (CMS). The project uses Medicare claims data in conjunction with other demographic data to provide information and analysis about national, regional, and local markets, as well as hospitals and their affiliated physicians. The Dartmouth Atlas of Health Care is produced and maintained by The Dartmouth Institute for Health Policy and Clinical Practice.

For more information about this source, including methodologies and definitions, refer to the Dartmouth Atlas of Healthcare website.

# Methodology

The Dartmouth Institute analyzes data drawn from enrollment and claims files from the Medicare program. Analysis is restricted to the fee-for-service population over age 65; HMO patients are not included. Indicator data include measures of primary care utilization, quality of care for diabetes, mammography, leg amputation and preventable hospitalizations.

When appropriate, statistical adjustments are carried out to account for differences in age, race and sex.

More information can be found in Regional and Racial Variation in Primary Care and the Quality of Care among Medicare Beneficiaries .

# PREVENTION - RECENT PRIMARY CARE VISIT (ADULT)

### **Data Background**

The Behavioral Risk Factor Surveillance System (BRFSS) is a collaborative project of the Centers for Disease Control and Prevention (CDC) and U.S. states and territories. The BRFSS, administered and supported by CDC's Behavioral Risk Factor Surveillance Branch, is an ongoing data collection program designed to measure behavioral risk factors for the adult population (18 years of age or older) living in households. The health characteristics estimated from the BRFSS include data pertaining to health behaviors, chronic conditions, access and utilization of healthcare, and general health. Surveys are administered to populations at the state level and then delivered to the CDC. BRFSS annual survey data are publicly available and maintained on the CDC's BRFSS Annual Survey Data web page.

In 2015, The Robert Wood Johnson Foundation and CDC Foundation launched the 500 Cities Project in partnership with the Centers for Disease Control and Prevention (CDC). The 500 city project seeks to identify, analyze, and report city and census tract-level data, obtained using small area estimation methods, for 27 chronic disease measures for the 500 largest American cities.

## Methodology

This indicator reports the percentage of respondents age 18 years and older who report having been to a doctor for a routine checkup (e.g., a general physical exam, not an exam for a specific injury, illness, condition) in the previous year. Estimates for this indicator are available only for those cenus tracts within the top 500 most populous cities in the United States. Values are small-area estimates modeled from the Behavioral Risk Factor Surveillance System (BRFSS) annual survey data files. Data are made available by the Centers for Disease Control and Prevention (CDC) National Center for Health Statistics (NCHS) through the 500 Cities: Local Data for Better Health project.

## PREVENTION - RECENT PRIMARY CARE VISIT (MEDICARE)

#### **Data Background**

The Dartmouth Atlas of Healthcare is an online repository of health data and maps based on information

included in the massive Medicare database maintained by the Center for Medicare and Medicaid Services (CMS). The project uses Medicare claims data in conjunction with other demographic data to provide information and analysis about national, regional, and local markets, as well as hospitals and their affiliated physicians. The Dartmouth Atlas of Health Care is produced and maintained by The Dartmouth Institute for Health Policy and Clinical Practice.

For more information about this source, including methodologies and definitions, refer to the Dartmouth Atlas of Healthcare website.

# Methodology

The Dartmouth Institute analyzes data drawn from enrollment and claims files from the Medicare program. Analysis is restricted to the fee-for-service population over age 65; HMO patients are not included. Indicator data include measures of primary care utilization, quality of care for diabetes, mammography, leg amputation and preventable hospitalizations.

When appropriate, statistical adjustments are carried out to account for differences in age, race and sex.

More information can be found in Regional and Racial Variation in Primary Care and the Quality of Care among Medicare Beneficiaries .

# PREVENTION - CORE PREVENTATIVE SERVICES FOR MEN

# **Data Background**

The Behavioral Risk Factor Surveillance System (BRFSS) is a collaborative project of the Centers for Disease Control and Prevention (CDC) and U.S. states and territories. The BRFSS, administered and supported by CDC's Behavioral Risk Factor Surveillance Branch, is an ongoing data collection program designed to measure behavioral risk factors for the adult population (18 years of age or older) living in households. The health characteristics estimated from the BRFSS include data pertaining to health behaviors, chronic conditions, access and utilization of healthcare, and general health. Surveys are administered to populations at the state level and then delivered to the CDC. BRFSS annual survey data are publicly available and maintained on the CDC's BRFSS Annual Survey Data web page.

In 2015, The Robert Wood Johnson Foundation and CDC Foundation launched the 500 Cities Project in partnership with the Centers for Disease Control and Prevention (CDC). The 500 city project seeks to identify, analyze, and report city and census tract-level data, obtained using small area estimation methods, for 27 chronic disease measures for the 500 largest American cities.

# PREVENTION - CORE PREVENTATIVE SERVICES FOR WOMEN

## **Data Background**

The Behavioral Risk Factor Surveillance System (BRFSS) is a collaborative project of the Centers for Disease Control and Prevention (CDC) and U.S. states and territories. The BRFSS, administered and supported by CDC's Behavioral Risk Factor Surveillance Branch, is an ongoing data collection program designed to measure behavioral risk factors for the adult population (18 years of age or older) living in households. The health characteristics estimated from the BRFSS include data pertaining to health behaviors, chronic conditions, access and utilization of healthcare, and general health. Surveys are administered to populations at the state level and then delivered to the CDC. BRFSS annual survey data are publicly available and maintained on the CDC's BRFSS Annual Survey Data web page.

In 2015, The Robert Wood Johnson Foundation and CDC Foundation launched the 500 Cities Project in partnership with the Centers for Disease Control and Prevention (CDC). The 500 city project seeks to identify, analyze, and report city and census tract-level data, obtained using small area estimation methods, for 27 chronic disease measures for the 500 largest American cities.

# HEALTHCARE WORKFORCE

# ACCESS TO CARE - ADDICTION/SUBSTANCE ABUSE PROVIDERS

# **Data Background**

The Centers for Medicare and Medicaid Services (CMS) National Plan and Provider Enumeration System (NPPES) provides basic information about all organization and individual providers with a National Provider Identifier (NPI). The National Provider Identifier (NPI) is unique identification number for health care providers, including both organizations and individuals. Each month, CMS provides an updated data file available for download which contains FOIA-disclosable NPPES health care provider information, including name, credential, practice location address, and practice type based on multiple (primary, secondary, tertiary, etc.) taxonomy codes. Additional information about the NPPES downloadable file can be found here.

## Methodology

Data for this indicator are acquired from the monthly Centers for Medicare and Medicaid Services (CMS) National Plan and Provider Enumeration System (NPPES) Downloadable File. This file includes directory information for all Medicare providers that had a valid National Provider Identifier (NPI). Provider information contained in this file includes name, credentials, gender, specialty, and complete address. Indicator counts are tabulations of providers that specialize in addiction or substance abuse treatment, determined based on the "provider type" listed in the data file. Addiction or substance abuse providers include MDs, DOs, and other credentialed professionals specializing in substance abuse treatment, rehabilitation, addiction medicine, or providing methadone. The number of facilities that specialize in addiction and substance abuse treatment are also listed (but are not included in the calculated rate). For more information, please refer to the CMS

National Provider Identifier documentation, available here .

### **ACCESS TO CARE - DENTISTS**

## **Data Background**

The Area Health Resource File (AHRF) is a database of information about the U.S. health care system, maintained and released annually by the U.S. Health and Human Services (HHS) Health Resources and Services Administration (HRSA). The AHRF contains more than 6,000 variables, aggregated for each of the nation's counties. The ARF contains information on health facilities, health professions, health status, economic activity, health training programs, measures of resource scarcity, and socioeconomic and environmental characteristics. In addition, the basic file contains geographic codes and descriptors which enable it to be linked to many other files and to aggregate counties into various geographic groupings.

The ARF integrates data from numerous primary data sources including: the American Hospital Association, the American Medical Association, the American Dental Association, the American Osteopathic Association, the Bureau of the Census, the Centers for Medicare and Medicaid Services (formerly Health Care Financing Administration), Bureau of Labor Statistics, National Center for Health Statistics and the Veteran's Administration.

For more information, please visit HRSA's Area Health Resource File website.

## Methodology

Data for this indicator are acquired from the 2015-16 Area Health Resource File database. For this indicator, the 2015-16 AHRF reports figures from the Centers from Medicare and Medicaid Services (CMS) National Provider Identification (NPI) File. This resource includes all dentists - qualified as having a doctorate in dental surgery (D.D.S.) or dental medicine (D.M.D.), who are licensed by the state to practice dentistry and who are practicing within the scope of that license. Rates are calculated per 100,000 total population using the following formula:

# Provider Rate = [ Number of Dentists ] / [ Total Population ] \* 100,000

Population figures in the AHRF are from the U.S. Census Bureau's Annual Resident Population Estimates, Estimated

Components of Resident Population Change and Rates of the Components of Resident Population Change for States and Counties: April 1, 2010 to July 1, 2015. For detailed source information, please

view the documentation included in the 2015-2016 AHRF, which can be downloaded here.

#### **Notes**

# Race and Ethnicity

Statistics by race and ethnicity are not provided for this indicator.

## **Data Limitations**

Reported data represent summaries limited by county boundaries. When comparing rates, consider the following:

- 1. Rates assume uniform distribution of both establishments and populations throughout the county and may not detect disparities in access for rural or minority populations.
- 2. Summaries may over-represent or under-represent county rates when populations or establishments are highly concentrated on county border lines.
- 3. Rates do not describe quality of the establishment or utilization frequency.

# **ACCESS TO CARE - MENTAL HEALTH PROVIDERS**

# **Data Background**

The Centers for Medicare and Medicaid Services (CMS) National Plan and Provider Enumeration System (NPPES) provides basic information about all organization and individual providers with a National Provider Identifier (NPI). The National Provider Identifier (NPI) is unique identification number for health care providers, including both organizations and individuals. Each month, CMS provides an updated data file available for download which contains FOIA-disclosable NPPES health care provider information, including name, credential, practice location address, and practice type based on multiple (primary, secondary, tertiary, etc.) taxonomy codes. Additional information about the NPPES downloadable file can be found here.

## Methodology

Data for this indicator are acquired from the monthly Centers for Medicare and Medicaid Services (CMS) National Plan and Provider Enumeration System (NPPES) Downloadable File. This file includes directory information for all Medicare providers

that had a valid National Provider Identifier (NPI). Provider information contained in this file includes name, credentials, gender, specialty, and complete address. Indicator counts are tabulations of providers that deliver mental health care, determined based on the "provider type" listed in the data file. Mental health providers include licensed clinical social workers and other credentialed professionals specializing in psychiatry, psychology, counselling, or child, adolescent, or adult mental health. The number of facilities that specialize in mental health are tabulated, (but are not included in the calculated rate). For more information, please refer to the CMS National Provider Identifier documentation, available here.

# **ACCESS TO CARE - PRIMARY CARE**

### **Data Background**

The Area Health Resource File (AHRF) is a database of information about the U.S. health care system, maintained and released annually by the U.S. Health and Human Services (HHS) Health Resources and Services Administration (HRSA). The AHRF contains more than 6,000 variables, aggregated for each of the nation's counties. The ARF contains information on health facilities, health professions, health status, economic activity, health training programs, measures of resource scarcity, and socioeconomic and environmental characteristics. In addition, the basic file contains geographic codes and descriptors which enable it to be linked to many other files and to aggregate counties into various geographic groupings.

The ARF integrates data from numerous primary data sources including: the American Hospital Association, the American Medical Association, the American Dental Association, the American Osteopathic Association, the Bureau of the Census, the Centers for Medicare and Medicaid Services (formerly Health Care Financing Administration), Bureau of Labor Statistics, National Center for Health Statistics and the Veteran's Administration.

For more information, please visit HRSA's Area Health Resource File website.

# Methodology

Data for this indicator are acquired from the 2018-19 Area Health Resource File database. For this

indicator, the 2018-19 AHRF reports figures based on the 2010-2017 American Medical Association Physician Masterfiles (Copyright). Doctors classified as "primary care physicians" by the AMA include M.D.s and D.O.s in the fields of: General Family Medicine, General Practice, General Internal Medicine and General Pediatrics. Physicians age 75 and over and physicians practicing sub-specialties within the listed specialties are excluded. data are tabulated for physicians practicing office-based patient care only. Non-patient care practitioners include administrators, medical teachers, researchers, etc. Rates are calculated per 100,000 total population using the following formula:

# Provider Rate = [ Number of Primary Care Physicians ] / [ Total Population ] \* 100,000

Population figures in the AHRF are from the U.S. Census Bureau's Annual Resident Population Estimates, Estimated Components of Resident Population Change and Rates of the Components of Resident Population Change for States and Counties: April 1, 2010 to July 1, 2017. For detailed source information, please view the documentation included in the 2018-2019 AHRF, which can be downloaded here.

### **Notes**

# Race and Ethnicity

Statistics by race and ethnicity are not provided for this indicator.

### **Data Limitations**

Reported data represent summaries limited by county boundaries. When comparing rates, consider the following:

- 1. Rates assume uniform distribution of both establishments and populations throughout the county and may not detect disparities in access for rural or minority populations.
- 2. Summaries may over-represent or under-represent county rates when populations or establishments are highly concentrated on county border lines.
- 3. Rates do not describe quality of the establishment or utilization frequency.

# POPULATION LIVING IN A HEALTH PROFESSIONAL SHORTAGE AREA

## **Data Background**

Health Professional Shortage Areas (HPSAs) are designated by the US Health Resources and Services Administration (HRSA) as having shortages of primary medical care, dental or mental health providers. HPSAs may refer to an entire geographic area (a county or service area), a demographic group within a geographic area (low income population) or an institution (comprehensive health center, federally qualified health center or other public facility).

HPSAs are designated using several criteria, depending on the type of designation. For example, a HPSA may be designated on the basis that medical professionals in contiguous areas are over-utilized, excessively distant, or inaccessible to the population under consideration. HPSAs are also designated based on population-to-clinician ratios. This ratio is usually 3,500 to 1 for primary care, 5,000 to 1 for dental health care, and 30,000 to 1 for mental health care. All Federally Qualified Health Centers and Rural Health Clinics that provide access to care, regardless of patient ability to pay, receive automatic facility HPSA designation.

HPSAs are updated on a continuous basis through the US Health and Humans Services (HHS) Health Resources and Services Administration (HRSA) GIS data warehouse. For more information about HPSAs, please visit the HRSA Health Professional Shortage Area (HPSA) web page.

# Methodology

Health Professional Shortage Area (HPSA) boundary files were acquired from the US Health Resources and Services Administration (HRSA) GIS data warehouse. Data from HRSA contained estimates of the total component population, as well as the degree of shortage. Shortages vary based on HPSA designation, and may refer to the total area's full time equivalency\* population, or the population of a specific demographic (income, racial, ethnic) group. This indicator reports the total population in the report area that is living in a Health Professional Shortage Area, regardless of the degree of shortage, or whether the HPSA covers the entire geographic area or a population subgroup. Indicator data are based on the following calculation:

# Percentage = [HPSA Population] / [Report Area Population] \* 100

The population figures used in this calculation are from the 2017 American Community Survey 5-year Estimates.

\* Total equivalency population:

HPSA Designation populations may exceed total census populations in areas with large transient populations as follows:

- Seasonal residents, i.e., those who maintain a residence in the area but inhabit it for only 2 to 8 months per year, may be included but must be weighted in proportion to the fraction of the year they are present in the area.
- Other tourists (non-resident) may be included in an area's population but only with a weight of 0.25, using the following formula: Effective tourist contribution to population = 0.25 x (fraction of year tourists are present in area) x (average daily number of tourists during portion of year that tourists are present).
- Migratory workers and their families may be included in an area's population, using the following formula: Effective migrant contribution to population = (fraction of year migrants are present in area) x (average daily number of migrants during portion of year that migrants are present)

For additional information, including designation procedures and access to the original data, please visit the HRSA Health Professional Shortage Area (HPSA) web page.

### **Notes**

# Race and Ethnicity

Statistics by race and ethnicity are not provided for this indicator from the data source. Detailed race/ ethnicity data may be available at a broader geographic level, or from a local source.

# SPECIAL TOPICS - COVID-19

# **COVID-19 - CONFIRMED CASES**

# **Data Background**

The Center for Systems Science and Engineering (CSSE) is a research collective housed within the Department of Civil and Systems Engineering (CaSE) at Johns Hopkins University (JHU). The Center's faculty, researchers, and students work on a range of complex and interdisciplinary problems, united by the goal to better understand and improve societal, health, and technological systems for everyone. The CSSE is tracking the COVID-19 spread in real-time on our interactive dashboard with data available for download and modeling the spread of the virus.

# Methodology

This indicator reports the number of confirmed cases for the novel coronavirus COVID-19 in US counties. Attributes include the total cumulative cases, deaths, case rate (number of cases per 100,000 population) and mortality rate (deaths per 100,000 population).

Note: Rates are used to allow meaningful comparison across geographic areas with different base population sizes.

Case counts data for this layer are updated daily from a feature service provided by the Center for Systems Science and Engineering (CSSE) at the Johns Hopkins University. Rates are calculated by CARES using 2018 population totals. For more information about the data displayed here, please visit the ESRI COVID-19 Overview web page.

### **COVID-19 - MORTALITY**

# **Data Background**

The Center for Systems Science and Engineering (CSSE) is a research collective housed within the Department of Civil and Systems Engineering (CaSE) at Johns Hopkins University (JHU). The Center's faculty, researchers, and students work on a range of complex and interdisciplinary problems, united by the goal to better understand and improve societal, health, and technological systems for everyone. The CSSE is tracking the COVID-19 spread in real-time on our interactive dashboard with data available for download and modeling the spread of the virus.

### Methodology

This indicator reports the number of deaths attributed to the novel coronavirus COVID-19 in US counties. Attributes reported with this dataset include the total, cumulative number of deaths and the crude mortality rate (deaths per 100,000 population). Population figures are obtained from the 2018 US Census Population Estimates.

Note: Rates are used to allow meaningful comparison across geographic areas with different base population sizes.

Case counts data for this layer are updated daily from a feature service provided by the Center for Systems Science and Engineering (CSSE) at the Johns Hopkins University. Rates are calculated by CARES using 2018 population totals. For more information about the data displayed here, please visit the ESRI COVID-19 Overview web page.

# **COVID-19 - FULLY VACCINATED ADULTS**

## Methodology

Data on vaccine doses administered include data received by CDC as of 6:00 a.m. ET on the day of reporting. Vaccination providers collect data on COVID-19 vaccine doses they administered and report the data to CDC through multiple sources, including jurisdictions, pharmacies, and federal entities. These sources use various reporting methods including immunization information systems, the Vaccine Administration Management System, and direct data submission.

CDC determines county of residence by matching the county Federal Information Processing Standard State code to the state as submitted in the raw data provided to CDC. Vaccine hesitancy rates are estimated in two steps. First, hesitancy rates are estimated at the state level using the HPS for the collection period March 3, 2021 – March 15, 2021, which is referred to as Week 26. Then, the estimated values are used to predict hesitancy rates in more granular areas using the Census Bureau's 2019 American Community Survey (ACS) 1-year Public Use Microdata Sample (PUMS). To create county-

level estimates, a PUMA-to-county crosswalk from the Missouri Census Data Center was used. PUMAs spanning multiple counties had their estimates apportioned across those counties based on overall 2010 Census populations. Population weighted averages are used by CARES to estimate values across multiple states or counties.

The Vaccine Coverage (CVAC) index measures the level of concern about COVID-19 vaccine coverage based on supply and demand-side barriers, including contextual factors, care-seeking behaviors, and historical vaccine coverage data. The CVAC is a modular index where the final score can be broken down into five different themes that reflect barriers to vaccine coverage:

- 1. Historic undervaccination
- 2. Sociodemographic barriers
- 3. Resource-constrained health systems
- 4. Healthcare accessibility barriers
- 5. Irregular care-seeking behavior

The overall CVAC composite score and scores per each of the five CVAC themes were calculated at state and county levels, ranking each geographical region on a 0-1 scale of the level of concern about COVID-19 vaccine coverage (0 = least concerning, 1 = most concerning). Population weighted averages are used by CARES to estimate values across multiple states or counties.