

2022

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# REGIONAL HEALTH ASSESSMENT

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**“Social determinants of health issues are the biggest that need to be addressed like housing and food. Healthcare is now coming together with public health, whereas before they were siloed.”**

**-Springfield Community, Greene County**

# ACKNOWLEDGMENTS

The Ozark Health Commission Steering Committee is composed of a variety of organizations representing multiple diverse perspectives. The Steering Committee expresses appreciation to Crescendo Consulting for its work with the Missouri, Kansas and Oklahoma stakeholders that provided feedback in interviews, surveys, and prioritization activities. Thank you to the following partners that led, contributed to and/or supported the Regional Health Assessment.

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# INTRODUCTION

Recognizing the value of together, local hospital systems, public health entities and other health organizations have collaborated under the umbrella of the Ozarks Health Commission (the Commission) to publish regional health assessments every three years since 2016.

The Ozarks Health Commission (OHC) Region includes 30 counties located within the three Midwestern states of Kansas, Missouri, and Oklahoma. It is centered in southwest Missouri, and represents the combined service areas of OHC Region healthcare partners CoxHealth, Freeman Health System, and Mercy Hospitals. Seven multi-county Communities were defined based on hospital service areas and named for a major city within the Community: Bolivar, Branson, Joplin, Lebanon, Monett, Mountain View, and Springfield (see map on page 5).

The Commission's work has been recognized at the annual meeting of the American Public Health Association, honored as a 2017 Promising Practice by the National Association of County and City Health Officials and awarded the 2018 Group Merit Award from the Missouri Public Health Association.

## Purpose

The 2022 Regional Health Assessment (RHA) builds upon the success of the 2016 and 2019 regional health assessments to better understand the health status, behaviors and needs of the populations and communities served. This assessment takes a comprehensive, data-driven approach to look at the health characteristics and behaviors of residents in the OHC Region by presenting more than 200 public health and emergency room utilization data indicators including demographics, health morbidity and mortality, health status and behaviors, and social determinants of health.

In addition to being an IRS requirement, the RHA is the foundation for each of the regional non-profit hospital systems participating in the assessment and is one of the requirements for Public Health Accreditation for participating health departments. The RHA is intended to be paired with OHC Region Community Summary reports, to support Community Health Improvement Plans (CHIP) that outline each entity's plan to systematically address health issues.

The RHA may also inform city/community planning processes and master plans. Further, partner community organizations may utilize the assessment to work towards strategic planning efforts to make collective impact actions in each community.

The intent of this document is to inform the work of all organizations that impact the health or social determinants of health of citizens in the Ozarks Health Commission Region. Gaining an understanding of the health outcomes, behaviors and social determinants can help coalesce communities' efforts towards addressing root causes and developing upstream actions and interventions that may include policy, systems, and infrastructure, resulting in positive change and collective impact for the betterment of health.



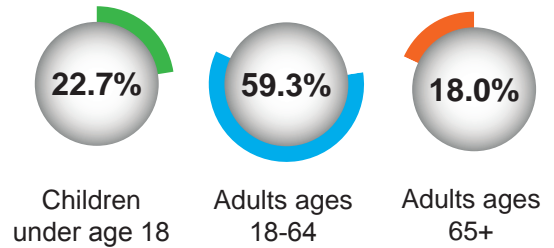
# SERVICE AREA

By assessing the health of OHC Region residents, large-scale improvement plans can be created and implemented to assist residents in living high-quality, long lives. More than one million people live in the OHC Region, a number that has grown by approximately 13% in a decade. Compared to the State of Missouri, which has shown slow growth over the last decade, the OHC Region has been one of the state's fastest growing metro areas<sup>1</sup>. There are slightly more females living in the OHC Region. Just over half of residents live in areas defined as urban, while the other half are considered rural residents. Most living in the area claim a citizenship status of 'native', indicating they were born in the United States. Just over 20% of residents are under the age of 18 and just under 20% are over the age of 65. Three in ten families in the OHC Region have children.

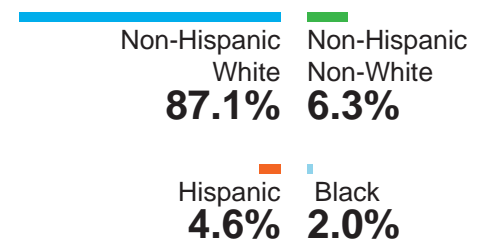
Additional demographic nuances beyond age, sex, and rurality can impact the ability to live a long, healthy life. For example, race can have an impact on health status and outcomes, as evidenced by this assessment. The majority of residents (87.11%) identify as White, Non-Hispanic. Two percent of residents identify as Black, Non-Hispanic and over six percent identify as Non-Hispanic of another race. Just under five percent of OHC Region residents identify as Hispanic. It is important to note other areas where the community is diverse, such as the 17% of residents living with a disability and nearly 10% who are veterans.

## DEMOGRAPHICS

### AGE



### RACE & ETHNICITY



### FAMILIES

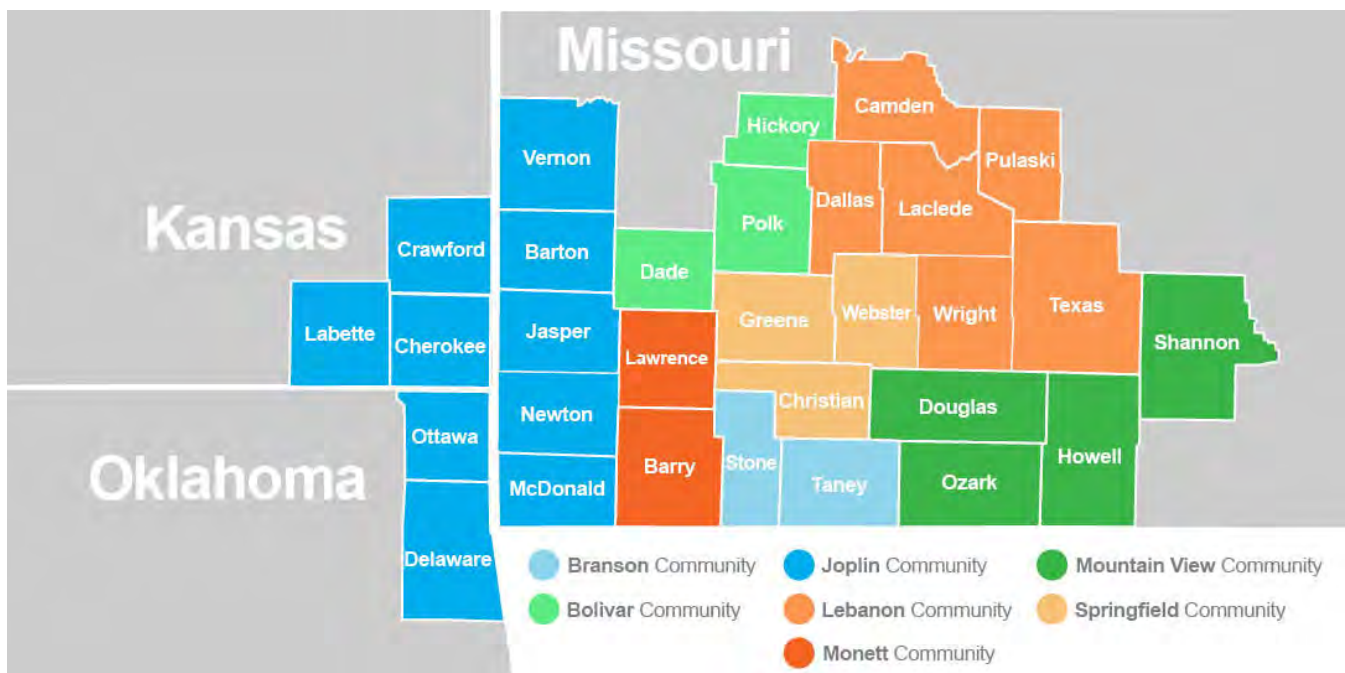
Families with children make up **28.9%** of the OHC Region population.



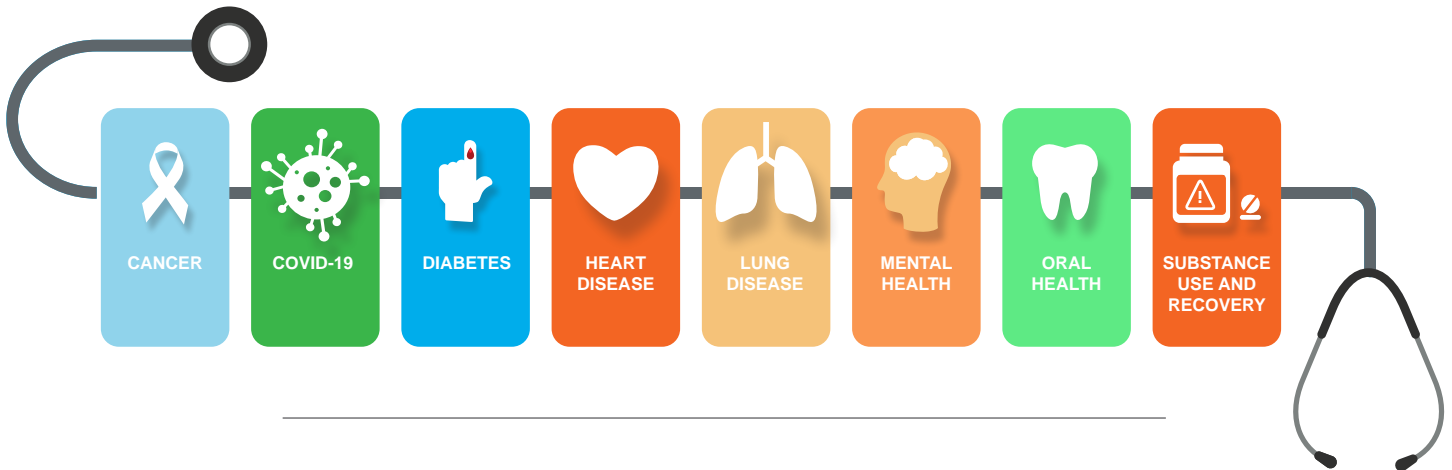
### POPULATION

The OHC Region's population has increased by **2.4%** since 2010.

## OHC COMMUNITIES



# ASSESSED HEALTH ISSUES



This Regional Health Assessment, the third since collaboration began in 2016, has been completed using hospital emergency department data from local hospital systems (CoxHealth, Freeman Health System, and Mercy Hospitals), public health and historical data from various county-level sources, and input from community stakeholders and members. While each county and community face unique challenges and have implemented unique solutions to keep their residents healthy, there are a number of conditions that impact the entire OHC Region. Analysis focused on a series of ‘assessed health issues’, or AHIs, which have been analyzed in order to determine the relative impact each has on the health of the Region’s residents and overall community health. These conditions of focus are largely consistent with those evaluated in previous iterations of the assessment and include mental health, cancer, COVID-19, diabetes, heart disease, lung disease, oral health, and substance use and recovery. Communities then used the methodology described below to rank the AHIs to prioritize health goals over the next several years. Analysis of each AHI for the region will be further discussed in this document.

Each of the measures used to develop prioritized rankings are included in Appendices A and B of this document. They provide the associated metrics and color-coded comparison to state and national equivalents at the Community and county level. The narrative of this report will frequently compare Community and county rates to the Missouri state rate, as most counties in the region fall within Missouri’s boundaries. However, comparative rates for both Kansas and Oklahoma can be found in the Appendices.





# ASSESSED HEALTH ISSUES DATA FINDINGS

## MENTAL HEALTH

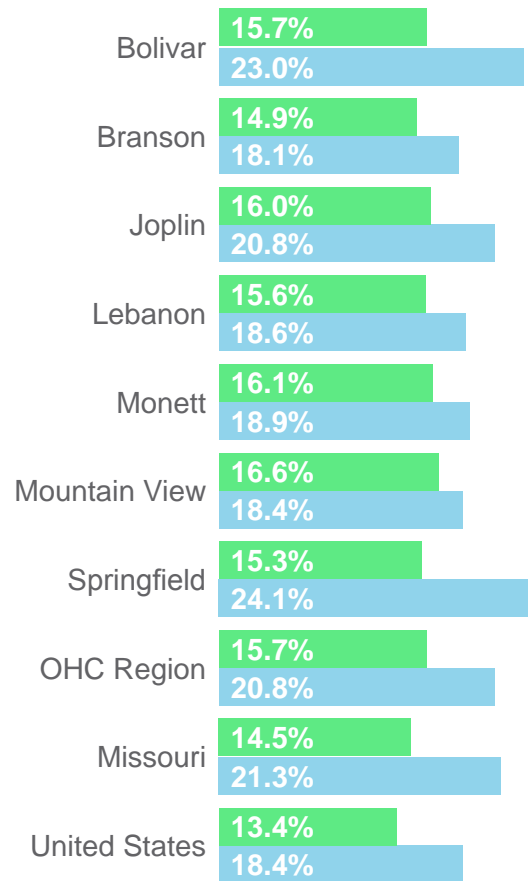
### POOR MENTAL HEALTH AND DEPRESSION PREVALENCE

*Medicare beneficiaries only*

*Non-institutionalized adults age 18+*

While the Ozarks Health Commission Region has lower rates of self-reported depression prevalence than the rest of the state, the suicide rates in the Region tell a different story. Self-reported poor mental health days (reported by non-institutionalized adults age 18+) occur at a lower rate than overall depression prevalence. However, this may be indicative of the general mental health underperformance of the Region more than depression prevalence (which is based on Medicare beneficiaries only). For instance, the Mountain View Community has the highest rate of suicide in the OHC Region and the highest percentage of self-reported poor mental health. However, the depression prevalence in this community is the second lowest in the region. Again, this could be tied to a limitation of the depression prevalence data as it is available for Medicare beneficiaries only.

● Poor Mental Health    ● Depression

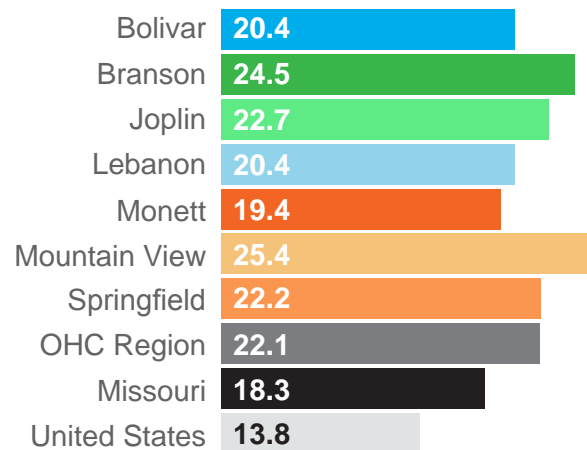


### SUICIDE MORTALITY RATE

*Age-adjusted rate per 100,000 residents*

Rates of death by suicide are 60% higher than the U.S. average (13.9 per 100,000) and 20% higher than the Missouri state average (18.3). There is some variance amongst the Communities in the OHC Region, but each has rates that are more than 25% greater than the national average and between 6-39% higher than the Missouri average.

Suicide continues to be an ongoing issue in the OHC Region, with recent suicide rates up more than 18% compared to the rate reported five years ago (18.7). Five-year rolling averages show a steady increase of suicide mortality that is occurring at roughly the same pace as the national increase (between 1.7% and 2.3% per year) and slightly slower than the statewide increase (2.2% to 4.7%/year).



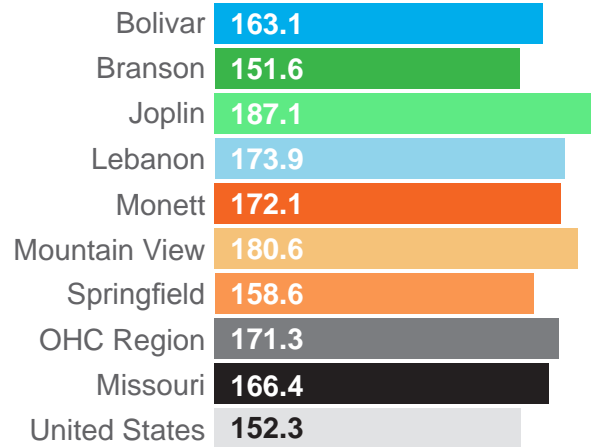


# ASSESSED HEALTH ISSUES DATA FINDINGS CANCER

## CANCER MORTALITY RATE

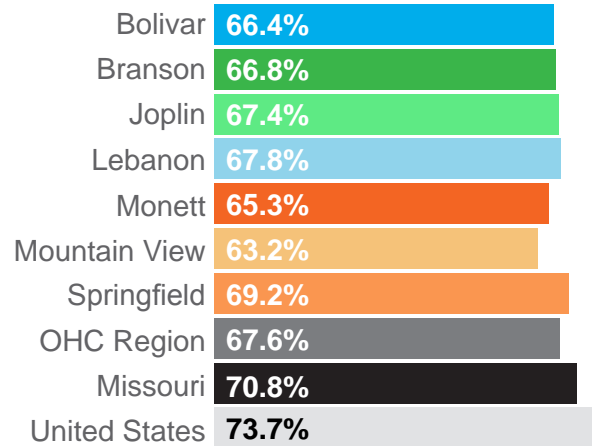
*Age adjusted rate per 100,000 residents*

Throughout the OHC Region, there is variability in these measures. The overall cancer mortality rate in the Joplin Community is 24% higher than the mortality rate in the adjacent Branson Community.



## RECENT MAMMOGRAM

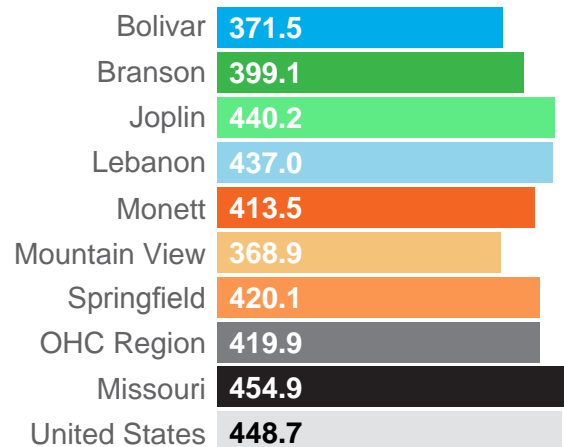
Screening percentages are more consistent throughout the OHC Region's communities, but there are areas of elevated concern. For example, the percent of Mountain View residents reporting a recent mammogram is roughly 7% lower than the regional average.



## CANCER INCIDENCE RATES

*Per 100,000 population*

An interesting story emerges when examining the impact of cancer on the OHC Region. Overall, the Region has a lower cancer incidence rate (419.9 per 100,000) than Missouri (454.9) and the nation (448.7). While, on the surface, this may seem to be something to celebrate. However, mortality is comparatively high (+3% compared to Missouri and +12% compared to the national average). Screening procedure metrics that track recent mammograms, pap smears and adequate colorectal cancer screening all fall below the national and state averages.







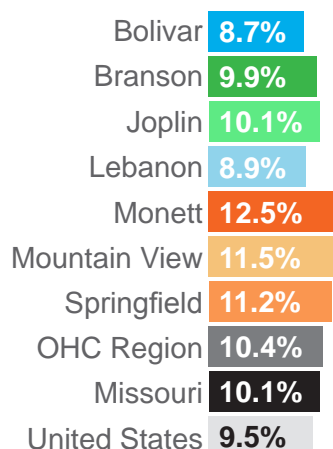
# ASSESSED HEALTH ISSUES DATA FINDINGS

## DIABETES

### DIABETES PREVALENCE

Regionally, the Ozarks Health Commission has a diabetes prevalence that is slightly higher than the Missouri average- roughly one in ten people in the OHC region have been diagnosed with diabetes.

Individually, there is some variation between communities- only 8.7% of residents in the Bolivar Community have been diagnosed with diabetes, but in the Monett Community the rate of diagnosis (12.5%) is more than 25% higher than the national average (9.5%).



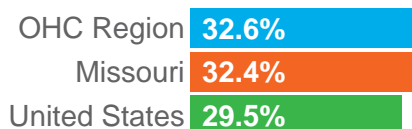
### DIABETES RISK FACTORS

Certain health behaviors and conditions can be indicative of diabetes risk and could make the disease more difficult to manage<sup>2</sup>. For two of these indicators, poor physical health and obesity prevalence, the OHC Region performs poorly. Nearly 20% of individuals in the Mountain View Community have self-reported poor physical health and nearly one in three people in the OHC Region are obese.

### POOR PHYSICAL HEALTH

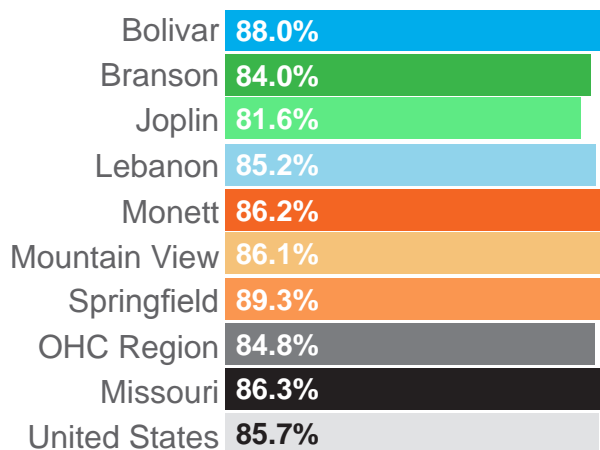


### OBESITY PREVALENCE



### ANNUAL HEMOGLOBIN A1c SCREENING

*Medicare enrollees diagnosed with diabetes only*  
Much like with cancer and heart disease, there are screening procedures that can assist in monitoring, managing, and potentially preventing a diabetes diagnosis. Regular hemoglobin A1c testing is commonplace in the OHC Region. In fact, nearly 85% of Medicare enrollees with diabetes are tested annually. (The CDC recommends those with diabetes should be tested at least twice a year and 'more often if your medicine changes or you have other health conditions<sup>3</sup>.) This completion rate is slightly lower than both state and national averages, but an encouraging sign. Compliance in the Springfield and Bolivar Communities is near 90% and exceed those comparative averages.





# ASSESSED HEALTH ISSUES DATA FINDINGS

## HEART DISEASE

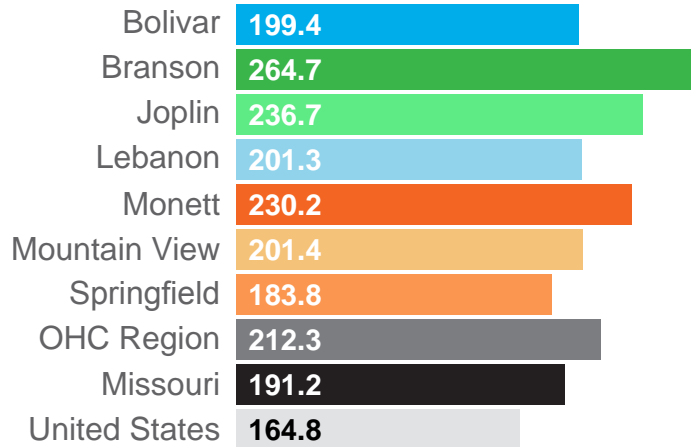
When studying the impacts of heart disease, considered a chronic condition, it is important to include a variety of indicators that measure different facets of the condition. Heart disease, for example, could have positive outcomes associated with appropriate screening or different behavioral and environmental factors, which, addressed individually, can have a positive impact overall. For each heart disease-related indicator measured, the OHC Region underperforms when compared to both state and national averages.

### HEART DISEASE AND STROKE MORTALITY

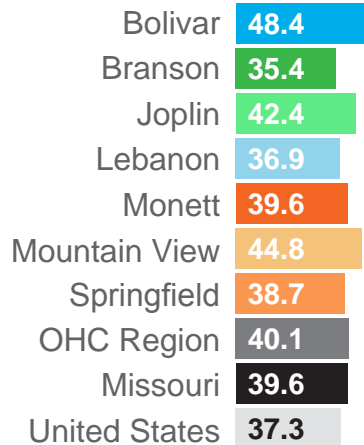
*Age adjusted rate per 100,000 residents*

Of the eight health issues assessed at the regional level, heart disease causes the highest mortality rate (212.3 deaths per 100,000 residents when adjusted for age). Some communities are more severely impacted than others. For instance, the Springfield Community has a mortality rate of 183.8, which is lowest in the region and better than the state average. In the Branson Community, the heart disease mortality rate is 44% higher, at 264.7. Death rates from stroke are not as high as from heart disease, and the disparity between communities is not as great, but this condition continues to impact the OHC Region. (It is interesting to note that while the Branson Community has both the highest heart disease mortality rate, it conversely has the lowest stroke mortality rate in the Region.)

### HEART DISEASE MORTALITY

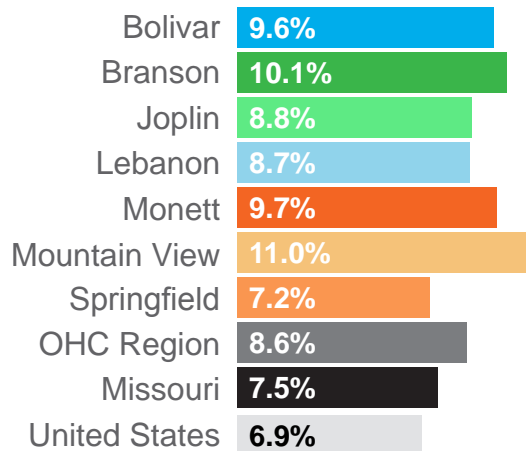


### STROKE MORTALITY



### HEART DISEASE PREVALENCE

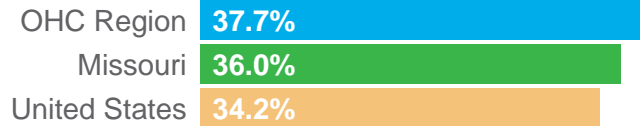
Heart disease has long been a leading cause of death at regional, state, and national levels. Chronic diseases, like heart disease and diabetes, are often the result of very complicated and interwoven behavioral and environmental factors that can take decades to modify or impact. Monitoring and screening are important—community members are at increased risk of dying due to heart disease, so being aware of some factors that can contribute to this condition is important, as is regularly monitoring for warning signs that could indicate onset or flares of disease. Heart disease is often progressive<sup>4</sup>—communities with high rates of coronary heart disease prevalence also have high heart disease mortality rates, as evidenced by trends in the Region, state, and nation.



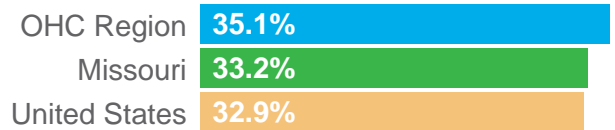
### HEART DISEASE SCREENING

Sometimes the progression of heart disease can be slowed or stopped. (Johns Hopkins Medicine, 2021) Two of the most useful screening measures that could decrease the likelihood of experiencing bad outcomes due to heart disease or stroke involve blood pressure and cholesterol. The prevalence of either high blood pressure or high cholesterol are early warning signs that could warrant lifesaving medical or behavioral intervention. In the OHC Region, more than one in three adults have high blood pressure and/or high cholesterol.

### HIGH CHOLESTEROL PREVALENCE



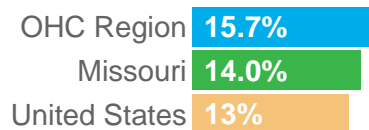
### HIGH BLOOD PRESSURE PREVALENCE



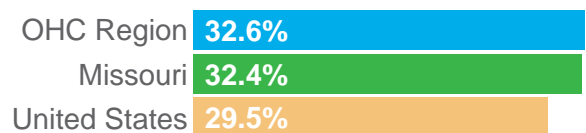
### HEART DISEASE RISK FACTORS

Some well-known risk factors related to heart disease could be impacted by behavioral change. For instance, obese individuals are two times more likely to experience heart failure<sup>5</sup>. Those with overall poor physical health could be experiencing barriers that lead to obesity. Nearly one-third of all adults in the OHC Region are obese and more than one in ten report poor physical health. This continuous cycle of cause and effect, choice and outcome, are why diminishing the presence of chronic disease in a community is complicated and takes time.

### POOR PHYSICAL HEALTH



### OBESITY PREVALENCE

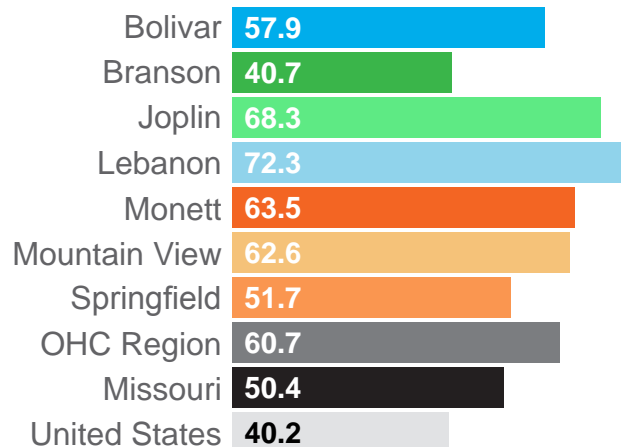


## ASSESSED HEALTH ISSUES DATA FINDINGS LUNG DISEASE

### LUNG DISEASE MORTALITY

*Age adjusted rate per 100,000 residents*

Lung disease is another chronic health condition affecting many who live in the Ozarks Health Commission Region. Much like when analyzing heart disease, the Region underperforms the state and nation for each indicator analyzed. When charting mortality rates due to lung disease, the regional rate for this indicator is an astounding 50% higher than the national average. Only one Community in the Region had a rate lower than the state average (Branson Community, 40.7 per 100,000 compared to 50.4). There are large differences in mortality throughout the region- the local community with the highest lung disease mortality rate (Lebanon Community, 72.3) is nearly 80% higher than the Branson Community.





# ASSESSED HEALTH ISSUES DATA FINDINGS

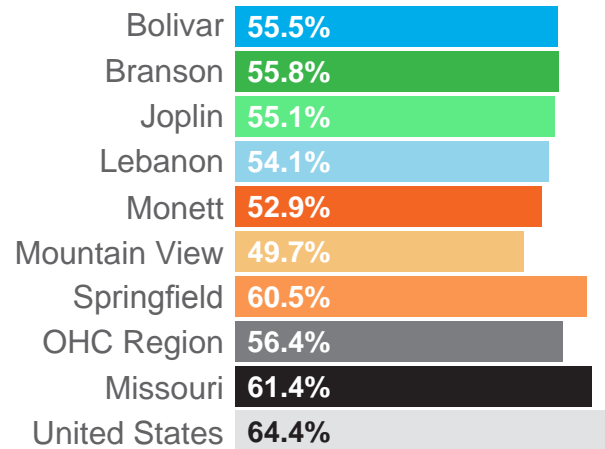
## ORAL HEALTH

Lack of available data related to oral health and factors impacting oral health conditions is an unfortunate limitation for analysis. Based on qualitative and anecdotal evidence, however, the Ozarks Health Commission Region appears to show widespread need for greater resources to improve oral health. There is a growing body of evidence suggesting that substandard oral health can be linked to chronic disease, including heart disease, diabetes, and stroke.

### RECENT DENTAL VISIT

*In the past 12 months*

One of the most useful ways to assess oral health-related challenges is to determine how frequently citizens are utilizing oral health services. In the OHC Region, just over half of adult residents' report visiting a dentist within the past year (56.4%); therefore, around half have not been to the dentist in the past year. This is lower than both the state (61.4%) and national (64.4%) averages. Alarming, less than half of those living in the Mountain View Community report visiting a dentist in the last twelve months.



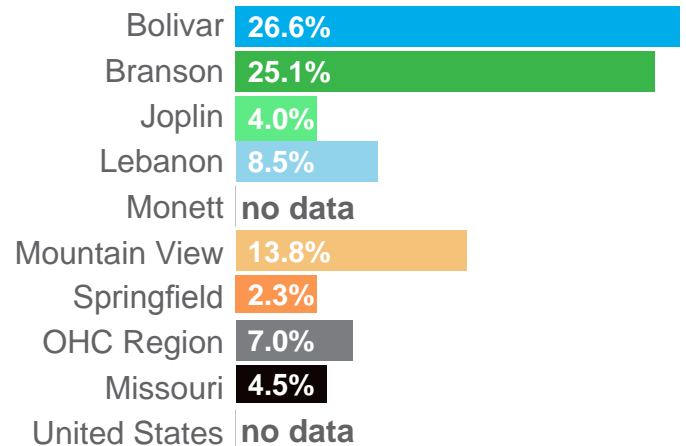
### NUMBER OF CHILDHOOD CARIES

*PSP participants age five and under only*

The dental needs of adults and children are different. One way to measure the overall pediatric oral health in an area is to look at the dental caries rate for children living in a community. Caries, or cavities, occur when tooth enamel is broken down as a result of bacteria<sup>6</sup>.

While this information is not available for every child living in the OHC Region, the Missouri Department of Health and Senior Services, Office of Oral Health does collect data for children participating in the Preventive Services Program (PSP), which is dedicated to promoting and improving healthy smiles for all Missouri children through education and preventive services<sup>7</sup>.

More than one in every four children under the age of five (participating in the PSP program) that live in the Bolivar and Branson Communities had at least one cavity referred for follow up. This high rate of dental caries (decay) correlates with the lack of an essential public health service- drinking water fluoridation.

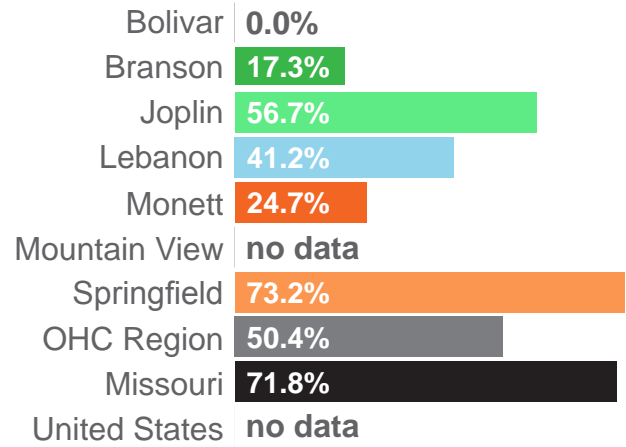


### PUBLIC WATER SERVICE FLUORIDATION

The most effective way to prevent tooth decay is by providing fluoride in a resident's drinking water. This safe and effective public health measure is also cost effective- in most cases, every \$1 invested in water fluoridation saves \$38 in dental treatment costs.

Fluoride is naturally occurring in groundwater and oceans- adjusting the amount of fluoride in drinking water can be compared to fortifying salt with iodine or orange juice with calcium<sup>8</sup>. The Missouri Department of Health and Senior Services, Office of Rural Health monitors the number of Public Water Systems (PWSD) that provide fluoride to consumers. Some areas of the Region have high percentages of residents receiving fluoride- more than 80% in the Springfield Community.

Concerningly, no residents utilizing public water systems in the Bolivar or Mountain View Communities are provided this dental-health and cost-saving service. There is an inverse relationship between the communities with low levels of fluoridation services and high childhood dental caries rates.



## ASSESSED HEALTH ISSUES DATA FINDINGS SUBSTANCE USE AND RECOVERY

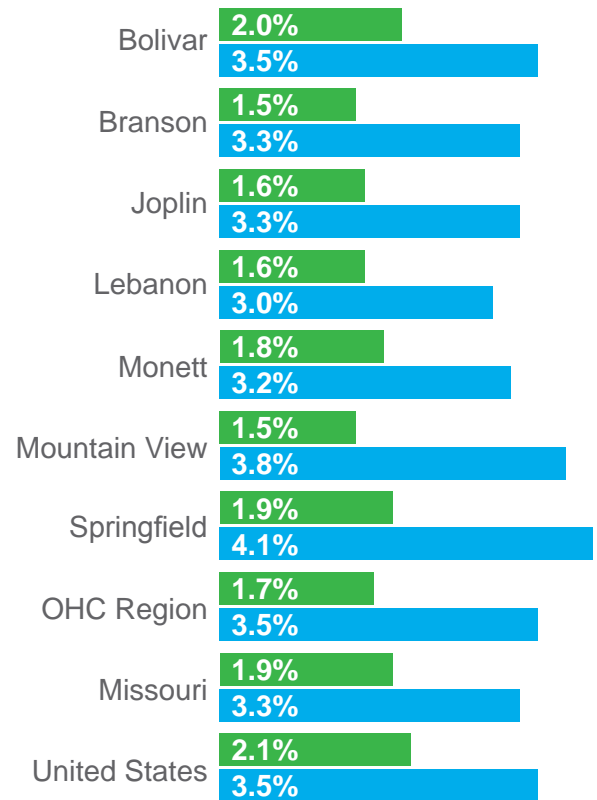
Residents engaging in substance use and recovery is all too common in the Ozarks Health Commission Region. Though there are limitations collecting and accessing secondary data that could be useful in completing a quantitative analysis discussing this topic, the qualitative information shared by experts and people in the community tells an important story. Information related to the number of OHC Region residents who have been diagnosed with alcohol or substance use disorder is limited to Medicare beneficiaries only. Data that is reflective of this subset of the population indicate that more than 3% have been diagnosed with substance use disorder (a rate higher than the Missouri average). The number of people diagnosed with alcohol use disorder is lower, less than 2%, and the Region has a rate lower than the Missouri and national averages.

### ALCOHOL AND SUBSTANCE USE DISORDER PREVALENCE

*Medicare beneficiaries only*

The Springfield and Bolivar Communities each have higher than average rates of both alcohol and substance use disorder in the Medicare population.

Two communities, Lebanon and Monett have substance use disorder rates that are lower than both the Missouri and national averages. Five of seven communities have lower than average rates of alcohol use disorder in the Medicare community.

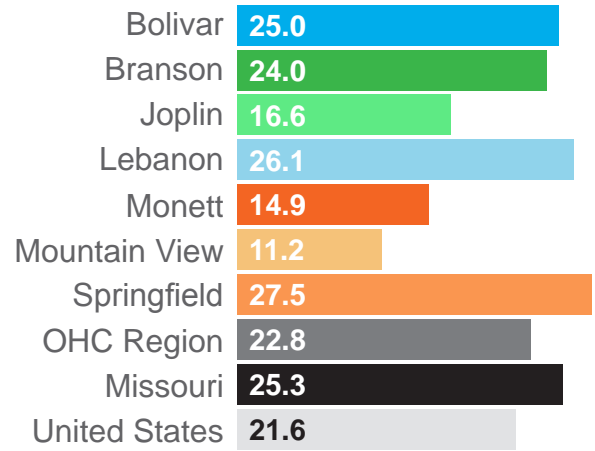


- Alcohol Use Disorder Prevalence
- Substance Use Disorder Prevalence

### DRUG POISONING MORTALITY RATE

*Age adjusted rate per 100,000 population*

Though this data appears to show a low prevalence of alcohol and substance use disorders in the area, there are limitations with the data. Mortality data, however, is more representative of the entire population. During the same time period, OHC Region residents died due to drug poisoning at a rate that was greater than those who died of suicide, another dire mental health issue affecting the community. This mortality rate is lower than the Missouri average, but 6% greater than the national average. Mortality rates range greatly among OHC Region communities. The community with the highest rate, Springfield (27.5 per 100,000), has a rate more than double the Mountain View Community, which has the lowest mortality rate (11.2).





# SPECIAL HEALTH ISSUE COVID-19

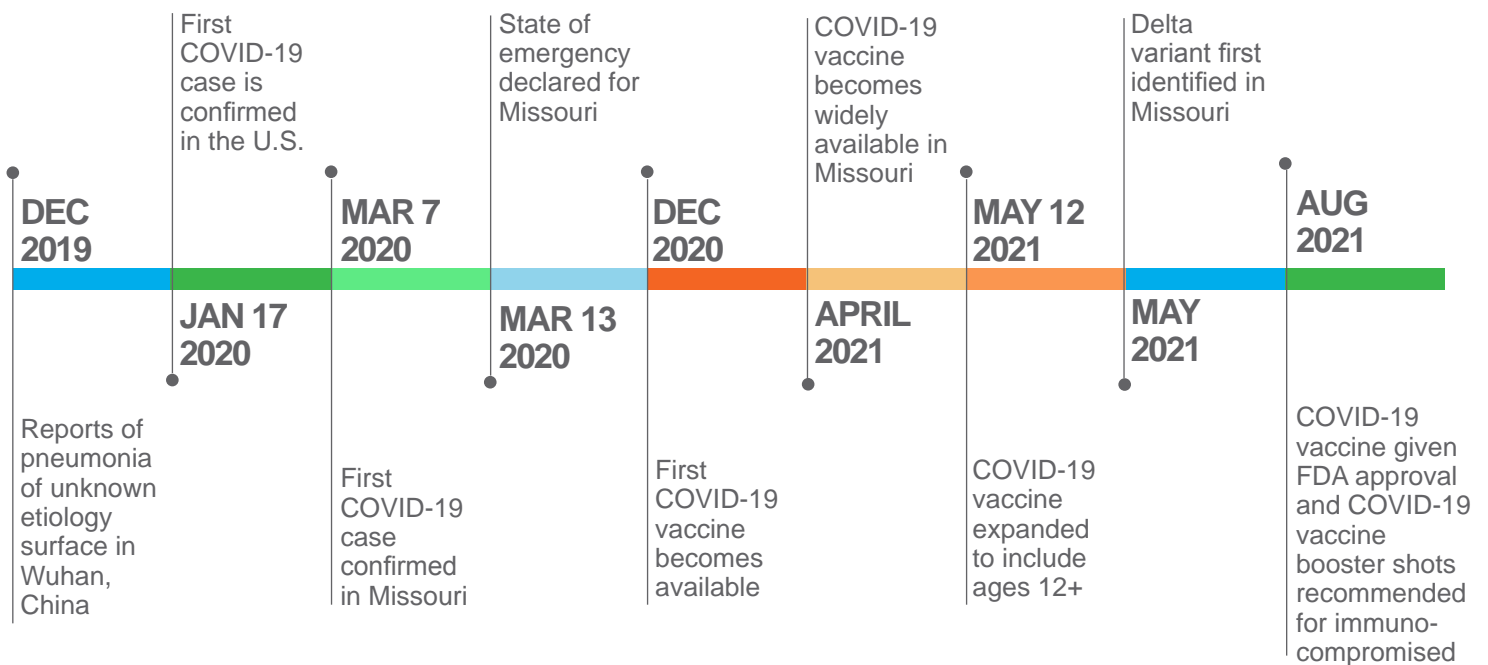
Beginning in late 2019, rumblings of a new respiratory disease with severe symptoms began spreading outward from Asia. By mid-January 2020 this disease, known as SARS-CoV-2 or COVID-19, had spread to the United States<sup>9</sup>. A Missouri resident, after traveling back from Europe, tested positive in March, though subsequent data updates indicate possible earlier cases<sup>10</sup>. The first recorded positive case in Greene County, Missouri (part of the Springfield Community) was verified on March 12, 2020<sup>11</sup>.

Missouri Governor Mike Parson declared a state of emergency due to COVID-19 on March 13, 2020<sup>12</sup>. In the months that followed many municipalities, private organizations, and community boards in the OHC Region enacted various disease mitigation programs including social distancing, mask requirements, and school/workplace closures.

By December 2020, several vaccine candidates became available for public use, for those age 16 and over, through an Emergency Use Authorization by the US Food and Drug Administration<sup>13</sup>. In Missouri, vaccine access prioritized older and more at-risk residents but by April 2021 the vaccine was available, though not always accessible, to the general adult population<sup>14</sup>. In May 2021, the Emergency Use Authorization (EUA) was expanded to include everyone over the age of 12<sup>15</sup>. To increase vaccination rates and offer the best protection from severe health consequences of COVID-19, leaders in health, public

health, and other community organizations rallied together to make sure residents had the appropriate information and access to the vaccine. By August 2021, one vaccine had been given formal FDA approval for those 16 and older, resulting in mandated vaccination by several public and private employers<sup>16</sup>.

COVID-19 continues to have a significant impact to the residents, economy, and social structures in the OHC Region. Beginning in June 2021, the Region became Missouri's and the US's epicenter for a new virus variant, Delta, which is characterized by increased transmissibility, especially among unvaccinated populations. Health infrastructure continued to be stretched and many of those living in the area died or lost loved ones due to the virus. In August 2021, recommendations for vaccine booster shots among immunocompromised individuals were issued by leading health organizations<sup>17</sup>.

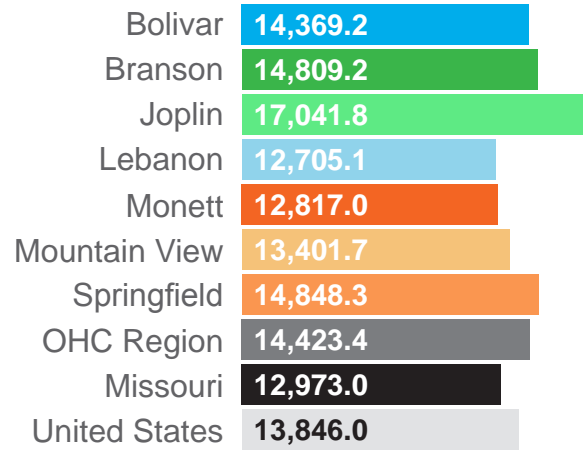


### COVID-19 CASE RATES

*Crude rate per 100,000 population through 10/29/2021*

Though the COVID-19 pandemic is ongoing, it is vital to examine how this unprecedented emergency, and its long-term effects, has impacted the community.

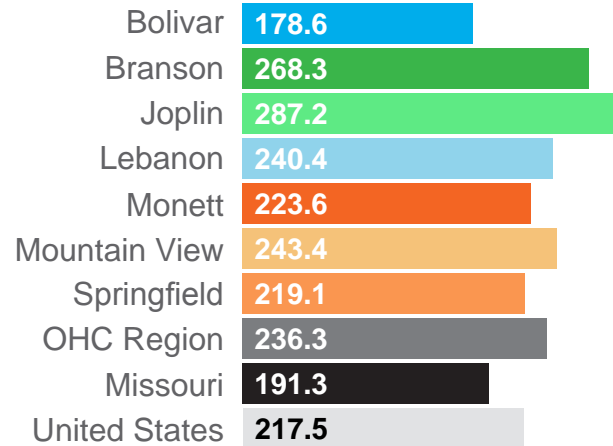
The OHC Region, specifically, is performing poorly when comparing certain statistics to state and national rates. For example, the Region's overall case rate is more than 10% higher than the state rate; regional communities have rates that range from 12,705.1 (Lebanon Community) to 17,041.8 (Joplin Community) per 100,000 population. (For context, the population of the city of Springfield, Missouri is around 167,000.) Multiply that by the number of family members, friends, and other close contacts put at risk of infection and the overall power and reach of this disease becomes staggering.



### COVID-19 MORTALITY

*Crude rate per 100,000 population through 10/29/2021*

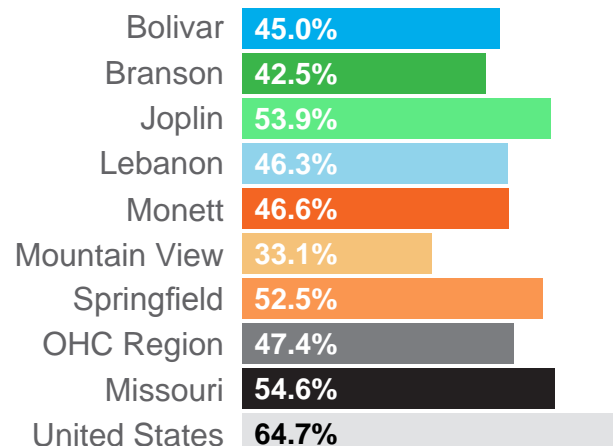
Families, friends, and communities have been deeply impacted by loss of life due to COVID-19. While accounting for differences in total population, the Ozarks Health Commission Region has experienced more loss due to COVID-19 than average for Missouri (+22%) and for the nation (+5%). While many who contract COVID-19 go on to recover, sometimes with short- and long-term disability, the virus has proven fatal for hundreds of residents and neighbors. Many worked to create, communicate, and maintain mitigation strategies to decrease the spread and severity of disease, but these measures were not always accepted by community members. Acceptance of mitigation strategies, such as masking and vaccination, remains incomplete while misinformation related to COVID-19 abounds. As a result, the burden of disease persisted.



### COVID-19 FULLY VACCINATED ADULTS

*through 10/29/2021*

There have been successes, too. Importantly, the medical community and the public-at-large now have a safe, effective, and accessible tool to fight COVID-19—a vaccine. However, the OHC Region has fallen behind in utilizing this tool. In each community, the COVID-19 vaccination rate for adults trails the state and national average. In the Mountain View Community, for example, only one in three residents have taken advantage of this potentially life-saving opportunity. The OHC Region's rate is higher (47.4%) but it is being largely driven by urban areas like Springfield and Joplin. Overall, the OHC Region has a vaccination rate that continues to lag behind the national average by about 25%.





# SOCIAL DETERMINANTS OF HEALTH

Also included in Appendices A and B are tables displaying the metrics for indicators that could impact multiple AHIs. Referred to here as Social Determinants of Health, these are indicators that could be included in community health improvement plans in order to move the needle on more than one Assessed Health Issues. Social Determinants of Health, per Healthy People 2030, are "...the conditions where people are born, work, play, worship, and age that affect a wide range of health, functioning, and quality of life outcomes and risks<sup>18</sup>." Often, Social Determinants of Health are referenced in the context of upstream factors that can ultimately impact an individual's health. For example, studies have long shown that tobacco use can have dire health consequences. By limiting behaviors that can lead to tobacco use (limiting use by minors, disallowing tobacco use in public areas, etc.) the overall future health of an individual might be positively impacted. Broadly, these Social Determinants of Health fall into six categories: economic stability, education access and quality, healthcare access and quality, neighborhood and built environment, social and community context, and health behaviors.





## **ECONOMIC STABILITY**

In the OHC Region, 4 in 10 people live in poverty, and many people can't afford things like healthy foods, health care, and housing. Healthy People 2030 focuses on helping more people achieve economic stability. People with steady employment are less likely to live in poverty and more likely to be healthy, but many people have trouble finding and keeping a job. People with disabilities, injuries, or conditions like arthritis may be especially limited in their ability to work. In addition, many people with steady work still don't earn enough to afford the things they need to stay healthy. Employment programs, career counseling, and high-quality childcare opportunities can help more people find and keep jobs. In addition, policies to help people pay for food, housing, health care, and education can reduce poverty and improve health and well-being.



## **EDUCATION ACCESS AND QUALITY**

People with higher levels of education are more likely to be healthier and live longer. Healthy People 2030 focuses on providing high-quality educational opportunities for children and adolescents — and on helping them do well in school. Children from low-income families, children with disabilities, and children who routinely experience forms of social discrimination — like bullying — are more likely to struggle with math and reading. They're also less likely to graduate from high school or go to college. In the OHC Region, 1 in 10 adults over the age of 25 do not have a high school diploma or equivalency. This means they're less likely to get safe jobs that provide a liveable wage, and are more likely to have health problems like heart disease, diabetes, and depression. In addition, some children live in places with poorly performing schools, and many families can't afford to send their children to college. The stress of living in poverty can also affect children's brain development, making it harder for them to do well in school. Interventions to help children and adolescents do well in school and help families pay for college can have long-term health benefits.



## **HEALTHCARE ACCESS AND QUALITY**

Many people in the United States don't get the health care services they need. Healthy People 2030 focuses on improving health by helping people get timely, high-quality health care services. About 1 in 5 adults in the OHC Region don't have health insurance. Strategies to increase insurance coverage rates are critical for making sure more people get important health care services, like preventive care and treatment for chronic illnesses. Sometimes people don't get recommended health care services, like cancer screenings, because they don't have a primary care provider. Other times, it's because they live too far away from health care providers who offer screening services. These are sometimes called Health Professional Shortage Areas (HPSAs). More than 40% of the OHC Region's residents live in a HPSA. Interventions to increase access to health care professionals and improve communication — in person or remotely — can help more people get the care they need.



## **NEIGHBORHOOD AND BUILT ENVIRONMENT**

The neighborhoods people live in have a major impact on their health and well-being. Healthy People 2030 focuses on improving health and safety in the places where people live, work, learn, and play. Many people in the United States live in neighborhoods with high rates of violence, unsafe air or water, and other health and safety risks. One in four OHC Region households have no or slow Internet, a severe limitation. Racial/ethnic minorities and people with low incomes are more likely to live in places with these risks. In addition, some people are exposed to things at work that can harm their health, like secondhand smoke or loud noises. Interventions and policy changes at the local, state, and federal level can help reduce these health and safety risks and promote health. For example, providing opportunities for people to walk and bike in their communities — like by adding sidewalks and bike lanes — can increase safety and help improve health and quality of life.



## **SOCIAL AND COMMUNITY CONTEXT**

People's relationships and interactions with family, friends, co-workers, and community members can have a major impact on their health and well-being. Healthy People 2030 focuses on helping people get the social support they need in the places where they live, work, learn, and play. Many people face challenges and dangers they can't control — like unsafe neighborhoods, discrimination, or trouble affording the things they need. This can have a negative impact on health and safety throughout life. Positive relationships at home, at work, and in the community can help reduce these negative impacts. But some people — like children whose parents are in jail and adolescents who are bullied — often don't get support from loved ones or others. In the OHC Region, 4% of elementary and secondary students have been identified as homeless. Interventions to help people get the social and community support they need are critical for improving health and well-being.



## **HEALTH BEHAVIORS**

Not all indicators of community health fall neatly into the Social Determinants of Health categories above. Health behaviors include individual-level behaviors, often influenced by access or quality of services, that can impact the overall health of an individual or community. Behaviors related to substance use/misuse, healthy eating, physical activity, and practicing safe sexual practices are behaviors often influenced by the conditions in the environments where people are born, live, learn, work, play, worship, and age. In the OHC Region, 1 in 4 adults is physically inactive and 1 in 5 currently smokes. These behaviors can affect a wide range of health, functioning, and quality-of-life outcomes and risks.



# COMMUNITY CONTEXT DATA

The Ozarks Health Commission Steering Committee elected to utilize consultative services to acquire reliable and representative input from the 30-county OHC Region. To that end, a consulting firm was hired to gather both quantitative and qualitative data through 3 avenues: community surveys, focus groups and interviews.

The community survey, which collected quantitative data, saw broad participation across all 7 Communities. The community focus groups and interviews which collected qualitative data, consisted of key community stakeholders, policymakers and residents. Across the OHC Region, significant engagement was seen from health systems, non-profits, government, schools, libraries, tribal communities, vulnerable populations and diverse communities, health focused organizations and faith-based organizations.

The full Crescendo Community Report can be found in Appendix D.

Through the analysis of the qualitative data, themes emerged in the region for identified needs and possible interventions. The needs and possible interventions identified through community input are important factors to consider when planning approaches for community improvement. This included needs and interventions in the areas of mental health, substance use and recovery, COVID-19, access to care, housing/homelessness/poverty and neighborhood and built environment.

Through the analysis of quantitative data themes also emerged, including mental health, substance use and recovery, housing and access to affordable childcare. For analysis purposes the themes that emerged will be discussed in relationship to AHIs and/or social determinants of health.

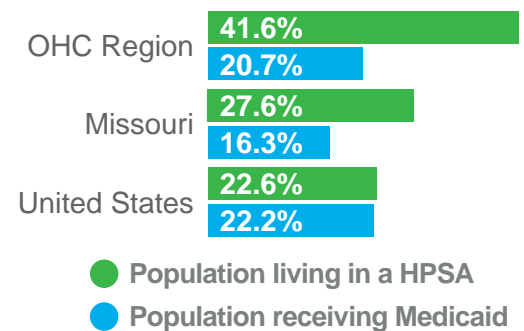
## COVID-19:

- The COVID-19 pandemic, specifically stemming from low vaccination rates in the area, will have long-lasting effects on many health and social aspects of the population.
- Healthcare has become highly and increasingly politicized, and this has affected both medical and mental health needs of residents across the region.
- Recruiting and retaining the necessary number of and types of providers exacerbates the already challenging health issues (as illustrated by the chart to the right).
- Many shared the hope for their children's futures, but isolation due to poverty and the risk of COVID-19 is creating what they feel are permanent educational and behavioral health challenges for many. The complete impact of the pandemic will not be known for years.

## TOP 10 COMMUNITY NEEDS FROM SURVEY

1. Affordable, quality childcare
2. Counseling services for mental health issues such as depression, anxiety, trauma or others for adolescents and children
3. Counseling services for mental health issues such as depression, anxiety, trauma or others for adults
4. Emergency mental health services for issues such as suicidal thinking or actions, homicidal thinking or actions, self-harm or harm to others
5. Affordable housing
6. Drug and other substance use treatment and rehabilitation services, including detox
7. Integrated care, or where people can get medical care and counseling at the same time
8. Drug and other substance use education, prevention and early intervention services
9. Social services (other than healthcare) for people experiencing homelessness
10. Coordination of patient care between the hospital and other clinics, private doctors or others

## HEALTH PROFESSIONAL SHORTAGE AREAS AND MEDICAID



Overlapping needs mental health and substance use and recovery services were identified through interviews and focus groups. Mental health and substance misuse have always plagued the area, but the COVID-19 pandemic has greatly increased the problem and not nearly enough treatment options exist.

Survey respondents identified the following needs in relation to Mental Health:

- Counseling services for mental health issues for children & adolescents
- Counseling services for mental health issues for adults
- Emergency mental health services



**Our area has high percentage of people on drugs. Meth is big. If you have a record, it's hard to get housing, so people live in extended stay hotels and drugs are prevalent – people can't get out of the cycle.**

**(Branson Community, Taney County)**

Regarding the AHI Substance Use and Recovery, 62.97% of the respondents identified drug and substance use treatment and rehab services (including detox) were needed in the region. Further, 60.54% of the respondents identified that drug and other substance use education, prevention and early intervention services are widely needed.

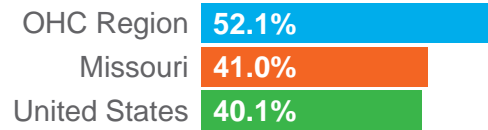
Social determinant of health factors are found as underlying or contributing issues to improving chronic disease and other health issues. Whether due to transportation, insurance or cost considerations, avoidance of healthcare, unhealthy lifestyles or other factors, the difficulty of accessing healthcare, mental health and substance use and recovery providers leads to a large number of people who indicated that chronic conditions are a major issue in the region. Diabetes, heart disease, obesity, Chronic Obstructive Pulmonary Disease (COPD), and hypertension were consistently cited.

Transportation remains a barrier for individuals and families trying to get the healthcare they need, and travel for regular employment.

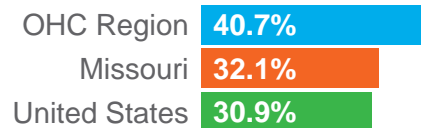
Another overlapping theme emerges with access, broadband and COVID-19. As delivery options have expanded during the pandemic, not all residents have perceived this as a viable option for services. Telehealth comes with its own challenges and

barriers to solving rural health care needs due to the lack of broadband infrastructure, as well as costs of hardware, consistent internet access, and knowledge gaps.

**CHILDREN LIVING BELOW 200% FEDERAL POVERTY LEVEL**



**ADULTS LIVING BELOW 200% FEDERAL POVERTY LEVEL**



Housing, homelessness and poverty were identified as themes that are underlying factors that affect the health, well-being and progress of community members.

As we assess the underlying factors, two themes rise to the top from the community survey results. Access to affordable childcare and access to affordable housing. Access to affordable childcare rose to the top of identified needs with 70.37% of the respondents identifying this as a need. This need was identified by all age groups and genders that participated in the survey.



**Homeless teens and homeless in general are a major problem. We have a lot of couch surfers or multifamily homes, not enough homes for growing community in Durham. The number of people without a permanent address is extremely staggering for kids in schools.**

**(Lebanon Community, Dallas County)**

## Community Survey Question:

Which of the following Health Care issues do you feel need more focus or attention for improvement?

● Not Needed or Rarely Needed ● Needed ● Very Needed

### Access to Dental Services



### Case Workers to Help People With Chronic Diseases Get the Right Care Over Time



### Coordination of Patient Care



### Counseling Services for Mental Health Issues (Child/Adolescent)



### Counseling Services for Mental Health Issues (Adult)



### Drug and Other Substance Use Education, Prevention and Early Intervention Services



### Drug and Other Substance Use Treatment and Rehab Services



### Emergency Mental Health Services



### Healthcare for Seniors



### Increased Brain Care



### Integrated Care



### Men's Health Services



### Pediatric/Child Health Services



### Primary Health Care Services



### Programs for Heart Health or Cardiovascular Health



### Urgent Care Services



### Women's Health Services



# HOSPITAL EMERGENCY DEPARTMENT DATA

The Steering Committee determined that Emergency Department (ED) data is essential to the assessment process because it provides current information about the specific communities and populations that are being assessed. It also helps to identify community specific needs, therefore assisting in the creation of the health improvement plans.

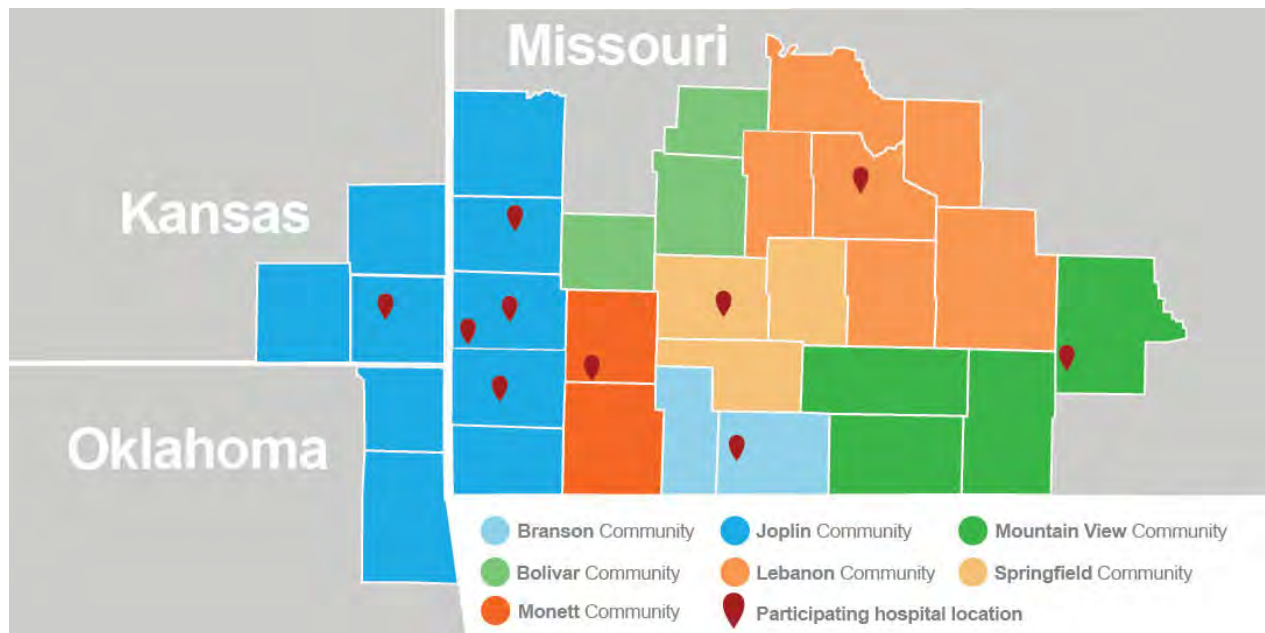
The Regional Health Assessment focuses on patients that enter the health systems through the emergency department (ED), because the ED captures patients with all insurance types, including those without insurance. This approach provides the opportunity to assess potential health disparities across patient groups.

Utilizing their respective organization's analytics team, data from the three previous calendar years (2018-2020) was collected from each of the following facilities: Cox Barton County Hospital; Cox Medical Center Branson; Cox Medical Center South; Cox North Hospital; Cox Monett Hospital; Freeman Hospital West; Freeman Neosho Hospital; Mercy Hospital Carthage; Mercy Hospital Joplin; Mercy Hospital Columbus; Mercy Hospital Springfield; Mercy Hospital Lebanon; Mercy St. Francis Hospital. International Classification of Diseases, Clinical Modification (ICD-10-CM) diagnosis groups (first three digits only) were used to ensure consistent data collection across facilities that corresponded with pre-determined assessed health issues.

When each hospital finished analysis, analysts at the Springfield Greene County Health Department combined and de-identified the ED data sets in Communities with more than one ED. This approach maintained the collaborative nature of the Regional Health Assessment and provided an insightful perspective of community health needs.

Acknowledging the gaps in other healthcare services proved to the public such as outpatient clinic data is essential. That data could provide this report with a better understanding of the community needs since clinics provide the highest number of patient visits for any community. Future collaborations between hospital systems may provide usable outpatient clinical data that can be aggregated and compiled for future assessments.

## PARTICIPATING HOSPITAL LOCATIONS



## KEY FINDINGS.

Below are some of the key findings of the data (2018-2020):

### AHI CONDITIONS

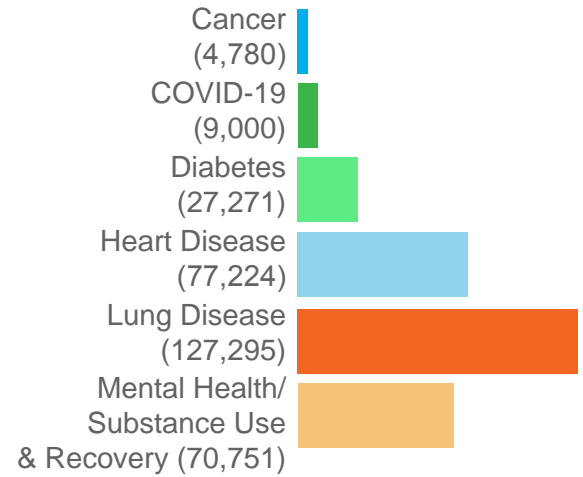
- Of the 1,203,465 ED admissions in the Region, 26.3% (316,321) were due to an AHI-related condition, and more than 300,000 ED visits to facilities had diagnoses associated with an AHI.
- Lung Disease was the most frequent diagnosis, comprising 40% of visits attributed to the six AHIs.
- Comparing 2018 (pre-COVID) and 2020 data shows that there was an overall 11% decrease in AHI-related diagnoses during the first year COVID appeared.
  - Lung Disease, 33% decrease
  - Cancer, 14% decrease
  - Heart Disease, 11% decrease
  - Diabetes, 7% decrease
  - Mental Health, Substance Use & Recovery, 7% decrease
  - COVID-19 was a new diagnosis code introduced in 2020.

### PAYOR TYPES

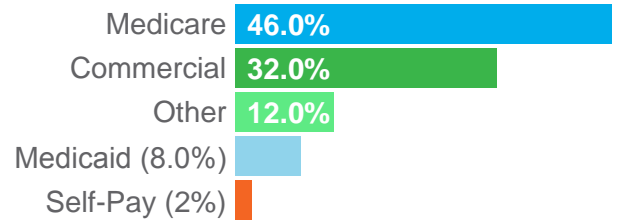
- Medicare is the most frequently used payor-type in the OHC Region, used for 37% of AHI-related diagnoses.
- Lung Disease diagnoses are most frequently paid through Medicaid (33%)
- Mental Health, Substance Use & Recovery diagnoses are most frequently paid through Self-Pay (33%)

### EMERGENCY ROOM VISITS

2018-2020



### UTILIZATION BY PAYOR



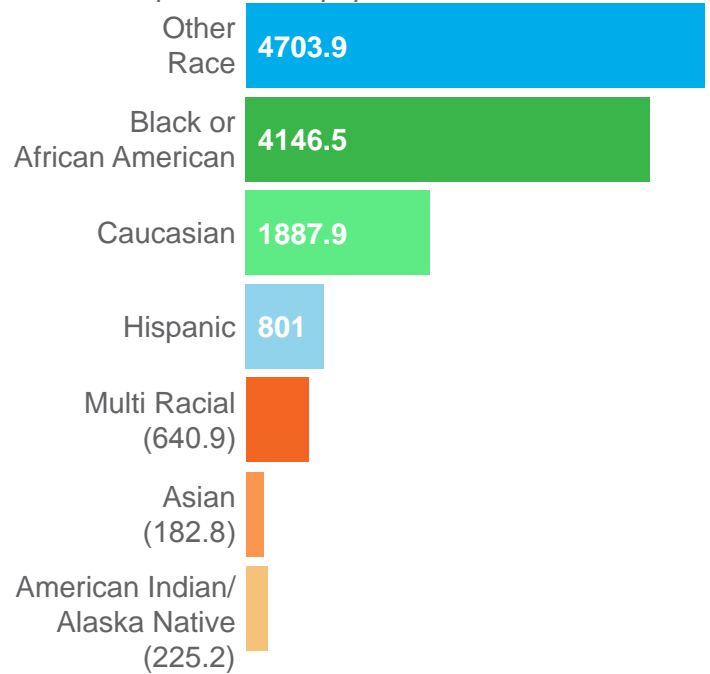


## DEMOGRAPHICS

- Men are slightly more likely to present to Springfield's emergency departments with an AHI-related diagnosis (51% of all visits).
- Males in the Springfield Community have higher rates of emergency department admissions for AHI-related diagnoses with two notable exceptions.
- Females are 15% more likely to be admitted for Diabetes and 16% more likely for Lung Disease- related diagnoses.
- Males are 33% more likely to be admitted for mental health-related diagnoses.
- The majority of those receiving emergency department services for an AHI-related diagnoses in the OHC Region self-identified as Caucasian (89.7%).
- African Americans have the highest rates of admission for each AHI, with the exception of Cancer (where they rank second, after Caucasians).
- Per the graph to the right, admissions for Mental Health and Substance Use Disorder among African Americans is more than double any other race group.
- The oldest members of the OHC Region also have the highest rates of ED admissions for AHI-related diagnoses, with two exceptions.
  - Individuals under the age of 18 have the highest admission rate for Lung Disease.
  - Those aged 18-64 have the highest admission rates for Mental Health, Substance Use & Recovery (3.7 times higher than those under age 18 and 4.2 times higher than those over age 65).

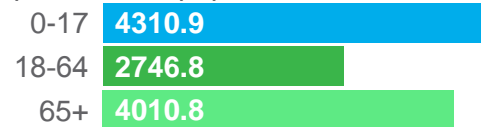
## UTILIZATION BY RACE

Mental Health and Substance Use & Recovery  
Crude rate per 100,000 population



## UTILIZATION BY AGE

Lung Disease  
Crude rate per 100,000 population



# APPROACH/METHODOLOGY

The partners of the Ozark Health Commission built upon the previously developed, multi-faceted approach to collect data and complete the 2022 assessment. The OHC formed a steering committee to guide the process of the Regional Health Assessment; formed by various community partners from across a 30-county region. The steering committee began the discussion of data collection and analysis with the end in mind- determining what data was needed to best understand and subsequently improve health in the community. A comprehensive approach was decided to provide greater breadth and depth of information. The core of the data used in the assessment were public community health indicators (including statistics on mortality, morbidity, and risk factors), as the data is already available across various health categories. The committee determined that having timely data via primary hospital data was a key component of the assessment. Not only does the data provide a unique and timely examination of a Community's health, but it also provides the collaborative process for this type of collection and use of hospital data. To garner the perspective of partners and individuals within each of the Communities, it was decided that a consulting firm would conduct stakeholder interviews, focus groups and community surveys to provide firsthand information and feedback on health issues and timely information on COVID-19 impacts.

Throughout the public health and hospital emergency department data collection, the steering committee provided direction, feedback and guidance, whereas the detailed research and efforts took place within subcommittees or with a third-party contractor. The majority of the research and development of the methods was completed through four subcommittees. The subcommittees completed work on community health public data indicators, populations of focus, hospital emergency department data indicators, and health issues and prioritization. The following information provides additional information on the overall process, each of the four subcommittees and their work. Much of the work completed by the subcommittees happened concurrently, with a majority of the work occurring between May and November 2021.

## POPULATIONS OF INTEREST

The steering committee had established in previous assessments that vulnerable, disenfranchised, and at-risk populations are a key factor when identifying and addressing community health needs. Populations of interest may also be referred to as vulnerable populations, such as: people in poverty, minorities, the elderly, varying demographic groups and socioeconomic status, those experiencing higher rates of chronic disease/illness and those experiencing worse health outcomes.

A sub-committee was formed to review and update the previous process for identifying populations of interest. The sub-committee agreed to continue to use the previously used Social Vulnerability Index (SVI), which was created to help emergency planners identify and map groups that may be most at risk in the event of a disaster. The SVI uses U.S. Census and American Community Survey data to identify at risk groups by ranking all census tracts on 15 social factors. The factors are grouped into four main themes, housing & transportation, minority status and language, household composition & disability and socioeconomic status<sup>19</sup>.

Each of these socioeconomic indicators are predictive of behaviors that lead to poor health outcomes related to COVID-19, heart disease, lung disease, mental health, oral health, diabetes, and cancer. Income and employment status are more directly tied to a person's mental health<sup>20</sup>. Therefore, addressing populations that live near or below poverty, have low education levels, and/or are unemployed, will impact their health related to all Assessed Health Issues (AHI).

## SOCIOECONOMIC STATUS

(Poverty, Income, Employment, and Education)

Two SVI indicators measure the income status of the population: poverty and per capita income. Poverty measures the proportion of the population living below 100% of the Federal Poverty Level (FPL). Per capita income measures the average yearly income earned per person. A person's income status is closely tied to their health. Generally, people with a higher income have easier access to healthcare by means of transportation, health insurance, and finances to pay out-of-pocket expenses. Additionally, they are more likely to engage in healthy lifestyle behaviors, such as exercising eating healthy food, and abstaining from tobacco use<sup>21</sup>.

Two socioeconomic indicators closely tied to income are education and employment. The education indicator measures the prevalence of the population, age 25 and older, that does not have a high school diploma. The employment indicator measures the prevalence of the population, age 16 and older, that are unemployed. In general, people with a higher income are more educated, which means they typically 1) have increased knowledge of healthy lifestyle activities and 2) are better positioned for higher paying jobs which increases their means for participating in these activities<sup>22</sup>. Similarly, a person's employment status is closely tied to his or her access to health care.

Each of these socioeconomic indicators are predictive of behaviors that lead to poor health outcomes related to COVID-19, heart disease, lung disease, mental health, oral health, diabetes, and cancer. Income and employment status are more directly tied to a person's mental health<sup>23</sup>. Therefore, addressing populations that live near or below poverty, have low education levels, and/or are unemployed, will impact their health related to all Assessed Health Issues (AHI).

## HOUSEHOLD COMPOSITION AND DISABILITY

(Age, Disability Status, Household)

Oftentimes, adults aged 65 and older experience risk factors that increase with age, such as decreased mobility, social isolation, chronic disease, financial decline, nutritional needs, and age-related illnesses. Living in poverty compounds the effect of these risk factors as it becomes more challenging to access available health and social resources. This population experiences an increased risk of dealing with one or more of all the AHI.

Children less than 18 years of age are generally dependent on a care giver to ensure their basic, educational, and healthcare needs are met. If a parent is not able to nurture and protect his or her child, which is statistically evident in families facing the complexities of poverty, the child is more likely to participate in risky and unhealthy behavior<sup>24</sup>. Children living in poverty are more likely to experience abuse and neglect, which can cause them to leave the house prematurely, have early pregnancies, and/or associate with inappropriate peers<sup>25</sup>. As the child gets older, low educational attainment can negatively affect employment possibilities, housing, access to health care, nutrition, and more.

Regardless of income, children are more susceptible to environmental risks due to developing immune systems. Yet, their risk increases if they live in poverty.<sup>26</sup> Health problems can result from contaminated water, poor sanitation, indoor smoke, and widespread disease vectors such as mosquitoes and an unsafe food supply. In regard to the assessment's AHI, these conditions can increase the threat of a child developing lung disease, as well as mental, behavioral, and substance use issues while still in adolescence. Additionally, risky behaviors that develop during childhood years are likely to remain as an adult and/or affect their health status later in life. These may lead to poor health outcomes in most

## WHAT MAKES A POPULATION VULNERABLE?

### SOCIO-ECONOMIC STATUS

Below poverty

Unemployed

Income

No High School

Diploma

### HOUSEHOLD COMPOSITION & DISABILITY

Aged 65 or older

Aged 17 or younger

Civilian with a Disability

Single-Parent

Households

### MINORITY STATUS & LANGUAGE

Minority

Aged 5 or older who

speaks English  
"Less than Well"

### HOUSEHOLD TYPE & TRANSPORTATION

Multi-Unit Structures

Mobile Homes

Crowding

No Vehicle

Group Quarters

identified AHI: heart disease, lung disease, diabetes, oral health, and mental health.

According to the International Classification of Functioning, Disability, and Health, a disability involves dysfunction of bodily function, limitations in activity, and/or restrictions in participating in life situations, and is the interaction between an individual with a health condition and personal and environmental factors<sup>27</sup>. Disability is diverse, with some health conditions requiring extensive attention and care while others do not. People with disabilities are vulnerable to insufficiencies in health care services, such as prohibitive costs, limited availability of services, physical barriers, and inadequate skills and knowledge of health workers. Additionally, they may experience greater vulnerability to co-morbid conditions, age-related conditions, secondary conditions, engaging in risky health behaviors, and higher rates of premature death<sup>28</sup>. Co-morbid, age-related, and secondary conditions may include all of the AHI.

### **MINORITY STATUS AND LANGUAGE**

Health disparities among racial and ethnic minorities are well-documented. Variations in health outcomes arise from factors such as lack of health insurance, limited access to health care, disparities in quality of care, inability of providers to recognize and address disparities, lack of data collection, analysis, and distribution of resources. Because the social construct of one's environment can predict his or her health outcomes, it is important to understand the unique needs of diverse populations to ensure access to social and health services. Similarly, it is important to understand the health issues faced by specific racial and ethnic minorities. For example, there is a greater prevalence of hypertension among African Americans than Caucasians<sup>29</sup>. Additionally, Hispanics are burdened by asthma as they are more likely to work in environments that may make them sick and/or not provide access to health care. The risk for developing one or more of the AHI varies by race and ethnicity. Therefore, the first step in identifying unique health needs is to understand the ethnic and racial features of a community.

### **HOUSING TYPE AND TRANSPORTATION**

A housing unit may be a house, an apartment, a mobile home, a group of rooms or a single room that is occupied (or, if vacant, intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live separately from any other individuals in the building, and which have direct access from outside the building or through a common hall. Living in a multi-unit housing unit with 10 or more units can create challenges because pollutants, or disease particles, may move

from unit to unit and residents have limited ability to make changes to the building structure itself. Pest management and smoke-free policies also present unique challenges in multi-unit housing structures.

<sup>30</sup>

Crowding can also be problematic for those living in multi-unit or mobile home housing, especially if there are more people than rooms. This can also often occur in group quarters, which is a place where people live or stay in a group living arrangement and are generally not related to one another. Often, group quarters are college residence halls, residential treatment centers, skilled nursing facilities, group homes, military barracks, correctional facilities, workers' dormitories, and/or facilities for people experiencing homelessness.

Living with no vehicle, especially in areas where public transportation is not readily available, puts a strain on the health of an individual. The inability to access general healthcare is devastating and it becomes more so if specialty care, which might require a longer commute, is necessary.




## PUBLIC HEALTH DATA

A subcommittee on secondary community health data indicators was formed to identify categories of convergent health indicators, review the collected data, and conduct an initial assessment of the findings. The committee was comprised of public health partners from the steering committee. The committee began their work to review and update the methods from the previous health assessments.

The committee reviewed the previous set of health indicator based upon the Assessed Health Issues prioritized during the 2019 assessment. During this process a set of 2022 assessed health issues were identified and updated to include behavioral/mental health, cancer, diabetes, heart disease, lung disease, oral health, substance use and recovery and the special topic – COVID-19. The committee identified that the health indicators would need to be prioritized to include no more than 150 secondary indicators for this particular assessment based upon the health issues. The committee then prioritized the health indicators to be included to assess each health issue. The following categories of indicators were identified: clinical care and prevention, demographics, education, health behaviors, health outcomes, healthcare workforce, housing and families, income and economics, other social and economic factors, physical environment and a special topic – COVID-19. Individual indicators within each category were then prioritized and further categorized into specific assessed health issues or, as appropriate, Social Determinants of Health. The committee determined the indicators would be collected at the county-level and then combined into the community-level for comparison. County-level data is available for individual communities, health systems, public health agencies, and partners to examine the data on a more granular level.

## ASSESSED HEALTH ISSUES INDICATORS

 <p><b>MENTAL HEALTH</b> Suicide Mortality Poor Mental Health Depression Prevalence</p>	 <p><b>CANCER</b> Cancer Incidence Rate Cancer Mortality Recent Mammogram Recent Pap Smear Adequate Colorectal Cancer Screening</p>	 <p><b>DIABETES</b> Annual Hemoglobin A1C Test Diabetes Prevalence</p>	 <p><b>HEART DISEASE</b> Stroke Mortality Heart Disease Mortality High Blood Pressure Prevalence High Cholesterol Prevalence Coronary Heart Disease Prevalence Obesity Prevalence Poor Physical Health</p>
 <p><b>LUNG DISEASE</b> Lung Disease Mortality Poor Physical Health Asthma Prevalence COPD Prevalence</p>	 <p><b>ORAL HEALTH</b> Recent Dental Visit Public Water Service Fluoridation Early Childhood Caries Referral</p>	 <p><b>SUBSTANCE USE &amp; RECOVERY</b> Drug Poisoning Mortality Alcohol Use Disorder Prevalence Substance Use Disorder Prevalence</p>	 <p><b>COVID-19</b> COVID-19 Mortality COVID-19 Case Rate COVID-19 Fully Vaccinated Adults Coronary Heart Disease Prevalence Obesity Prevalence Poor Physical Health</p>

## SOCIAL DETERMINANTS OF HEALTH

The committee reviewed information from CDC and National Association of County and City Health Officials (NACCHO) on the incorporation of social determinants of health and Healthy People 2030 as a framework for social determinant of health indicators in the community health assessment. It was agreed upon that this approach would allow for upstream information to be used when developing community health improvement plans (CHIP). Using this framework, the following social determinant of health categories were used based on the social determinants of health framework: economic stability; education access & quality; healthcare access & quality; health behaviors; neighborhood & built environment; social and community context. Individual indicators within each category were then prioritized and further categorized into specific social determinant of health categories.

Data collection began in May 2021 by partnering with the Center for Applied Research and Engagement Systems (CARES) network to pull all categorized health indicators that were identified by the subcommittee. A collection of definitions of indicators was provided by CARES and included in Appendix C (Glossary).

As the data was collected and compiled, it was aggregated into the appropriate assessed health issue or social determinant of health and sorted by community and county. This aggregated data was developed into comparison tables to allow for a side-by-side examination of the data between Communities, the OHC Region, state, and the nation. The steering committee reviewed the previously set indicator measures by state and national average and agreed the same indicators should be used this round. The committee reviewed these datasets and began to attach performance context with the indicators, which occurred in September and October 2021. Subsequently, the committee made additional observations about the indicators and how the OHC Region and Communities performed in comparison to the nation, states, and Region. After the data was reviewed, the committee provided their findings to the steering committee. Key findings within each category are provided within this report. For a comprehensive list of comparison tables refer to Appendix A (Community Data). For the county-level information that was used to create comparison tables refer to Appendix B (County Data).

## SOCIAL DETERMINANTS OF HEALTH INDICATORS

<p><b>EDUCATION ACCESS AND QUALITY</b>            No High School Diploma            Associate's Level Degree or Higher            Bachelor's Degree or Higher            Chronic Absence Rate</p>	<p><b>HEALTHCARE ACCESS AND QUALITY</b>            Uninsured Adults            Uninsured Children            Population Receiving Medicaid            Population Living in a HPSA            Primary Care Physicians Provider Rate            Mental Health Care Provider Rate            Addiction/Substance Abuse Provider Rate            Dentists Provider Rate            Core Preventive Services for Men            Core Preventive Services for Women            Households with No Motor Vehicle</p>	<p><b>NEIGHBORHOOD AND BUILT ENVIRONMENT</b>            Substandard Housing            Violent Crime Rate            Households with No or Slow Internet            Low Food Access            Respiratory Hazard Index Score</p>
<p><b>HEALTH BEHAVIORS</b>            Adult Binge Drinking            Physical Inactivity            Current Smokers            Fruit/Vegetable Expenditures            Chlamydia Incidence            Gonorrhea Incidence            HIV Prevalence</p>		<p><b>SOCIAL AND COMMUNITY CONTEXT</b>            Social Vulnerability Index (SVI)            SVI- Household Composition            SVI- Housing and Transportation            SVI- Minority Status            SVI- Socioeconomic            Homeless Students</p>
<p><b>ORAL HEALTH</b>            Recent Dental Visit            Public Water Service Fluoridation            Early Childhood Caries Referral</p>		

## **IDENTIFYING AND PRIORITIZING HEALTH ISSUES**

The OHC Steering Committee worked together to review and update the process of assessing and prioritizing health issues for Communities. The steering committee began work on updating and defining the process in June 2021 and concluded their updates by July 2021. Specific Community prioritization occurred from November 2021 – February 2022.

To establish the health issues that would be assessed further, 32 health indicators were examined and grouped by their similarities. A similar process identified eight groupings of related indicators that are considered Social Determinants of Health. During this process, it was determined that behavioral/mental health and substance use and recovery would be separate Health Issues with their appropriate indicators. This decision was made based on expert guidance in the field of mental health and substance use.

The committee then developed an objective review and examination of the health issues as a process for scoring. The scoring system included both key data points and community perspective providing a more thorough examination of the health issues. The following sections outline the scoring system that was developed.

### **HEALTH INDICATOR SCORING**

Information from Kaiser Permanente and NACCHO were used as guides in the prioritization process for assessed health issues. These resources provided guidance for a “Prioritization Matrix” to be used to identify health issues. A prioritization matrix is a commonly used tool for prioritization and is ideal when health issues are considered against multiple criteria. Decision matrices provide a visual method for prioritizing and account for criteria with varying degrees of importance. Ideas for the criteria were based on the Hanlon Method<sup>31</sup>. The committee modified Hanlon’s criteria (seriousness, magnitude and effectiveness) to better fit the data and communities within the OHC Region. The Hanlon Method also incorporates the ‘PEARL’ Test, which screens for propriety, economics, acceptability, resources and legality. The actual test was not performed in this process, but some of the concepts were used as criteria for the matrix (i.e. community readiness). This modification was required due to condensed timeline and the diversity within the Communities and consistent partner engagement throughout the OHC Region.

The scoring system used key components/evidence from the data and evidence from the community. The data used in the scoring system includes morbidity

and/or mortality for each of the health issues, comparisons of these indicators to state and national performance, trending performance over time, and the pervasiveness of health issues presented in the primary hospital utilization data. The higher the score, the more problematic the associated statistics. The data used to provide community evidence of momentum around the health issue was the feasibility to change the health issue and the readiness of the community for those changes. With the data elements, the committee decided to use an approach of scoring and averaging all indicator scores within the health issue to create the overall score better encompass the entire issue. With the community elements of the scoring system, a broader examination of the health issues occurred and included factors along the disease and well-being continuum. The committee felt that this approach provided a thorough examination from each health issue. The committee did not feel that the initial process to coordinate and integrate the focus groups and the survey results was compatible enough to include them with a scoring mechanism. The committee did feel it was important to include them to information in the prioritization process as context, but not provide a score. Additionally, the results of the survey were not given a score in the prioritization matrix. Rather the survey results produced themes of health needs in the region and communities. This information was also used to set context in the prioritization process.

This score was then used by communities to have community conversations around which and how many health issues to select as the priority for the community. Further, analysis of community input was given to participants during this portion to add context to the issues. In addition, communities can also add other health issues that were not identified in the process outlined herein. The priority health issues will then be the basis for developing community health improvement plans. Each community summary details the scoring for prioritization of each health issue.

### MORBIDITY

Morbidity evaluates how common the health issue is in a population. Typically, it is represented as a proportion of the population with the health issue. These estimates can show the prevalence (how much common the disease is in the entire population) or incidence (which focuses on new cases). There are multiple indicators that are within the defined health issues. For the process, the committee identified the indicators that corresponded with the health issue, scored the indicator using the table below, and averaged those scores to inform the final assessed health issue score. The morbidity data is based on the NACCHO health assessment information<sup>32</sup>. Incidence data thresholds were reviewed from previous assessment by the committee, which based the top category on an incidence rate that would create a prevalence of five percent within a ten-year period.

Score	Prevalence	Incidence per 100,000
4	>25%	> 500
3	10% - 24.9%	250-499
2	1% - 9.9%	100-249
1	<1%	< 100

### MORTALITY

Death rates (mortality) are used to evaluate long-term impact and severity of a health issue to a community.

As with morbidity, relevant indicators were defined, scored, and averaged to represent the health issue.

The score was based on the rank of each health issue's rate of death, compared to other health issues.

To illustrate, heart disease had the highest death rate in the OHC Region while suicide had the lowest. Rank scores were divided into quartiles between these two rates.

Score	Severity/Seriousness
4	Age-adjusted mortality rate above 212.3
3	Mortality rates between 117.2 and 212.3
2	Mortality rates between 58.6 and 117.1
1	Mortality rates below 58.6 or data is not available.

### HOSPITAL UTILIZATION DATA

Public health data provides a robust look at health indicators and health issues in a community, but there are certain limitations to exclusively using this secondary data to determine health priorities. Most notably, this data typically lags three to five years, raising concerns whether the data is too dated to fully represent the health issue. Layered hospital utilization data from hospital systems helps to provide greater confidence in the process and final conclusions/health priorities. This primary data comes from individual hospital Emergency Departments from throughout the OHC Region. Visits to the Emergency Department were classified by the Principal Diagnosis Group (using ICD-10-CM coding). The visits based on Principal Diagnosis Group were tabulated for each community. The Principal Diagnosis Groups were then associated with assessed health issues (e.g., Diseases of the Respiratory System and Lung Disease). The hospital utilization data score was then based on the percent of Emergency Department visits associated with identified Health Issues.

Score	Percent of Visits Associated with Health Issues
4	>25% of visits
3	11% - 24% of visits
2	1% - 10% of visits
1	< 1% of visits



### **FEASIBILITY TO CHANGE THE ISSUE**

Feasibility to change the issue evaluates both the simplicity of the issue and the control a community has over the issue. Issues with a clear, evidence-based approach and those which can be solved by addressing a single issue are viewed as more feasible to change, whereas ones that are multi-faceted or with no clear approach to change are viewed less feasible.

To illustrate, mental health is a multi-faceted health issue with no clearly defined path to make significant improvements in a limited time frame. Issues that can be addressed at a local level are viewed to be more feasible to change, whereas issues that are not controlled by the community are viewed as less feasible to change. To further illustrate, access to care is largely impacted by whether or not a community has expanded Medicaid, which is not feasible for an individual community to change. Contradictory to the previously described ranking criteria, “Feasibility to Change the Issue” and “Community Readiness to Change” are to use a more broad and inclusive examination of the health issue in the community, rather than focusing on a single indicator. The committee based the categories on information found within the NACCHO Guide to Prioritization Techniques<sup>33</sup> and used community experience of committee members to determine definitions and thresholds for the categories.

### **FEASIBILITY TO CHANGE- COMPLEXITY**

- Multi-faceted health issue that cannot be improved in 2-3 years
- Single health issue that cannot be improved in 2-3 years
- Multi-faceted health issue that can be improved in 2-3 years
- Single health issue that can be improved in 2-3 years

### **FEASIBILITY TO CHANGE- LEVEL OF CONTROL**

- Unknown level of control
- Little local control to create policy or system change
- Some local control to create policy or system change
- Local control to create policy or system change

### **FEASIBILITY TO CHANGE- PATH FOR IMPLEMENTATION**

- Unknown or no understanding of what efforts are needed
- Moderate understanding of what is needed, but no efforts are in development
- Clear path of what is needed, but no current efforts in development or early in development
- Clear path of what is needed and is currently in place or development

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### **COMMUNITY READINESS TO CHANGE**

The community readiness to change evaluates both the community and organizations within the community’s readiness to impact the issue. A community with collaborative efforts already underway is more likely to adopt health priorities and impact change. Organizations that have efforts or funding already in place to address an issue are more ready to impact change. Communities that have both key organizations serving as a backbone for a health issue and community collaboration that is moving in parallel and coordinated fashion are more closely following the Collective Impact Model, which provides an effective approach to advance progress around community issues<sup>34</sup>. This approach was developed by the Committee, which based the standard on the Collective Impact Model and used a consensus approach determine the breakpoints for scoring.

### **COMMUNITY READINESS – LEADERSHIP**

- Organizational leadership is unknown
- No current community organization leading the effort
- Community organization, limited in capacity and/or experience, is leading efforts to address the issue
- Community organization with capacity and/or experience is leading efforts to address issue

### **COMMUNITY READINESS- COMMUNITY**

- Community partnership unknown
- Informal community partnership or no community coordinated efforts
- Formal community partnership in place but with limited success
- Formal community partnership in place with evidence of success

## COMMUNITY CONTEXT DATA

The purpose of the survey was to gather insights from each Community regarding health-related needs, the impact of COVID-19 and communication and service use issues. The survey was disseminated by the OHC Commissions and project leaders throughout the 30-county region. In total, 2,638 individuals completed the survey. Even though some data limitations occasionally impact the clarity of a specific “rank order” or other rating of needs, most research (including the research included in this project), clearly illuminate the set of core needs. In more rural counties (e.g., lower population or reduced research participation), data challenges exist, yet the robust research plan of this assessment and the survey sample size helped to address several data limitations.

The survey was available electronically through an on-line platform, as well as paper-based in both English and Spanish. Results of the survey were compiled and analyzed by Crescendo Consulting using SPSS. The community survey summary contained within this report includes highlights and insights of survey results; the full Community Input Report can be found in Appendix D. The quantifiable insights gained from the survey added context to the deeper insights collected in the focus groups.

For the community focus groups, the Commission hoped to garner information on health priorities that was more grounded in both personal and professional experiences. Focus group members were recruited from the regional communities through mass and personal emails, one-on-one conversations, social media, and through word of mouth. Focus groups were facilitated using a discussion guide (located in Appendix D-2 of Crescendo Report). After introductions, participants were asked to think broadly about the topic areas. Discussions then narrowed into what they saw as the biggest concerns facing their community and what possible solutions they envisioned.

There were 10 virtual focus group discussions in many areas across the seven communities. This allowed regional voices to highlight areas they see as the biggest health-related needs facing the community. The focus groups added insight and depth to community needs perceptions.

To build upon the focus groups and have more in-depth and private conversations about community-wide strengths, barriers to getting care, impacts of the COVID-19 pandemic, and ideas to improve their communities, thirty-minute one-on-one interviews were conducted. Crescendo representatives completed interviews with 75 residents from the 7 Communities. Although an interview guide (located in

Appendix D-1 of Crescendo Report) was used to help guide the conversation, participants were encouraged to speak about their areas of concern, interest, or experience.

## PRIMARY HOSPITAL UTILIZATION DATA

Another key component of the assessment was the collection of the partnering hospitals’ data. The steering community determined that this data was essential for the assessment process because it provided current information about the specific communities and populations that are being assessed. It also helps in identifying community specific needs, therefore assisting in the creation of the health improvement plans. To review the previous process and further refine and update the indicators and collection methods, a Hospital Data Subcommittee was created. The subcommittee was comprised of hospital representatives from all three of the partnering health systems and public health representatives. The committee began meeting in June of 2021 and completed its work by December 2021.

The Hospital Data Subcommittee chose to focus on patients that enter the health systems through the emergency department (ED), because the ED captures patients with all insurance types, including those without insurance. This approach provides the opportunity to assess potential health disparities across patient groups. The list below includes all data sets collected by each hospital partner:

- ED Only vs ED Admitted
- ED by Principal Diagnosis Group
- ED by Age Groups
- ED by Principal Diagnosis Group, Age 0-17
- ED by Principal Diagnosis Group, Age 18-64
- ED by Principal Diagnosis Group, Age 65+
- ED by Payor Group
- ED by Payor Group, by Principal Diagnosis Group
- ED by Patient Race
- ED by Patient Race (Top 5 Race Groups by Volume), by Principal Diagnosis

Utilizing their respective organizations’ s analytics team, data from the three previous calendar years (2018-2020) was collected from each of the participating hospitals. International Classification of Diseases, Clinical Modification (ICD-10-CM) diagnosis groups (first three digits only) were used to ensure consistent data collection across facilities that corresponded with pre-determined assessed health issues. When each hospital finished analysis, the Hospital Data Subcommittee combined and de-identified the ED data sets in Communities with more than one ED. This approach maintained the collaborative nature of the Regional Health Assessment and provided a holistic perspective of

# CONCLUSION

The trends discussed in this report do not occur in a vacuum nor do they tell the entire story of the health of our community. Without including the environmental, social, and economic layers that impact both individual and community health, important nuance and context can be lost. This report refers to these layers as Social Determinants of Health, as they flow through each of the assessed health issues highlighted above. When community partners positively address a single social determinant of health, multiple assessed health issues will likely be impacted.



# ENDNOTES

- 1 White, M.C., Population Trends in Missouri and Its Regions, May 2021, <https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pub/pdf/miscpubs/mx0055.pdf>
- 2 American Diabetes Association, 2021
- 3 Centers for Disease Control and Prevention, 2021
- 4 Johns Hopkins Medicine, 2021
- 5 Ndumele, 2016
- 6 Centers for Disease Control and Prevention, 2016
- 7 Missouri Department of Health and Senior Services, Office of Dental Health, 2021
- 8 American Dental Association, 2021
- 9 Centers for Disease Control and Prevention, 2021
- 10 Smith, 2020
- 11 Springfield-Greene County Health Department, 2021
- 12 Missouri Governor Michael L. Parson, 2020
- 13 U.S. Department of Health and Human Services, 2021
- 14 Missouri Governor Michael L. Parson, 2021
- 15 U.S. Department of Health and Human Services, 2021
- 16 U.S. Department of Health and Human Services, 2021
- 17 Centers for Disease Control and Prevention, 2021
- 18 US Department of Health and Human Services, 2021
- 19 Centers for Disease Control and Prevention, 2021
- 20 Thompson, 2015, Hudson, 2005
- 21 Centers for Disease Control and Prevention, 2021
- 22 Newman, 2002
- 23 Thompson, 2015) (Hudson, 2005
- 24 Evans, 2004
- 25 Brown, 1986
- 26 Evans, 2004
- 27 World Health Organization, 2002
- 28 World Health Organization, 2020
- 29 Lackland, 2015
- 30 United States Environmental Protection Agency, 2021
- 31 National Association of County and City Health Officials, 2021
- 32 National Association of County and City Health Officials, 2021
- 33 National Association of County and City Health Officials, 2021
- 34 Callahan, 2012



# APPENDIX A

## COMMUNITY DATA

### HOW TO READ THESE TABLES

	Measure is better than Missouri average.
	Measure is up to 9.9% worse than Missouri average.
	Measure is 10-25% worse than Missouri average.
	Measure is more than 25% worse than Missouri average.
Normal	Measure is better than United States average.
<i>Italics</i>	Measure is up to 9.9% worse than United States average.
<b>Bold Italics</b>	Measure is 10-25% worse than United States average.
<b>Bold</b>	Measure is more than 25% worse than United States average.

### COVID-19 MORTALITY RATE

	COVID-19 Mortality Rate	COVID-19 Case Rate	COVID-19 Fully Vaccinated Adults
Bolivar Community	178.6	14369.2	45.0%
Branson Community	<b>268.3</b>	14809.2	42.5%
Joplin Community	<b>287.2</b>	<b>17041.8</b>	<b>53.9%</b>
Lebanon Community	<b>240.4</b>	12705.1	46.3%
Monett Community	223.6	12817.0	46.6%
Mountain View Community	<b>243.4</b>	13401.7	<b>33.1%</b>
Springfield Community	219.1	14848.3	<b>52.5%</b>
OHC Region	236.3	14423.4	47.4%
Missouri	191.3	12973.0	54.6%
United States	217.5	13846.0	64.7%

\*Crude rate per 100,000 population  
COVID-19 data through 10/29/2021

### HEART DISEASE

	Stroke Mortality Rate	Heart Disease Mortality Rate	High Blood Pressure Prevalance	High Cholesterol Prevalance	Coronary Heart Disease Prevalance	Obesity Prevalance	Poor Physical Health
Bolivar Community	<b>48.4</b>	<b>199.4</b>	<b>37.4%</b>	<b>40.0%</b>	<b>9.6%</b>	<b>35.2%</b>	<b>16.7%</b>
Branson Community	35.4	<b>264.7</b>	<b>38.1%</b>	<b>40.7%</b>	<b>10.1%</b>	29.3%	<b>16.6%</b>
Joplin Community	<b>42.4</b>	<b>236.7</b>	<b>36.8%</b>	<b>37.7%</b>	<b>8.8%</b>	<b>34.3%</b>	<b>16.0%</b>
Lebanon Community	36.9	<b>201.3</b>	<b>35.4%</b>	<b>37.9%</b>	<b>8.7%</b>	<b>31.1%</b>	<b>15.9%</b>
Monett Community	39.6	<b>230.2</b>	<b>36.8%</b>	<b>39.8%</b>	<b>9.7%</b>	<b>35.6%</b>	<b>17.4%</b>
Mountain View Community	<b>44.8</b>	<b>201.4</b>	<b>40.4%</b>	<b>41.6%</b>	<b>11.0%</b>	<b>32.8%</b>	<b>19.0%</b>
Springfield Community	<b>38.7</b>	<b>183.8</b>	31.2%	<b>35.8%</b>	<b>7.2%</b>	31.8%	<b>14.1%</b>
OHC Region	<b>40.1</b>	<b>212.3</b>	<b>35.1%</b>	<b>37.7%</b>	<b>8.6%</b>	<b>32.6%</b>	<b>15.7%</b>
Missouri	39.6	191.2	33.2%	36.0%	7.5%	32.4%	14.0%
United States	37.3	164.8	32.9%	34.2%	6.9%	29.5%	13.0%

Age adjusted rate per 100,000 population

## ORAL HEALTH

	Recent Dental Visit	Public Water Service Fluoridation*	Early Childhood Caries Referrals**
Bolivar Community	<b>55.5%</b>	0.0%	26.6%
Branson Community	<b>55.8%</b>	17.3%	25.1%
Joplin Community	<b>55.1%</b>	56.7%	4.0%
Lebanon Community	<b>54.1%</b>	41.2%	8.5%
Monett Community	<b>52.9%</b>	24.7%	no data
Mountain View Community	<b>49.7%</b>	0.0%	13.8%
Springfield Community	<b>60.5%</b>	73.2%	2.3%
OHC Region	<b>56.4%</b>	50.4%	7.0%
Missouri	61.4%	71.8%	4.5%
United States	64.4%		

\*Missouri counties only  
\*\*PSP participants age five and under only

## LUNG DISEASE

	Lung Disease Mortality Rate	Poor Physical Health	Asthma Prevalence	COPD Prevalence
Bolivar Community	<b>57.9</b>	<b>16.7%</b>	<b>10.1%</b>	<b>11.1%</b>
Branson Community	<b>40.7</b>	<b>16.6%</b>	<b>10.0%</b>	<b>11.2%</b>
Joplin Community	<b>68.3</b>	<b>16.0%</b>	<b>10.4%</b>	<b>10.0%</b>
Lebanon Community	<b>72.3</b>	<b>15.9%</b>	<b>10.0%</b>	<b>10.3%</b>
Monett Community	<b>63.5</b>	<b>17.4%</b>	<b>10.2%</b>	<b>11.4%</b>
Mountain View Community	<b>62.6</b>	<b>19.0%</b>	<b>10.5%</b>	<b>12.9%</b>
Springfield Community	<b>51.7</b>	<b>14.1%</b>	<b>9.7%</b>	<b>8.6%</b>
OHC Region	<b>60.7</b>	<b>15.7%</b>	<b>10.1%</b>	<b>10.0%</b>
Missouri	50.4	14.0%	9.7%	8.5%
United States	40.2	13.0%	9.5%	7.2%

\*Age adjusted rate per 100,000 population

## DIABETES

	Annual Hemoglobin A1c Test*	Diabetes Prevalence	Poor Physical Health	Obesity Prevalence
Bolivar Community	<b>88.0%</b>	<b>8.7%</b>	<b>16.7%</b>	<b>35.2%</b>
Branson Community	<b>84.0%</b>	<b>9.9%</b>	<b>16.6%</b>	<b>29.3%</b>
Joplin Community	<b>81.6%</b>	<b>10.1%</b>	<b>16.0%</b>	<b>34.3%</b>
Lebanon Community	<b>85.2%</b>	<b>8.9%</b>	<b>15.9%</b>	<b>31.1%</b>
Monett Community	<b>86.2%</b>	<b>12.5%</b>	<b>17.4%</b>	<b>35.6%</b>
Mountain View Community	<b>86.1%</b>	<b>11.5%</b>	<b>19.0%</b>	<b>32.8%</b>
Springfield Community	<b>89.3%</b>	<b>11.2%</b>	<b>14.1%</b>	<b>31.8%</b>
OHC Region	<b>84.8%</b>	<b>10.4%</b>	<b>15.7%</b>	<b>32.6%</b>
Missouri	86.3%	10.1%	14.0%	32.4%
United States	85.7%	9.5%	13.0%	29.5%

\*Medicare enrollees

## CANCER

	Cancer Incidence Rate*	Cancer Mortality Rate**	Recent Mammogram***	Recent Pap Smear****	Adequate Colorectal Cancer Screening
Bolivar Community	371.5	163.1	66.4	81.3%	63.8%
Branson Community	399.1	151.6	66.8	82.5%	65.6%
Joplin Community	440.2	187.1	67.4	81.6%	61.6%
Lebanon Community	437.0	173.9	67.8	82.3%	64.3%
Monett Community	413.5	172.1	65.3	81.7%	62.7%
Mountain View Community	368.9	180.6	63.2	80.7%	60.9%
Springfield Community	420.1	158.6	69.2	82.7%	65.9%
OHC Region	419.9	171.3	67.6	82.1%	63.8%
Missouri	454.9	166.4	70.8	84.1%	67.0%
United States	448.7	152.3	73.7	83.9%	65.5%

\*rate per 100,000 population  
 \*\*Age adjusted rate per 100,000 population  
 \*\*\*Females, age 50-74  
 \*\*\*\*Females, 21-65

## MENTAL HEALTH

	Suicide Mortality Rate*	Poor Mental Health	Depression Prevalence**
Bolivar Community	20.4	15.7%	23.0%
Branson Community	24.5	14.9%	18.1%
Joplin Community	22.7	16.0%	20.8%
Lebanon Community	20.4	15.6%	18.6%
Monett Community	19.4	16.1%	18.9%
Mountain View Community	25.4	16.6%	18.4%
Springfield Community	22.2	15.3%	24.1%
OHC Region	22.1	15.7%	20.8%
Missouri	18.3	14.5%	21.3%
United States	13.8	13.4%	18.4%

\*Age adjusted rate per 100,000  
 \*\*Medicare beneficiaries only



## SUBSTANCE USE AND RECOVERY

	Drug Poisoning Mortality Rate*	Alcohol Use Disorder Prevalence**	Substance Use Disorder Prevalence**
Bolivar Community	<b>25.0</b>	2.0%	3.5%
Branson Community	<b>24.0</b>	1.5%	3.3%
Joplin Community	16.6	1.6%	3.3%
Lebanon Community	<b>26.1</b>	1.6%	3.0%
Monett Community	14.9	1.8%	3.2%
Mountain View Community	11.2	1.5%	3.8%
Springfield Community	<b>27.5</b>	1.9%	<b>4.1%</b>
OHC Region	<b>22.8</b>	1.7%	3.5%
Missouri	25.3	1.9%	3.3%
United States	21.6	2.1%	3.5%

\*Age adjusted rate per 100,000  
\*\*Medicare beneficiaries only

## ECONOMIC STABILITY

	Population Below 200% FPL	Children Below 200% FPL	Per Capita Income (\$)	Unemployment Rate	Cost Burden, Severe (50%)	Affordable Housing (60% AMI)
Bolivar Community	<b>43.3%</b>	<b>52.5%</b>	<b>\$22,444.00</b>	3.6%	10.5%	38.9%
Branson Community	<b>38.6%</b>	<b>54.4%</b>	<b>\$25,689.00</b>	<b>8.3%</b>	10.2%	31.1%
Joplin Community	<b>42.2%</b>	<b>54.2%</b>	<b>\$24,304.00</b>	3.7%	10.0%	43.8%
Lebanon Community	<b>40.6%</b>	<b>54.4%</b>	<b>\$23,782.00</b>	4.5%	10.9%	35.0%
Monett Community	<b>44.9%</b>	<b>61.2%</b>	<b>\$23,974.00</b>	4.0%	10.1%	41.0%
Mountain View Community	<b>49.9%</b>	<b>62.2%</b>	<b>\$20,330.00</b>	4.9%	11.3%	33.7%
Springfield Community	<b>37.1%</b>	<b>44.9%</b>	<b>\$27,241.00</b>	3.5%	12.0%	31.7%
OHC Region	<b>40.7%</b>	<b>52.1%</b>	<b>\$24,962.00</b>	4.0%	10.9%	36.6%
Missouri	32.1%	41.0%	\$30,810.00	4.7%	11.0%	38.8%
United States	30.9%	40.1%	\$34,102.00	5.5%	14.0%	29.9%

## EDUCATION ACCESS AND QUALITY

	No High School Diploma*	Associate's Level Degree or Higher*	Bachelor's Degree or Higher*	Chronic Absence Rate
Bolivar Community	12.7%	23.1%	16.3%	8.7%
Branson Community	11.8%	27.3%	19.4%	15.9%
Joplin Community	13.2%	28.8%	20.7%	9.5%
Lebanon Community	12.5%	26.9%	18.6%	9.3%
Monett Community	15.9%	22.5%	15.3%	11.1%
Mountain View Community	15.4%	22.7%	15.3%	6.7%
Springfield Community	8.7%	36.9%	28.8%	15.8%
OHC Region	11.8%	30.0%	22.1%	11.7%
Missouri	10.1%	37.1%	29.2%	11.8%
United States	12.0%	40.6%	32.2%	15.9%

\*Age 25+

## HEALTHCARE ACCESS AND QUALITY

	Uninsured Adults	Uninsured Children	Population Receiving Medicaid	Population Living in HPSA	Primary Care Physician Provider Rate*	Mental Health Provider Rate*
Bolivar Community	19.2%	9.0%	23.2%	56.7%	65.7	39.0
Branson Community	20.6%	9.1%	19.8%	42.0%	62.3	16.1
Joplin Community	20.2%	8.1%	22.5%	42.9%	54.3	103.0
Lebanon Community	18.3%	8.2%	21.0%	41.1%	45.5	36.7
Monett Community	21.7%	10.0%	24.1%	45.0%	59.6	14.9
Mountain View Community	20.6%	8.3%	29.3%	50.0%	63.5	35.3
Springfield Community	15.3%	7.6%	16.9%	36.7%	80.3	85.3
OHC Region	18.3%	8.2%	20.7%	41.6%	63.2	70.0
Missouri	14.1%	6.5%	16.3%	27.6%	70.0	37.0
United States	12.8%	5.6%	22.2%	22.6%	76.7	57.2

\*per 100,000 population

## HEALTHCARE ACCESS AND QUALITY CONTINUED

	Addiction/ Substance Abuse Provider Rate*	Dentists Provider Rate*	Core Preventative Services for Men**	Core Preventative Services for Women**	Lack of Prenatal Care*	Households with No Motor Vehicle
Bolivar Community	19.2%	9.0%	23.2%	56.7%	65.7	39.0
Branson Community	20.6%	9.1%	19.8%	42.0%	62.3	16.1
Joplin Community	20.2%	8.1%	22.5%	42.9%	54.3	103.0
Lebanon Community	18.3%	8.2%	21.0%	41.1%	45.5	36.7
Monett Community	21.7%	10.0%	24.1%	45.0%	59.6	14.9
Mountain View Community	20.6%	8.3%	29.3%	50.0%	63.5	35.3
Springfield Community	15.3%	7.6%	16.9%	36.7%	80.3	85.3
OHC Region	18.3%	8.2%	20.7%	41.6%	63.2	70.0
Missouri	14.1%	6.5%	16.3%	27.6%	70.0	37.0
United States	12.8%	5.6%	22.2%	22.6%	76.7	57.2

\*per 100,000 population,  
\*\*age 65+

## NEIGHBORHOOD AND BUILT ENVIRONMENT

	Substandard Housing	Violent Crime Rate*	Households with No or Slow Internet	Low Food Access	Respiratory Hazard Index Score
Bolivar Community	25.2%	307.1	26.0%	4.7%	1.1
Branson Community	27.7%	387.7	19.6%	31.1%	1.5
Joplin Community	26.1%	367.1	26.6%	24.7%	1.4
Lebanon Community	26.3%	251.5	26.0%	35.5%	1.3
Monett Community	26.0%	324.5	27.8%	19.1%	1.3
Mountain View Community	25.9%	259.2	31.4%	24.7%	1.4
Springfield Community	28.0%	634.8	22.9%	21.8%	1.7
OHC Region	26.8%	426.4	25.1%	24.8%	1.5
Missouri	26.0%	524.3	19.8%	24.9%	1.7
United States	31.9%	416.0	17.3%	22.2%	1.8

\*per 100,000 population

## SOCIAL & COMMUNITY CONTEXT

	Social Vulnerability Index (SVI)*	SVI-Household Composition*	SVI-Housing & Transportation*	SVI-Minority Status*	SVI-Socioeconomic*	Homeless Students
Bolivar Community	<b>0.6</b>	<b>0.7</b>	0.6	0.2	<b>0.7</b>	<b>3.0%</b>
Branson Community	<b>0.7</b>	<b>0.7</b>	<b>0.8</b>	0.3	<b>0.6</b>	<b>4.0%</b>
Joplin Community	<b>0.7</b>	<b>0.7</b>	0.6	0.5	<b>0.6</b>	<b>4.1%</b>
Lebanon Community	<b>0.6</b>	<b>0.6</b>	0.6	0.3	<b>0.7</b>	<b>4.7%</b>
Monett Community	<b>0.8</b>	<b>0.8</b>	0.4	0.6	<b>0.7</b>	<b>4.3%</b>
Mountain View Community	<b>0.6</b>	<b>0.8</b>	0.5	0.1	<b>0.8</b>	<b>3.7%</b>
Springfield Community	0.4	0.2	0.7	0.4	<b>0.4</b>	<b>4.4%</b>
OHC Region	<b>0.6</b>	<b>0.5</b>	0.6	0.4	<b>0.6</b>	<b>4.2%</b>
Missouri	0.4	0.4	0.5	0.5	0.4	4.0%
United States	0.4	0.3	0.6	0.8	0.3	3.0%

\*1 indicates highest vulnerability

## HEALTH BEHAVIORS

	Adult Binge Drinking*	Physical Inactivity	Current Smokers	Chlamydia Incidence**	Fruit/Vegetable Expenditures (\$)	Gonorrhea Incidence**	HIV Prevalence**
Bolivar Community	<b>15.7%</b>	23.0%	<b>22.4%</b>	331.6	<b>\$643.48</b>	98.2	76.4
Branson Community	14.6%	<b>29.7%</b>	<b>21.3%</b>	350.4	<b>\$615.50</b>	155.1	80.6
Joplin Community	15.3%	<b>27.2%</b>	<b>22.8%</b>	472.6	<b>\$640.72</b>	183.0	99.4
Lebanon Community	16.6%	26.2%	<b>22.6%</b>	417.8	<b>\$665.26</b>	156.3	86.6
Monett Community	15.7%	<b>30.0%</b>	<b>23.8%</b>	278.0	\$681.10	102.6	112.0
Mountain View Community	14.2%	<b>29.2%</b>	<b>25.2%</b>	261.2	<b>\$654.18</b>	53.6	89.9
Springfield Community	<b>17.4%</b>	22.9%	<b>20.1%</b>	<b>641.2</b>	<b>\$607.67</b>	<b>277.8</b>	196.2
OHC Region	16.1%	<b>26.0%</b>	<b>21.9%</b>	482.2	<b>\$635.03</b>	192.7	129.0
Missouri	17.5%	24.5%	20.3%	568.1	\$665.08	246.8	245.6
United States	16.9%	22.1%	17.0%	539.9	\$744.71	179.1	372.8

\*in the past 30 days  
\*\*per 100,000 population

# APPENDIX B

## COUNTY DATA

### HOW TO READ THESE TABLES:

	Measure is better than state average.
	Measure is worse than state average.
<b>Bold</b>	Measure is worse than national average.

### BOLIVAR COMMUNITY- ASSESSED HEALTH ISSUES

	Dade County, MO	Hickory County, MO	Polk County, MO	Bolivar Community	ORC Region	Missouri	United States
<b>Assessed Health Issue: Cancer</b>							
Cancer Incidence Rate*	413.2	353.2	367.5	371.5	419.9	454.9	448.7
Cancer Mortality*	173.2	190.2	152.7	163.1	171.3	166.4	152.3
Recent Mammogram**	65.8	65.8	66.7	66.4	67.6	70.8	73.7
Recent Pap Smear***	81.4%	81.6%	81.2%	81.3%	82.1%	84.1%	83.9%
Adequate Colorectal Cancer Screening	67.6%	64.0%	64.2%	63.8%	63.8%	67.0%	65.5%
<b>Assessed Health Issue: Diabetes</b>							
Annual Hemoglobin A1c Test+	91.2%	86.8%	87.5%	88.0%	84.8%	86.3%	85.7%
Diabetes Prevalence	9.3%	8.4%	8.7%	8.7%	10.4%	10.1%	9.5%
Poor Physical Health	18.6%	19.4%	15.5%	16.7%	15.7%	14.0%	13.0%
Obesity Prevalence	36.0%	30.4%	36.6%	35.2%	32.6%	32.4%	29.5%
<b>Assessed Health Issue: Lung Disease</b>							
Lung Disease Mortality*	38.5	57.5	62.7	57.9	60.7	50.4	40.2
Asthma Prevalence	10.3%	10.2%	10.0%	10.1%	10.1%	9.7%	9.5%
COPD Prevalence	12.6%	13.8%	9.9%	11.1%	10.0%	8.5%	7.2%
<b>Assessed Health Issue: Heart Disease</b>							
Stroke Mortality*	52.6	38.1	50.4	48.4	40.1	39.6	37.3
Heart Disease Mortality*	223.1	164.4	204.1	199.4	212.3	191.2	164.8
High Blood Pressure Prevalence	40.4%	46.4%	34.0%	37.4%	35.1%	33.2%	32.9%
High Cholesterol Prevalence	42.2%	45.9%	37.8%	40.0%	37.7%	36.0%	34.2%
Coronary Heart Disease Prevalence	11.0%	12.8%	8.4%	9.6%	8.6%	7.5%	6.9%
* per 100,000 population; ** females age 50-74							
*** females age 21-65; +Medicare population							
***** no data							
+ Missouri counties only							
! Missouri Preventive Services Program (PSP) participants only							

## BOLIVAR COMMUNITY- ASSESSED HEALTH ISSUES, CONT.

	Dade County, MO	Hickory County, MO	Polk County, MO	Bolivar Community	ORC Region	Missouri	United States
<b>Assessed Health Issue: Mental Health</b>							
Suicide Mortality*	*****	*****	20.4	20.4	22.1	18.3	13.8
Poor Mental Health	16.0%	14.9%	15.9%	15.7%	15.7%	14.5%	13.4%
Depression Prevalence+	19.4%	20.5%	25.5%	23.0%	20.8%	21.3%	18.4%
<b>Assessed Health Issue: Substance Use and Recovery</b>							
Drug Poisoning Mortality*	*****	*****	25.0	25.0	22.8	25.3	21.6
Alcohol Use Disorder Prevalence+	1.8%	2.0%	2.1%	2.0%	1.7%	1.9%	2.1%
Substance Use Disorder Prevalence+	3.6%	2.5%	4.0%	3.5%	3.5%	3.3%	3.5%
<b>Assessed Health Issue: Oral Health</b>							
Recent Dental Visit	52.4%	54.7%	56.4%	55.5%	56.4%	61.4%	64.4%
PWSD Fluoridation+	0.0%	0.0%	0.0%	0.0%	50.4%	71.8%	*****
Early Childhood Caries Referrals!	15.0%	36.7%	*****	26.6%	7.0%	4.5%	*****
<b>Assessed Health Issue: COVID-19</b>							
COVID-19 Mortality*	224.6	220.8	155.3	178.6	236.3	191.3	217.5
COVID-19 Case Rate*	11454.6	11473.3	15909.4	14369.2	14423.4	12973.0	13846.0
COVID-19 Fully Vaccinated Adults	49.4%	42.0%	43.9%	45.0%	47.4%	54.7%	64.7%
* per 100,000 population; ** females age 50-74							
*** females age 21-65; +Medicare population							
***** no data							
+ Missouri counties only							
! Missouri Preventive Services Program (PSP) participants only							

## BOLIVAR COMMUNITY- SOCIAL DETERMINANTS OF HEALTH

	Dade County, MO	Hickory County, MO	Polk County, MO	Bolivar Community	ORC Region	Missouri	United States
<b>CT: Economic Stability</b>							
Population Below 200% FPL	47.5%	43.9%	42.1%	43.3%	40.7%	32.1%	30.9%
Children Below 200% FPL	67.1%	40.6%	52.1%	52.5%	52.1%	41.0%	40.1%
Per Capita Income (\$)	\$23,186.00	\$20,735.00	\$22,773.00	\$22,444.00	\$ -	\$30,810.00	\$34,102.00
Unemployment Rate	3.2%	3.8%	3.6%	3.6%	4.0%	4.7%	5.5%
Cost Burden, Severe (50%)	8.9%	11.6%	10.6%	10.5%	10.9%	11.0%	14.0%
Affordable Housing (60% AMI)	48.4%	40.3%	36.0%	38.9%	36.6%	38.8%	29.9%
* age 25+; ** per 100,000 population; *** age 65+							
+ 1 indicates highest vulnerability; @in the past 30 days							

## BOLIVAR COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, CONT.

	Dade County, MO	Hickory County, MO	Polk County, MO	Bolivar Community	ORC Region	Missouri	United States
<b>CT: Education Access &amp; Quality</b>							
No High School Diploma*	12.8%	15.7%	11.6%	12.7%	11.8%	10.1%	12.0%
Associate's Level Degree or Higher*	19.1%	15.9%	26.7%	23.1%	30.0%	37.1%	40.6%
Bachelor's Degree or Higher*	12.7%	9.0%	19.9%	16.3%	22.1%	29.2%	32.2%
Chronic Absence Rate	4.1%	4.4%	11.7%	8.7%	11.7%	11.8%	15.9%
<b>CT: Healthcare Access &amp; Quality</b>							
Uninsured Adults	19.7%	20.0%	18.9%	19.2%	18.3%	14.1%	12.8%
Uninsured Children	9.8%	10.0%	8.6%	9.0%	8.2%	6.5%	5.6%
Population Receiving Medicaid	24.6%	19.7%	23.8%	23.2%	20.7%	16.3%	22.2%
Population Living in a HPSA	46.0%	98.7%	46.8%	56.7%	41.6%	27.6%	22.6%
Primary Care Physicians Provider Rate**	65.9	21.3	78.8	65.7	63.2	70.0	76.7
Mental Health Care Provider Rate**	66.1	62.9	189.7	146.2	200.5	204.2	261.6
Addiction/Substance Abuse Provider Rate**	0.0	0.0	0.0	0.0	11.0	2.2	9.4
Dentists Provider Rate**	13.2	21.7	25.6	22.9	44.3	54.2	65.6
Core Preventative Services for Men***	31.3%	30.9%	33.0%	32.3%	33.0%	34.7%	31.0%
Core Preventative Services for Women***	31.5%	32.0%	33.0%	32.6%	33.8%	36.3%	31.1%
Households with No Motor Vehicle	4.7%	4.0%	6.6%	5.7%	6.0%	6.9%	8.6%
* age 25+; ** per 100,000 population; *** age 65+							
+ 1 indicates highest vulnerability; @in the past 30 days							

## BOLIVAR COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, CONT.

	Dade County, MO	Hickory County, MO	Polk County, MO	Bolivar Community	ORC Region	Missouri	United States
<b>CT: Neighborhood &amp; Built Environment</b>							
Substandard Housing	24.5%	24.9%	25.5%	25.2%	26.8%	26.0%	31.9%
Violent Crime Rate**	371.2	18.2	374.7	307.1	426.4	524.3	416.0
Households with No or Slow Internet	28.4%	36.5%	21.8%	26.0%	25.1%	19.8%	17.3%
Low Food Access	9.0%	4.4%	3.7%	4.7%	24.8%	24.9%	22.2%
Respiratory Hazard Index Score	1.1	1.1	1.2	1.1	1.5	1.7	1.8
<b>CT: Social &amp; Community Context</b>							
Social Vulnerability Index (SVI)+	0.7	0.6	0.5	0.6	0.6	0.4	0.4
SVI- Household Composition+	0.8	0.8	0.5	0.7	0.5	0.4	0.3
SVI- Housing & Transportation+	0.4	0.8	0.1	0.6	0.6	0.5	0.6
SVI- Minority Status+	0.2	0.1	0.4	0.2	0.4	0.5	0.8
SVI- Socioeconomic+	0.9	0.6	0.8	0.7	0.6	0.4	0.3
Homeless Students	0.7%	0.0%	3.6%	3.0%	4.2%	4.0%	3.0%
<b>CT: Health Behaviors</b>							
Adult Binge Drinking@	14.5%	12.7%	16.8%	15.7%	16.1%	17.5%	16.9%
Physical Inactivity	25.4%	21.1%	23.1%	23.0%	26.0%	24.5%	22.1%
Current Smokers	24.1%	22.9%	21.8%	22.4%	21.9%	20.3%	17.0%
Fruit/Vegetable Expenditures (\$)	*****	*****	*****	\$643.48	\$635.03	\$665.08	\$744.71
Chlamydia Incidence**	276.8	179.4	390.0	331.6	482.2	568.1	539.9
Gonorrhea Incidence**	92.3	31.7	119.5	98.2	192.7	246.8	179.1
HIV Prevalence**	107.7	59.8	74.0	76.4	129.0	245.6	372.8
* age 25+; ** per 100,000 population; *** age 65+							
+ 1 indicates highest vulnerability; @in the past 30 days							



## BRANSON COMMUNITY- ASSESSED HEALTH ISSUES

	Stone County, MO	Taney County, MO	Branson Community	ORC Region	Missouri	United States
<b>Assessed Health Issue: Cancer</b>						
Cancer Incidence Rate*	385.1	410.3	399.1	419.9	454.9	448.7
Cancer Mortality*	155.0	149.7	151.6	171.3	166.4	152.3
Recent Mammogram**	66.5	67.0	66.8	67.6	70.8	73.7
Recent Pap Smear***	82.4%	82.5%	82.5%	82.1%	84.1%	83.9%
Adequate Colorectal Cancer Screening	67.6%	64.5%	65.6%	63.8%	67.0%	65.5%
<b>Assessed Health Issue: Diabetes</b>						
Annual Hemoglobin A1c Test+	85.6%	82.9%	84.0%	84.8%	86.3%	85.7%
Diabetes Prevalence	8.1%	11.3%	9.9%	10.4%	10.1%	9.5%
Poor Physical Health	17.4%	16.1%	16.6%	15.7%	14.0%	13.0%
Obesity Prevalence	28.9%	29.6%	29.3%	32.6%	32.4%	29.5%
<b>Assessed Health Issue: Lung Disease</b>						
Lung Disease Mortality*	42.9	39.4	40.7	60.7	50.4	40.2
Asthma Prevalence	9.8%	10.1%	10.0%	10.1%	9.7%	9.5%
COPD Prevalence	12.2%	10.6%	11.2%	10.0%	8.5%	7.2%
<b>Assessed Health Issue: Heart Disease</b>						
Stroke Mortality*	36.6	34.8	35.4	40.1	39.6	37.3
Heart Disease Mortality*	226.0	286.7	264.7	212.3	191.2	164.8
High Blood Pressure Prevalence	41.7%	36.1%	38.1%	35.1%	33.2%	32.9%
High Cholesterol Prevalence	43.4%	39.1%	40.7%	37.7%	36.0%	34.2%
Coronary Heart Disease Prevalence	11.3%	9.4%	10.1%	8.6%	7.5%	6.9%
<b>Assessed Health Issue: Mental Health</b>						
Suicide Mortality*	33.9	19.2	24.5	22.1	18.3	13.8
Poor Mental Health	14.1%	15.4%	14.9%	15.7%	14.5%	13.4%
Depression Prevalence+	17.0%	18.9%	18.1%	20.8%	21.3%	18.4%
<b>Assessed Health Issue: Substance Use and Recovery</b>						
Drug Poisoning Mortality*	27.7	21.9	24.0	22.8	25.3	21.6
Alcohol Use Disorder Prevalence+	1.5%	1.5%	1.5%	1.7%	1.9%	2.1%
Substance Use Disorder Prevalence+	2.6%	3.8%	3.3%	3.5%	3.3%	3.5%
<b>Assessed Health Issue: Oral Health</b>						
Recent Dental Visit	56.8%	55.2%	55.8%	56.4%	61.4%	64.4%
PWSD Fluoridation+	7.2%	21.0%	17.3%	50.4%	71.8%	*****
Early Childhood Caries Referrals!	25.1%	*****	25.1%	7.0%	4.5%	*****
<b>Assessed Health Issue: COVID-19</b>						
COVID-19 Mortality*	264.6	270.4	268.3	236.3	191.3	217.5
COVID-19 Case Rate*	12491.7	16126.6	14809.2	14423.4	12973.0	13846.0
COVID-19 Fully Vaccinated Adults	40.6%	44.3%	42.5%	47.4%	54.7%	64.7%
* per 100,000 population; ** females age 50-74						
*** females age 21-65; +Medicare population						
***** no data						
+ Missouri counties only						
! Missouri Preventive Services Program (PSP) participants only						

## BRANSON COMMUNITY- SOCIAL DETERMINANTS OF HEALTH

	Stone County, MO	Taney County, MO	Branson Community	ORC Region	Missouri	United States
<b>CT: Economic Stability</b>						
Population Below 200% FPL	34.7%	40.8%	38.6%	40.7%	32.1%	30.9%
Children Below 200% FPL	52.4%	55.4%	54.4%	52.1%	41.0%	40.1%
Per Capita Income (\$)	\$29,025.00	\$23,775.00	\$25,689.00	\$ -	\$30,810.00	\$34,102.00
Unemployment Rate	7.6%	8.7%	8.3%	4.0%	4.7%	5.5%
Cost Burden, Severe (50%)	9.0%	10.9%	10.2%	10.9%	11.0%	14.0%
Affordable Housing (60% AMI)	32.7%	30.2%	31.1%	36.6%	38.8%	29.9%
<b>CT: Education Access &amp; Quality</b>						
No High School Diploma*	12.8%	11.1%	11.8%	11.8%	10.1%	12.0%
Associate's Level Degree or Higher*	26.5%	27.9%	27.3%	30.0%	37.1%	40.6%
Bachelor's Degree or Higher*	18.6%	19.9%	19.4%	22.1%	29.2%	32.2%
Chronic Absence Rate	13.1%	17.4%	15.9%	11.7%	11.8%	15.9%
<b>CT: Healthcare Access &amp; Quality</b>						
Uninsured Adults	18.7%	21.6%	20.6%	18.3%	14.1%	12.8%
Uninsured Children	10.1%	8.6%	9.1%	8.2%	6.5%	5.6%
Population Receiving Medicaid	16.2%	22.1%	19.8%	20.7%	16.3%	22.2%
Population Living in a HPSA	39.1%	43.7%	42.0%	41.6%	27.6%	22.6%
Primary Care Physicians Provider Rate**	34.8	78.0	62.3	63.2	70.0	76.7
Mental Health Care Provider Rate**	40.7	76.9	63.7	200.5	204.2	261.6
Addiction/Substance Abuse Provider Rate**	0.0	5.4	3.5	11.0	2.2	9.4
Dentists Provider Rate**	12.9	29.3	23.4	44.3	54.2	65.6
Core Preventative Services for Men***	31.9%	32.3%	32.2%	33.0%	34.7%	31.0%
Core Preventative Services for Women***	34.6%	33.6%	34.0%	33.8%	36.3%	31.1%
Households with No Motor Vehicle	4.0%	5.9%	5.2%	6.0%	6.9%	8.6%
<b>CT: Neighborhood &amp; Built Environment</b>						
Substandard Housing	24.6%	29.5%	27.7%	26.8%	26.0%	31.9%
Violent Crime Rate**	404.1	378.4	387.7	426.4	524.3	416.0
Households with No or Slow Internet	19.4%	19.7%	19.6%	25.1%	19.8%	17.3%
Low Food Access	14.7%	41.4%	31.1%	24.8%	24.9%	22.2%
Respiratory Hazard Index Score	1.3	1.6	1.5	1.5	1.7	1.8
* age 25+; ** per 100,000 population; *** age 65+						
+ 1 indicates highest vulnerability; @ in the past 30 days						

## BRANSON COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, CONT.

	Stone County, MO	Taney County, MO	Branson Community	ORC Region	Missouri	United States
<b>CT: Social &amp; Community Context</b>						
Social Vulnerability Index (SVI)+	0.4	0.8	0.7	0.6	0.4	0.4
SVI- Household Composition+	0.4	0.8	0.7	0.5	0.4	0.3
SVI- Housing & Transportation+	0.4	1.0	0.8	0.6	0.5	0.6
SVI- Minority Status+	0.1	0.4	0.3	0.4	0.5	0.8
SVI- Socioeconomic+	0.5	0.7	0.6	0.6	0.4	0.3
Homeless Students	5.0%	3.6%	4.0%	4.2%	4.0%	3.0%
<b>CT: Health Behaviors</b>						
Adult Binge Drinking@	13.9%	15.0%	14.6%	16.1%	17.5%	16.9%
Physical Inactivity	26.2%	32.0%	29.7%	26.0%	24.5%	22.1%
Current Smokers	20.6%	21.7%	21.3%	21.9%	20.3%	17.0%
Fruit/Vegetable Expenditures (\$)	*****	*****	\$615.50	\$635.03	\$665.08	\$744.71
Chlamydia Incidence**	246.1	410.1	350.4	482.2	568.1	539.9
Gonorrhea Incidence**	69.4	204.1	155.1	192.7	246.8	179.1
HIV Prevalence**	95.8	71.6	80.6	129.0	245.6	372.8
* age 25+; ** per 100,000 population; *** age 65+						
+ 1 indicates highest vulnerability; @in the past 30 days						

## JOPLIN COMMUNITY- ASSESSED HEALTH ISSUES, MISSOURI

	Barton County, MO	Cherokee County, MO	Jasper County, MO	McDonald County, MO	Newton County, MO	Vernon County, MO	Joplin Community	ORC Region	Missouri	United States
<b>Assessed Health Issue: Cancer</b>										
Cancer Incidence Rate*	466.5	*****	478.0	429.4	391.3	435.0	440.2	419.9	454.9	448.7
Cancer Mortality*	179.1	187.1	184.1	201.7	184.4	167.6	187.1	171.3	166.4	152.3
Recent Mammogram**	65.9	65.6	69.3	65.3	65.8	67.7	67.4	67.6	70.8	73.7
Recent Pap Smear***	81.4%	81.6%	82.7%	79.8%	82.8%	82.4%	81.6%	82.1%	84.1%	83.9%
Adequate Colorectal Cancer Screening	63.6%	58.2%	64.9%	59.5%	63.0%	63.7%	61.6%	63.8%	67.0%	65.5%
* per 100,000 population; ** females age 50-74										
*** females age 21-65; +Medicare population										
***** no data										
+ Missouri counties only										
! Missouri Preventive Services Program (PSP) participants only										

## JOPLIN COMMUNITY- ASSESSED HEALTH ISSUES, KANSAS

	Crawford County, KS	Labette County, KS	Joplin Community	ORC Region	Kansas	United States
<b>Assessed Health Issue: Cancer</b>						
Cancer Incidence Rate*	*****	*****	440.2	419.9	452.4	448.7
Cancer Mortality*	199.7	179.7	187.1	171.3	158.1	152.3
Recent Mammogram**	67.0	65.6	67.4	67.6	71.2	73.7
Recent Pap Smear***	79.7%	82.2%	81.6%	82.1%	83.4%	83.9%
Adequate Colorectal Cancer Screening	55.5%	58.1%	61.6%	63.8%	63.4%	65.5%
* per 100,000 population; ** females age 50-74						
*** females age 21-65; +Medicare population						
***** no data						

## JOPLIN COMMUNITY- ASSESSED HEALTH ISSUES, OKLAHOMA

	Delaware County, OK	Ottawa County, OK	Joplin Community	ORC Region	Oklahoma	United States
<b>Assessed Health Issue: Cancer</b>						
Cancer Incidence Rate*	395.1	478.9	440.2	419.9	449.8	448.7
Cancer Mortality*	172.0	218.2	187.1	171.3	178.0	152.3
Recent Mammogram**	66.9	68.9	67.4	67.6	71.6	73.7
Recent Pap Smear***	80.3%	79.7%	81.6%	82.1%	81.8%	83.9%
Adequate Colorectal Cancer Screening	62.1%	57.5%	61.6%	63.8%	60.3%	65.5%
* per 100,000 population; ** females age 50-74						
*** females age 21-65; +Medicare population						
***** no data						

## JOPLIN COMMUNITY- ASSESSED HEALTH ISSUES, MISSOURI

	Barton County, MO	Cherokee County, MO	Jasper County, MO	McDonald County, MO	Newton County, MO	Vernon County, MO	Joplin Community	ORC Region	Missouri	United States
<b>Assessed Health Issue: Diabetes</b>										
Annual Hemoglobin A1c Test+	90.5%	80.5%	85.6%	81.1%	82.9%	85.1%	81.6%	84.8%	86.3%	85.7%
Diabetes Prevalence	10.8%	12.3%	9.5%	8.0%	9.2%	7.2%	10.1%	10.4%	10.1%	9.5%
Poor Physical Health	17.2%	15.0%	15.0%	18.4%	15.7%	16.3%	16.0%	15.7%	14.0%	13.0%
Obesity Prevalence	28.6%	40.3%	37.0%	33.9%	30.0%	29.9%	34.3%	32.6%	32.4%	29.5%
<b>Assessed Health Issue: Lung Disease</b>										
Lung Disease Mortality*	55.8	74.4	69.4	105.7	58.5	64.1	68.3	60.7	50.4	40.2
Asthma Prevalence	10.2%	10.5%	9.9%	10.7%	9.9%	10.1%	10.4%	10.1%	9.7%	9.5%
COPD Prevalence	11.5%	9.6%	9.3%	11.8%	9.8%	10.7%	10.0%	10.0%	8.5%	7.2%
* per 100,000 population; ** females age 50-74										
*** females age 21-65; +Medicare population										
***** no data										
+ Missouri counties only										
! Missouri Preventive Services Program (PSP) participants only										

## JOPLIN COMMUNITY- ASSESSED HEALTH ISSUES, KANSAS

	Crawford County, KS	Labette County, KS	Joplin Community	ORC Region	Kansas	United States
<b>Assessed Health Issue: Diabetes</b>						
Annual Hemoglobin A1c Test+	86.0%	81.3%	81.6%	84.8%	86.8%	85.7%
Diabetes Prevalence	10.3%	11.0%	10.1%	10.4%	9.5%	9.5%
Poor Physical Health	12.5%	14.9%	16.0%	15.7%	11.9%	13.0%
Obesity Prevalence	31.4%	37.8%	34.3%	32.6%	32.9%	29.5%
<b>Assessed Health Issue: Lung Disease</b>						
Lung Disease Mortality*	68.8	57.5	68.3	60.7	49.6	40.2
Asthma Prevalence	10.2%	10.4%	10.4%	10.1%	9.6%	9.5%
COPD Prevalence	7.5%	9.4%	10.0%	10.0%	6.9%	7.2%
* per 100,000 population; ** females age 50-74						
*** females age 21-65; +Medicare population						
***** no data						

## JOPLIN COMMUNITY- ASSESSED HEALTH ISSUES, OKLAHOMA

	Delaware County, OK	Ottawa County, OK	Joplin Community	ORC Region	Oklahoma	United States
<b>Assessed Health Issue: Diabetes</b>						
Annual Hemoglobin A1c Test+	72.5%	77.4%	81.6%	84.8%	79.5%	85.7%
Diabetes Prevalence	11.7%	12.5%	10.1%	10.4%	11.3%	9.5%
Poor Physical Health	19.8%	18.6%	16.0%	15.7%	14.9%	13.0%
Obesity Prevalence	32.3%	37.3%	34.3%	32.6%	34.4%	29.5%
<b>Assessed Health Issue: Lung Disease</b>						
Lung Disease Mortality*	64.3	70.9	68.3	60.7	63.8	40.2
Asthma Prevalence	11.5%	11.6%	10.4%	10.1%	10.5%	9.5%
COPD Prevalence	12.4%	11.5%	10.0%	10.0%	8.6%	7.2%
* per 100,000 population; ** females age 50-74						
*** females age 21-65; +Medicare population						
***** no data						

## JOPLIN COMMUNITY- ASSESSED HEALTH ISSUES, MISSOURI

	Barton County, MO	Cherokee County, MO	Jasper County, MO	McDonald County, MO	Newton County, MO	Vernon County, MO	Joplin Community	ORC Region	Missouri	United States
<b>Assessed Health Issue: Heart Disease</b>										
Stroke Mortality*	56.8	39.5	41.2	34.6	44.0	48.4	42.4	40.1	39.6	37.3
Heart Disease Mortality*	183.0	262.7	239.4	224.2	230.7	243.0	236.7	212.3	191.2	164.8
High Blood Pressure Prevalence	37.4%	40.2%	33.4%	36.0%	34.9%	36.4%	36.8%	35.1%	33.2%	32.9%
High Cholesterol Prevalence	39.8%	38.6%	34.6%	38.9%	38.2%	39.5%	37.7%	37.7%	36.0%	34.2%
Coronary Heart Disease Prevalence	9.9%	9.0%	7.6%	9.5%	8.5%	9.2%	8.8%	8.6%	7.5%	6.9%
* per 100,000 population; ** females age 50-74										
*** females age 21-65; +Medicare population										
***** no data										
+ Missouri counties only										
! Missouri Preventive Services Program (PSP) participants only										

## JOPLIN COMMUNITY- ASSESSED HEALTH ISSUES, KANSAS

	Crawford County, KS	Labette County, KS	Joplin Community	ORC Region	Kansas	United States
<b>Assessed Health Issue: Heart Disease</b>						
Stroke Mortality*	34.7	44.1	42.4	40.1	37.1	37.3
Heart Disease Mortality*	196.4	206.9	236.7	212.3	160.2	164.8
High Blood Pressure Prevalence	33.7%	41.9%	36.8%	35.1%	33.4%	32.9%
High Cholesterol Prevalence	34.5%	39.1%	37.7%	37.7%	34.8%	34.2%
Coronary Heart Disease Prevalence	7.2%	8.9%	8.8%	8.6%	6.9%	6.9%
* per 100,000 population; ** females age 50-74						
*** females age 21-65; +Medicare population						
***** no data						

## JOPLIN COMMUNITY- ASSESSED HEALTH ISSUES, OKLAHOMA

	Delaware County, OK	Ottawa County, OK	Joplin Community	ORC Region	Oklahoma	United States
<b>Assessed Health Issue: Heart Disease</b>						
Stroke Mortality*	39.1	55.0	42.4	40.1	41.3	37.3
Heart Disease Mortality*	231.0	322.5	236.7	212.3	231.9	164.8
High Blood Pressure Prevalence	45.5%	40.9%	36.8%	35.1%	38.0%	32.9%
High Cholesterol Prevalence	43.6%	39.7%	37.7%	37.7%	37.8%	34.2%
Coronary Heart Disease Prevalence	12.1%	10.6%	8.8%	8.6%	8.3%	6.9%
* per 100,000 population; ** females age 50-74						
*** females age 21-65; +Medicare population						
***** no data						

## JOPLIN COMMUNITY- ASSESSED HEALTH ISSUES, MISSOURI

	Barton County, MO	Cherokee County, MO	Jasper County, MO	McDonald County, MO	Newton County, MO	Vernon County, MO	Joplin Community	ORC Region	Missouri	United States
<b>Assessed Health Issue: Mental Health</b>										
Suicide Mortality*	*****	20.3	23.8	*****	22.4	20.7	22.7	22.1	18.3	13.8
Poor Mental Health	16.0%	14.8%	15.9%	17.5%	15.3%	15.8%	16.0%	15.7%	14.5%	13.4%
Depression Prevalence+	15.1%	21.3%	23.0%	21.3%	18.9%	18.2%	20.8%	20.8%	21.3%	18.4%
<b>Assessed Health Issue: Substance Use and Recovery</b>										
Drug Poisoning Mortality*	*****	*****	13.8	*****	17.3	*****	16.6	22.8	25.3	21.6
Alcohol Use Disorder Prevalence+	1.3%	1.5%	1.9%	1.5%	1.5%	1.5%	1.6%	1.7%	1.9%	2.1%
Substance Use Disorder Prevalence+	2.1%	3.3%	3.1%	3.9%	2.6%	2.9%	3.3%	3.5%	3.3%	3.5%
* per 100,000 population; ** females age 50-74										
*** females age 21-65; +Medicare population										
***** no data										
+ Missouri counties only										
! Missouri Preventive Services Program (PSP) participants only										

## JOPLIN COMMUNITY- ASSESSED HEALTH ISSUES, KANSAS

	Crawford County, KS	Labette County, KS	Joplin Community	ORC Region	Kansas	United States
<b>Assessed Health Issue: Mental Health</b>						
Suicide Mortality*	19.3	24.0	22.7	22.1	18.2	13.8
Poor Mental Health	15.2%	14.7%	16.0%	15.7%	12.9%	13.4%
Depression Prevalence+	20.9%	17.3%	20.8%	20.8%	19.8%	18.4%
<b>Assessed Health Issue: Substance Use and Recovery</b>						
Drug Poisoning Mortality*	*****	*****	16.6	22.8	14.2	21.6
Alcohol Use Disorder Prevalence+	1.6%	1.4%	1.6%	1.7%	1.6%	2.1%
Substance Use Disorder Prevalence+	3.1%	2.6%	3.3%	3.5%	2.5%	3.5%
* per 100,000 population; ** females age 50-74						
*** females age 21-65; +Medicare population						
***** no data						

## JOPLIN COMMUNITY- ASSESSED HEALTH ISSUES, OKLAHOMA

	Delaware County, OK	Ottawa County, OK	Joplin Community	ORC Region	Oklahoma	United States
<b>Assessed Health Issue: Mental Health</b>						
Suicide Mortality*	23.4	23.9	22.7	22.1	20.2	13.8
Poor Mental Health	16.8%	18.0%	16.0%	15.7%	15.6%	13.4%
Depression Prevalence+	20.4%	23.8%	20.8%	20.8%	21.1%	18.4%
<b>Assessed Health Issue: Substance Use and Recovery</b>						
Drug Poisoning Mortality*	19.8	21.7	16.6	22.8	21.4	21.6
Alcohol Use Disorder Prevalence+	1.7%	1.6%	1.6%	1.7%	1.6%	2.1%
Substance Use Disorder Prevalence+	4.4%	4.2%	3.3%	3.5%	5.4%	3.5%
* per 100,000 population; ** females age 50-74						
*** females age 21-65; +Medicare population						
***** no data						

## JOPLIN COMMUNITY- ASSESSED HEALTH ISSUES, MISSOURI

	Barton County, MO	Cherokee County, MO	Jasper County, MO	McDonald County, MO	Newton County, MO	Vernon County, MO	Joplin Community	ORC Region	Missouri	United States
<b>Assessed Health Issue: Oral Health</b>										
Recent Dental Visit	52.8%	58.7%	53.4%	50.1%	54.9%	55.8%	55.1%	56.4%	61.4%	64.4%
PWSD Fluoridation+	90.3%	*****	69.0%	75.0%	0.0%	17.6%	56.7%	50.4%	71.8%	*****
Early Childhood Caries Referrals!	*****	*****	2.7%	*****	6.8%	4.2%	4.0%	7.0%	4.5%	*****
<b>Assessed Health Issue: COVID-19</b>										
COVID-19 Mortality*	228.9	384.7	289.3	195.0	214.5	316.6	287.2	236.3	191.3	217.5
COVID-19 Case Rate*	15265.3	18246.3	18626.3	15542.9	13338.8	14950.3	17041.8	14423.4	12973.0	13846.0
COVID-19 Fully Vaccinated Adults	38.8%	50.3%	53.9%	36.1%	28.9%	39.6%	53.9%	47.4%	54.7%	64.7%
* per 100,000 population; ** females age 50-74										
*** females age 21-65; +Medicare population										
***** no data										
+ Missouri counties only										
! Missouri Preventive Services Program (PSP) participants only										

## JOPLIN COMMUNITY- ASSESSED HEALTH ISSUES, KANSAS

	Crawford County, KS	Labette County, KS	Joplin Community	ORC Region	Kansas	United States
<b>Assessed Health Issue: Oral Health</b>						
Recent Dental Visit	65.0%	58.0%	55.1%	56.4%	66.7%	64.4%
PWSD Fluoridation+	*****	*****	56.7%	50.4%	*****	*****
Early Childhood Caries Referrals!	*****	*****	4.0%	7.0%	*****	*****
<b>Assessed Health Issue: COVID-19</b>						
COVID-19 Mortality*	374.4	300.5	287.2	236.3	218.0	217.5
COVID-19 Case Rate*	17146.0	17621.7	17041.8	14423.4	14423.4	13846.0
COVID-19 Fully Vaccinated Adults	39.4%	55.1%	53.9%	47.4%	47.4%	64.7%
* per 100,000 population; ** females age 50-74						
*** females age 21-65; +Medicare population						
***** no data						

## JOPLIN COMMUNITY- ASSESSED HEALTH ISSUES, OKLAHOMA

	Delaware County, OK	Ottawa County, OK	Joplin Community	ORC Region	Oklahoma	United States
<b>Assessed Health Issue: Oral Health</b>						
Recent Dental Visit	54.0%	51.6%	55.1%	56.4%	59.3%	64.4%
PWSD Fluoridation+	*****	*****	56.7%	50.4%	*****	*****
Early Childhood Caries Referrals!	*****	*****	4.0%	7.0%	*****	*****
<b>Assessed Health Issue: COVID-19</b>						
COVID-19 Mortality*	374.4	324.0	287.2	236.3	271.6	217.5
COVID-19 Case Rate*	17146.0	19467.5	17041.8	14423.4	14894.0	13846.0
COVID-19 Fully Vaccinated Adults	39.4%	43.5%	53.9%	47.4%	60.8%	64.7%
* per 100,000 population; ** females age 50-74						
*** females age 21-65; +Medicare population						
***** no data						



## JOPLIN COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, MISSOURI

	Barton County, MO	Jasper County, MO	McDonald County, MO	Newton County, MO	Vernon County, MO	Joplin Community	ORC Region	Missouri	United States
<b>CT: Economic Stability</b>									
Population Below 200% FPL	43.6%	39.8%	50.5%	39.2%	42.9%	38.6%	40.7%	32.1%	30.9%
Children Below 200% FPL	52.2%	51.5%	69.7%	51.0%	56.0%	54.4%	52.1%	41.0%	40.1%
Per Capita Income (\$)	\$26,509.00	\$24,483.00	\$20,467.00	\$28,352.00	\$24,312.00	\$25,689.00	\$ -	\$30,810.00	\$34,102.00
Unemployment Rate	3.6%	4.0%	3.8%	4.0%	3.3%	8.3%	4.0%	4.7%	5.5%
Cost Burden, Severe (50%)	11.2%	10.0%	5.8%	8.6%	9.3%	10.2%	10.9%	11.0%	14.0%
Affordable Housing (60% AMI)	50.6%	40.9%	40.3%	44.4%	46.6%	31.1%	36.6%	38.8%	29.9%
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @in the past 30 days									

## JOPLIN COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, KANSAS

	Cherokee County, KS	Crawford County, KS	Labette County, KS	Joplin Community	ORC Region	Kansas	United States
<b>CT: Economic Stability</b>							
Population Below 200% FPL	42.0%	42.5%	39.7%	38.6%	40.7%	29.8%	30.9%
Children Below 200% FPL	51.2%	48.6%	55.7%	54.4%	52.1%	38.0%	40.1%
Per Capita Income (\$)	\$22,615.00	\$23,091.00	\$24,572.00	\$25,689.00	\$ -	\$31,814.00	\$34,102.00
Unemployment Rate	3.4%	3.6%	3.9%	8.3%	4.0%	3.7%	5.5%
Cost Burden, Severe (50%)	7.2%	14.7%	8.2%	10.2%	10.9%	10.3%	14.0%
Affordable Housing (60% AMI)	54.3%	39.9%	61.6%	31.1%	36.6%	45.3%	29.9%
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @in the past 30 days							

## JOPLIN COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, OKLAHOMA

	Delaware County, OK	Ottawa County, OK	Joplin Community	ORC Region	Oklahoma	United States
<b>CT: Economic Stability</b>						
Population Below 200% FPL	44.4%	48.0%	38.6%	40.7%	36.5%	30.9%
Children Below 200% FPL	58.8%	60.4%	54.4%	52.1%	47.1%	40.1%
Per Capita Income (\$)	\$24,070.00	\$20,814.00	\$25,689.00	\$ -	\$28,421.00	\$34,102.00
Unemployment Rate	3.1%	3.2%	8.3%	4.0%	3.7%	5.5%
Cost Burden, Severe (50%)	11.3%	10.4%	10.2%	10.9%	10.7%	14.0%
Affordable Housing (60% AMI)	38.8%	43.7%	31.1%	36.6%	41.4%	29.9%
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @in the past 30 days						

## JOPLIN COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, MISSOURI

	Barton County, MO	Jasper County, MO	McDonald County, MO	Newton County, MO	Vernon County, MO	Joplin Community	ORC Region	Missouri	United States
<b>CT: Education Access &amp; Quality</b>									
No High School Diploma*	12.9%	13.3%	22.5%	12.9%	11.7%	13.2%	11.8%	10.1%	12.0%
Associate's Level Degree or Higher*	25.4%	30.5%	17.8%	29.0%	27.2%	28.8%	30.0%	37.1%	40.6%
Bachelor's Degree or Higher*	19.9%	23.6%	11.5%	20.0%	18.9%	20.7%	22.1%	29.2%	32.2%
Chronic Absence Rate	8.1%	9.2%	13.2%	9.5%	7.1%	9.5%	11.7%	11.8%	15.9%
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @in the past 30 days									

## JOPLIN COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, MISSOURI

	Cherokee County, KS	Crawford County, KS	Labette County, KS	Joplin Community	ORC Region	Kansas	United States
<b>CT: Education Access &amp; Quality</b>							
No High School Diploma*	10.1%	7.9%	10.2%	13.2%	11.8%	9.1%	12.0%
Associate's Level Degree or Higher*	29.6%	38.2%	30.0%	28.8%	30.0%	42.1%	40.6%
Bachelor's Degree or Higher*	19.6%	29.9%	18.7%	20.7%	22.1%	33.4%	32.2%
Chronic Absence Rate	11.2%	5.0%	7.6%	9.5%	11.7%	12.3%	15.9%
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @in the past 30 days							

## JOPLIN COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, MISSOURI

	Delaware County, OK	Ottawa County, OK	Joplin Community	ORC Region	Oklahoma	United States
<b>CT: Education Access &amp; Quality</b>						
No High School Diploma*	15.1%	14.7%	13.2%	11.8%	12.0%	12.0%
Associate's Level Degree or Higher*	25.2%	25.2%	28.8%	30.0%	33.4%	40.6%
Bachelor's Degree or Higher*	18.1%	14.5%	20.7%	22.1%	25.5%	32.2%
Chronic Absence Rate	14.5%	9.1%	9.5%	11.7%	11.9%	15.9%
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @in the past 30 days						

## JOPLIN COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, MISSOURI

	Barton County, MO	Jasper County, MO	McDonald County, MO	Newton County, MO	Vernon County, MO	Joplin Community	ORC Region	Missouri	United States
<b>CT: Healthcare Access &amp; Quality</b>									
Uninsured Adults	19.3%	20.4%	27.3%	19.1%	17.6%	20.2%	18.3%	14.1%	12.8%
Uninsured Children	9.0%	8.1%	12.0%	7.6%	10.1%	8.1%	8.2%	6.5%	5.6%
Population Receiving Medicaid	22.8%	21.5%	29.0%	18.7%	20.8%	22.5%	20.7%	16.3%	22.2%
Population Living in a HPSA	43.7%	40.2%	50.8%	39.8%	43.3%	42.9%	41.6%	27.6%	22.6%
Primary Care Physicians Provider Rate**	33.9	83.3	13.2	13.8	39.0	54.3	63.2	70.0	76.7
Mental Health Care Provider Rate**	68.1	235.7	13.1	34.3	408.5	196.8	200.5	204.2	261.6
Addiction/Substance Abuse Provider Rate**	0.0	5.8	0.0	1.7	0.0	28.2	11.0	2.2	9.4
Dentists Provider Rate**	8.4	55.7	26.5	17.1	28.8	38.3	44.3	54.2	65.6
Core Preventative Services for Men***	33.6%	34.8%	29.7%	32.7%	32.2%	32.8%	33.0%	34.7%	31.0%
Core Preventative Services for Women***	32.2%	36.1%	32.8%	33.9%	32.9%	33.4%	33.8%	36.3%	31.1%
Households with No Motor Vehicle	8.6%	6.3%	5.1%	5.1%	7.3%	6.4%	6.0%	6.9%	8.6%
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @in the past 30 days									

## JOPLIN COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, KANSAS

	Cherokee County, KS	Crawford County, KS	Labette County, KS	Joplin Community	ORC Region	Kansas	United States
<b>CT: Healthcare Access &amp; Quality</b>							
Uninsured Adults	13.3%	14.3%	15.2%	20.2%	18.3%	12.8%	12.8%
Uninsured Children	5.7%	4.6%	6.6%	8.1%	8.2%	5.7%	5.6%
Population Receiving Medicaid	23.8%	19.7%	23.4%	22.5%	20.7%	15.0%	22.2%
Population Living in a HPSA	38.8%	44.0%	41.8%	42.9%	41.6%	34.0%	22.6%
Primary Care Physicians Provider Rate**	24.8	82.2	69.6	54.3	63.2	77.4	76.7
Mental Health Care Provider Rate**	145.4	216.4	86.7	196.8	200.5	207.0	261.6
Addiction/Substance Abuse Provider Rate**	24.8	43.7	9.9	28.2	11.0	7.6	9.4
Dentists Provider Rate**	34.1	51.0	28.8	38.3	44.3	55.4	65.6
Core Preventative Services for Men***	29.6%	30.5%	28.6%	32.8%	33.0%	33.7%	31.0%
Core Preventative Services for Women***	28.6%	31.3%	28.3%	33.4%	33.8%	33.7%	31.1%
Households with No Motor Vehicle	8.2%	9.0%	5.9%	6.4%	6.0%	5.4%	8.6%
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @in the past 30 days							

## JOPLIN COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, OKLAHOMA

	Delaware County, OK	Ottawa County, OK	Joplin Community	ORC Region	Oklahoma	United States
<b>CT: Healthcare Access &amp; Quality</b>						
Uninsured Adults	27.0%	24.8%	20.2%	18.3%	20.3%	12.8%
Uninsured Children	10.1%	8.5%	8.1%	8.2%	8.6%	5.6%
Population Receiving Medicaid	24.7%	29.8%	22.5%	20.7%	20.5%	22.2%
Population Living in a HPSA	46.8%	48.8%	42.9%	41.6%	31.6%	22.6%
Primary Care Physicians Provider Rate**	46.9	51.0	54.3	63.2	61.9	76.7
Mental Health Care Provider Rate**	181.4	491.5	196.8	200.5	411	261.6
Addiction/Substance Abuse Provider Rate**	51.6	175.3	28.2	11.0	26.3	9.4
Dentists Provider Rate**	41.0	28.1	38.3	44.3	57.5	65.6
Core Preventative Services for Men***	34.4%	33.3%	32.8%	33.0%	35.4%	31.0%
Core Preventative Services for Women***	32.7%	32.8%	33.4%	33.8%	37.7%	31.1%
Households with No Motor Vehicle	4.7%	6.3%	6.4%	6.0%	5.5%	8.6%
* age 25+; ** per 100,000 population; *** age 65+						
+ 1 indicates highest vulnerability; @in the past 30 days						

## JOPLIN COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, MISSOURI

	Barton County, MO	Jasper County, MO	McDonald County, MO	Newton County, MO	Vernon County, MO	Joplin Community	ORC Region	Missouri	United States
<b>CT: Neighborhood &amp; Built Environment</b>									
Substandard Housing	25.5%	25.0%	28.8%	23.4%	24.1%	26.1%	26.8%	26.0%	31.9%
Violent Crime Rate**	312.3	427.0	514.5	249.3	714.3	367.1	426.4	524.3	416.0
Households with No or Slow Internet	31.6%	22.3%	45.5%	25.0%	21.7%	26.6%	25.1%	19.8%	17.3%
Low Food Access	56.5%	26.1%	3.8%	16.5%	32.9%	24.7%	24.8%	24.9%	22.2%
Respiratory Hazard Index Score	1.2	1.5	1.4	1.4	1.3	1.4	1.5	1.7	1.8
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @ in the past 30 days									

## JOPLIN COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, KANSAS

	Cherokee County, KS	Crawford County, KS	Labette County, KS	Joplin Community	ORC Region	Kansas	United States
<b>CT: Neighborhood &amp; Built Environment</b>							
Substandard Housing	21.7%	30.4%	26.4%	26.1%	26.8%	25.4%	31.9%
Violent Crime Rate**	303.3	345.6	437.5	367.1	426.4	368.8	416.0
Households with No or Slow Internet	27.7%	23.0%	25.2%	26.6%	25.1%	18.2%	17.3%
Low Food Access	46.4%	30.1%	24.2%	24.7%	24.8%	26.4%	22.2%
Respiratory Hazard Index Score	1.2	1.2	1.4	1.4	1.5	1.6	1.8
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @ in the past 30 days							

## JOPLIN COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, OKLAHOMA

	Delaware County, OK	Ottawa County, OK	Joplin Community	ORC Region	Oklahoma	United States
<b>CT: Neighborhood &amp; Built Environment</b>						
Substandard Housing	29.7%	26.7%	26.1%	26.8%	26.3%	31.9%
Violent Crime Rate**	208.8	243.1	367.1	426.4	443.5	416.0
Households with No or Slow Internet	31.0%	32.5%	26.6%	25.1%	21.4%	17.3%
Low Food Access	21.2%	15.9%	24.7%	24.8%	25.2%	22.2%
Respiratory Hazard Index Score	1.6	1.5	1.4	1.5	1.9	1.8
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @ in the past 30 days						

## JOPLIN COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, MISSOURI

	Barton County, MO	Jasper County, MO	McDonald County, MO	Newton County, MO	Vernon County, MO	Joplin Community	ORC Region	Missouri	United States
<b>CT: Social &amp; Community Context</b>									
Social Vulnerability Index (SVI)+	0.7	0.4	0.5	0.4	0.8	0.7	0.6	0.4	0.4
SVI- Household Composition+	0.6	0.4	0.8	0.8	0.8	0.7	0.5	0.4	0.3
SVI- Housing & Transportation+	0.6	0.4	0.6	0.2	0.4	0.6	0.6	0.5	0.6
SVI- Minority Status+	0.6	0.5	0.1	0.2	0.7	0.5	0.4	0.5	0.8
SVI- Socioeconomic+	0.6	0.4	0.4	0.5	0.8	0.6	0.6	0.4	0.3
Homeless Students	3.1%	3.7%	5.4%	5.4%	4.5%	4.1%	4.2%	4.0%	3.0%
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @in the past 30 days									

## JOPLIN COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, KANSAS

	Cherokee County, KS	Crawford County, KS	Labette County, KS	Joplin Community	ORC Region	Kansas	United States
<b>CT: Social &amp; Community Context</b>							
Social Vulnerability Index (SVI)+	0.7	0.6	0.6	0.7	0.6	0.4	0.4
SVI- Household Composition+	0.3	0.9	1.0	0.7	0.5	0.4	0.3
SVI- Housing & Transportation+	1.0	0.6	0.5	0.6	0.6	0.4	0.6
SVI- Minority Status+	0.5	0.3	0.1	0.5	0.4	0.6	0.8
SVI- Socioeconomic+	0.6	0.6	0.7	0.6	0.6	0.3	0.3
Homeless Students	2.2%	4.0%	0.4%	4.1%	4.2%	2.1%	3.0%
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @in the past 30 days							

## JOPLIN COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, OKLAHOMA

	Delaware County, OK	Ottawa County, OK	Joplin Community	ORC Region	Oklahoma	United States
<b>CT: Social &amp; Community Context</b>						
Social Vulnerability Index (SVI)+	1.0	0.9	0.7	0.6	0.6	0.4
SVI- Household Composition+	1.0	0.8	0.7	0.5	0.6	0.3
SVI- Housing & Transportation+	0.9	0.7	0.6	0.6	0.6	0.6
SVI- Minority Status+	0.7	0.8	0.5	0.4	0.7	0.8
SVI- Socioeconomic+	0.8	0.8	0.6	0.6	0.5	0.3
Homeless Students	6.4%	4.9%	4.1%	4.2%	4.5%	3.0%
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @in the past 30 days						

## JOPLIN COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, MISSOURI

	Barton County, MO	Jasper County, MO	McDonald County, MO	Newton County, MO	Vernon County, MO	Joplin Community	ORC Region	Missouri	United States
<b>CT: Health Behaviors</b>									
Adult Binge Drinking@	15.5%	16.4%	16.7%	16.2%	15.7%	14.6%	16.1%	17.5%	16.9%
Physical Inactivity	27.1%	25.7%	20.7%	29.1%	26.6%	27.2%	26.0%	24.5%	22.1%
Current Smokers	23.3%	22.7%	27.0%	22.2%	22.6%	22.8%	21.9%	20.3%	17.0%
Fruit/Vegetable Expenditures (\$)	****	****	****	****	****	\$640.72	\$635.03	\$665.08	\$744.71
Chlamydia Incidence**	379.7	579.0	501.4	399.7	264.2	472.6	482.2	568.1	539.9
Gonorrhea Incidence**	135.0	253.7	135.8	118.4	97.9	183.0	192.7	246.8	179.1
HIV Prevalence**	90.8	177.9	132.8	18.5	104.9	99.4	129.0	245.6	372.8
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @in the past 30 days									

## JOPLIN COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, KANSAS

	Cherokee County, KS	Crawford County, KS	Labette County, KS	Joplin Community	ORC Region	Kansas	United States
<b>CT: Health Behaviors</b>							
Adult Binge Drinking@	14.7%	16.0%	14.7%	14.6%	16.1%	16.0%	16.9%
Physical Inactivity	30.5%	25.9%	30.4%	27.2%	26.0%	23.3%	22.1%
Current Smokers	21.5%	19.7%	21.4%	22.8%	21.9%	17.5%	17.0%
Fruit/Vegetable Expenditures (\$)	****	****	****	\$640.72	\$635.03	\$677.50	\$744.71
Chlamydia Incidence**	333.1	566.2	501.4	472.6	482.2	488.5	539.9
Gonorrhea Incidence**	223.7	238.3	144.0	183.0	192.7	180.4	179.1
HIV Prevalence**	71.4	45.6	109.1	99.4	129.0	128.1	372.8
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @in the past 30 days							

## JOPLIN COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, OKLAHOMA

	Delaware County, OK	Ottawa County, OK	Joplin Community	ORC Region	Oklahoma	United States
<b>CT: Health Behaviors</b>						
Adult Binge Drinking@	11.5%	12.6%	14.6%	16.1%	13.6%	16.9%
Physical Inactivity	30.5%	26.9%	27.2%	26.0%	27.1%	22.1%
Current Smokers	22.9%	26.1%	22.8%	21.9%	20.6%	17.0%
Fruit/Vegetable Expenditures (\$)	****	****	\$640.72	\$635.03	\$657.14	\$744.71
Chlamydia Incidence**	363.8	558.9	472.6	482.2	559.0	539.9
Gonorrhea Incidence**	100.9	182.0	183.0	192.7	228.9	179.1
HIV Prevalence**	73.4	42.8	99.4	129.0	192	372.8
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @in the past 30 days						

## LEBANON COMMUNITY- ASSESSED HEALTH ISSUES

	Camden County, MO	Dallas County, MO	Laclede County, MO	Pulaski County, MO	Texas County, MO	Wright County, MO	Lebanon Community	ORC Region	Missouri	United States
<b>Assessed Health Issue: Cancer</b>										
Cancer Incidence Rate*	410.8	462.0	453.9	484.5	387.8	464.8	437.0	419.9	454.9	448.7
Cancer Mortality*	152.2	183.7	192.3	177.3	172.6	175.5	173.9	171.3	166.4	152.3
Recent Mammogram**	68.3	67.5	68.1	71.0	63.6	62.9	67.8	67.6	70.8	73.7
Recent Pap Smear***	83.4%	81.6%	82.1%	83.7%	79.9%	79.6%	82.3%	82.1%	84.1%	83.9%
Adequate Colorectal Cancer Screening	66.6%	62.4%	65.2%	64.7%	62.4%	59.5%	64.3%	63.8%	67.0%	65.5%
<b>Assessed Health Issue: Diabetes</b>										
Annual Hemoglobin A1c Test+	87.6%	89.9%	87.6%	80.3%	81.0%	87.3%	85.2%	84.8%	86.3%	85.7%
Diabetes Prevalence	8.0%	4.5%	10.3%	10.0%	11.7%	8.3%	8.9%	10.4%	10.1%	9.5%
Poor Physical Health	16.2%	17.9%	16.7%	11.4%	18.7%	20.3%	15.9%	15.7%	14.0%	13.0%
Obesity Prevalence	23.6%	31.1%	33.9%	33.5%	38.1%	29.3%	31.1%	32.6%	32.4%	29.5%
<b>Assessed Health Issue: Lung Disease</b>										
Lung Disease Mortality*	54.3	60.1	102.5	76.7	59.8	74.5	72.3	60.7	50.4	40.2
Asthma Prevalence	9.6%	10.3%	10.4%	9.2%	10.6%	10.9%	10.0%	10.1%	9.7%	9.5%
COPD Prevalence	11.1%	12.0%	11.0%	6.1%	12.4%	13.8%	10.3%	10.0%	8.5%	7.2%
<b>Assessed Health Issue: Heart Disease</b>										
Stroke Mortality*	30.6	36.5	43.4	31.2	46.7	42.8	36.9	40.1	39.6	37.3
Heart Disease Mortality*	151.4	190.5	209.3	207.0	209.7	291.2	201.3	212.3	191.2	164.8
High Blood Pressure Prevalence	40.0%	38.1%	36.7%	25.4%	40.7%	39.8%	35.4%	35.1%	33.2%	32.9%
High Cholesterol Prevalence	42.7%	40.9%	39.5%	28.6%	41.2%	41.7%	37.9%	37.7%	36.0%	34.2%
Coronary Heart Disease Prevalence	10.2%	10.0%	9.0%	4.8%	10.7%	11.3%	8.7%	8.6%	7.5%	6.9%
* per 100,000 population; ** females age 50-74										
*** females age 21-65; +Medicare population										
***** no data										
+ Missouri counties only										
! Missouri Preventive Services Program (PSP) participants only										



## LEBANON COMMUNITY- ASSESSED HEALTH ISSUES, CONT.

	Camden County, MO	Dallas County, MO	Laclede County, MO	Pulaski County, MO	Texas County, MO	Wright County, MO	Lebanon Community	ORC Region	Missouri	United States
<b>Assessed Health Issue: Mental Health</b>										
Suicide Mortality*	18.7	*****	24.4	20.0	15.9	23.9	20.4	22.1	18.3	13.8
Poor Mental Health	13.5%	16.2%	16.2%	15.5%	16.6%	17.9%	15.6%	15.7%	14.5%	13.4%
Depression Prevalence+	16.1%	20.8%	22.1%	19.2%	18.0%	20.1%	18.6%	20.8%	21.3%	18.4%
<b>Assessed Health Issue: Substance Use and Recovery</b>										
Drug Poisoning Mortality*	26.5	*****	19.1	34.4	17.9	*****	26.1	22.8	25.3	21.6
Alcohol Use Disorder Prevalence+	1.6%	2.0%	1.7%	1.6%	1.5%	1.2%	1.6%	1.7%	1.9%	2.1%
Substance Use Disorder Prevalence+	2.2%	4.5%	4.5%	3.2%	2.6%	3.4%	3.0%	3.5%	3.3%	3.5%
<b>Assessed Health Issue: Oral Health</b>										
Recent Dental Visit	58.4%	52.6%	52.8%	56.2%	49.0%	48.0%	54.1%	56.4%	61.4%	64.4%
PWSD Fluoridation+	39.2%	0.0%	45.9%	54.9%	13.5%	0.0%	41.2%	50.4%	71.8%	*****
Early Childhood Caries Referrals!	7.5%	*****	7.8%	2.9%	19.1%	14.2%	8.5%	7.0%	4.5%	*****
<b>Assessed Health Issue: COVID-19</b>										
COVID-19 Mortality*	272.8	250.6	358.4	151.9	164.3	277.5	240.4	236.3	191.3	217.5
COVID-19 Case Rate*	13809.9	13542.5	14759.3	10133.8	11661.7	13924.3	12705.1	14423.4	12973.0	13846.0
COVID-19 Fully Vaccinated Adults	48.3%	40.8%	42.9%	66.4%	36.2%	42.9%	46.3%	47.4%	54.7%	64.7%
* per 100,000 population; ** females age 50-74										
*** females age 21-65; +Medicare population										
***** no data										
+ Missouri counties only										
! Missouri Preventive Services Program (PSP) participants only										

## LEBANON COMMUNITY- SOCIAL DETERMINANTS OF HEALTH

	Camden County, MO	Dallas County, MO	Laclede County, MO	Lebanon Community	ORC Region	Missouri	United States
<b>CT: Economic Stability</b>							
Population Below 200% FPL	31.5%	41.7%	42.0%	40.6%	40.7%	32.1%	30.9%
Children Below 200% FPL	52.2%	47.7%	54.2%	54.4%	52.1%	41.0%	40.1%
Per Capita Income (\$)	\$28,274.00	\$23,646.00	\$23,050.00	\$23,782.00	\$ -	\$30,810.00	\$34,102.00
Unemployment Rate	4.9%	4.6%	4.2%	4.5%	4.0%	4.7%	5.5%
Cost Burden, Severe (50%)	11.2%	8.9%	8.5%	10.9%	10.9%	11.0%	14.0%
Affordable Housing (60% AMI)	27.8%	38.1%	47.0%	35.0%	36.6%	38.8%	29.9%
<b>CT: Education Access &amp; Quality</b>							
No High School Diploma*	9.6%	16.6%	14.8%	12.5%	11.8%	10.1%	12.0%
Associate's Level Degree or Higher*	29.6%	17.6%	22.6%	26.9%	30.0%	37.1%	40.6%
Bachelor's Degree or Higher*	21.1%	12.9%	14.6%	18.6%	22.1%	29.2%	32.2%
Chronic Absence Rate	13.7%	16.2%	8.2%	9.3%	11.7%	11.8%	15.9%

	Pulaski County, MO	Texas County, MO	Wright County, MO	Lebanon Community	ORC Region	Missouri	United States
<b>CT: Economic Stability</b>							
Population Below 200% FPL	35.7%	52.8%	55.1%	40.6%	40.7%	32.1%	30.9%
Children Below 200% FPL	45.8%	68.3%	68.5%	54.4%	52.1%	41.0%	40.1%
Per Capita Income (\$)	\$23,650.00	\$19,972.00	\$19,849.00	\$23,782.00	\$ -	\$30,810.00	\$34,102.00
Unemployment Rate	4.7%	4.4%	4.2%	4.5%	4.0%	4.7%	5.5%
Cost Burden, Severe (50%)	12.7%	12.8%	10.4%	10.9%	10.9%	11.0%	14.0%
Affordable Housing (60% AMI)	32.1%	31.5%	35.5%	35.0%	36.6%	38.8%	29.9%
<b>CT: Education Access &amp; Quality</b>							
No High School Diploma*	7.2%	16.4%	19.6%	12.5%	11.8%	10.1%	12.0%
Associate's Level Degree or Higher*	38.7%	21.0%	17.1%	26.9%	30.0%	37.1%	40.6%
Bachelor's Degree or Higher*	28.3%	13.5%	10.2%	18.6%	22.1%	29.2%	32.2%
Chronic Absence Rate	5.7%	10.9%	9.8%	9.3%	11.7%	11.8%	15.9%
* age 25+; ** per 100,000 population; *** age 65+							
+ 1 indicates highest vulnerability; @in the past 30 days							

## LEBANON COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, CONT.

	Camden County, MO	Dallas County, MO	Laclede County, MO	Lebanon Community	ORC Region	Missouri	United States
<b>CT: Healthcare Access &amp; Quality</b>							
Uninsured Adults	18.1%	20.3%	17.0%	18.3%	18.3%	14.1%	12.8%
Uninsured Children	8.6%	9.8%	7.8%	8.2%	8.2%	6.5%	5.6%
Population Receiving Medicaid	16.2%	26.1%	20.2%	21.0%	20.7%	16.3%	22.2%
Population Living in a HPSA	37.4%	46.9%	47.0%	41.1%	41.6%	27.6%	22.6%
Primary Care Physicians Provider Rate**	77.0	6.0	53.7	45.5	63.2	70.0	76.7
Mental Health Care Provider Rate**	142.5	23.7	151.2	137.3	200.5	204.2	261.6
Addiction/Substance Abuse Provider Rate**	2.2	0.0	0.0	1.6	11.0	2.2	9.4
Dentists Provider Rate**	45.2	30.5	25.4	51.7	44.3	54.2	65.6
Core Preventative Services for Men***	37.0%	31.2%	34.0%	33.8%	33.0%	34.7%	31.0%
Core Preventative Services for Women***	35.7%	32.1%	35.2%	34.0%	33.8%	36.3%	31.1%
Households with No Motor Vehicle	3.2%	6.6%	5.5%	5.5%	6.0%	6.9%	8.6%
* age 25+; ** per 100,000 population; *** age 65+							
+ 1 indicates highest vulnerability; @in the past 30 days							

	Pulaski County, MO	Texas County, MO	Wright County, MO	Lebanon Community	ORC Region	Missouri	United States
<b>CT: Healthcare Access &amp; Quality</b>							
Uninsured Adults	14.8%	23.1%	22.6%	18.3%	18.3%	14.1%	12.8%
Uninsured Children	5.7%	10.3%	11.0%	8.2%	8.2%	6.5%	5.6%
Population Receiving Medicaid	17.3%	26.2%	32.7%	21.0%	20.7%	16.3%	22.2%
Population Living in a HPSA	31.3%	43.6%	58.2%	41.1%	41.6%	27.6%	22.6%
Primary Care Physicians Provider Rate**	40.5	35.1	16.5	45.5	63.2	70.0	76.7
Mental Health Care Provider Rate**	216.7	35.4	114.8	137.3	200.5	204.2	261.6
Addiction/Substance Abuse Provider Rate**	1.9	0.0	5.5	1.6	11.0	2.2	9.4
Dentists Provider Rate**	103.3	15.6	38.3	51.7	44.3	54.2	65.6
Core Preventative Services for Men***	34.2%	31.4%	29.8%	33.8%	33.0%	34.7%	31.0%
Core Preventative Services for Women***	35.4%	30.8%	29.2%	34.0%	33.8%	36.3%	31.1%
Households with No Motor Vehicle	4.9%	7.1%	9.2%	5.5%	6.0%	6.9%	8.6%
* age 25+; ** per 100,000 population; *** age 65+							
+ 1 indicates highest vulnerability; @in the past 30 days							

## LEBANON COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, CONT.

	Camden County, MO	Dallas County, MO	Laclede County, MO	Lebanon Community	ORC Region	Missouri	United States
<b>CT: Neighborhood &amp; Built Environment</b>							
Substandard Housing	27.0%	24.1%	22.5%	26.3%	26.8%	26.0%	31.9%
Violent Crime Rate**	335.2	197.8	263.5	251.5	426.4	524.3	416.0
Households with No or Slow Internet	21.9%	32.8%	27.1%	26.0%	25.1%	19.8%	17.3%
Low Food Access	20.5%	26.0%	43.7%	35.5%	24.8%	24.9%	22.2%
Respiratory Hazard Index Score	1.2	1.2	1.5	1.3	1.5	1.7	1.8
<b>CT: Social &amp; Community Context</b>							
Social Vulnerability Index (SVI)+	0.7	0.6	0.7	0.6	0.6	0.4	0.4
SVI- Household Composition+	1.0	0.7	0.3	0.6	0.5	0.4	0.3
SVI- Housing & Transportation+	0.5	0.6	0.7	0.6	0.6	0.5	0.6
SVI- Minority Status+	0.2	0.1	0.6	0.3	0.4	0.5	0.8
SVI- Socioeconomic+	0.7	0.8	0.6	0.7	0.6	0.4	0.3
Homeless Students	12.9%	2.8%	3.8%	4.7%	4.2%	4.0%	3.0%
* age 25+; ** per 100,000 population; *** age 65+							
+ 1 indicates highest vulnerability; @in the past 30 days							

	Pulaski County, MO	Texas County, MO	Wright County, MO	Lebanon Community	ORC Region	Missouri	United States
<b>CT: Neighborhood &amp; Built Environment</b>							
Substandard Housing	28.0%	29.2%	26.3%	26.3%	26.8%	26.0%	31.9%
Violent Crime Rate**	224.0	172.4	261.5	251.5	426.4	524.3	416.0
Households with No or Slow Internet	18.1%	34.3%	32.3%	26.0%	25.1%	19.8%	17.3%
Low Food Access	63.3%	12.6%	18.0%	35.5%	24.8%	24.9%	22.2%
Respiratory Hazard Index Score	1.4	1.2	1.2	1.3	1.5	1.7	1.8
<b>CT: Social &amp; Community Context</b>							
Social Vulnerability Index (SVI)+	0.3	0.9	0.8	0.6	0.6	0.4	0.4
SVI- Household Composition+	0.4	1.0	0.9	0.6	0.5	0.4	0.3
SVI- Housing & Transportation+	0.3	0.7	0.7	0.6	0.6	0.5	0.6
SVI- Minority Status+	0.2	0.3	0.3	0.3	0.4	0.5	0.8
SVI- Socioeconomic+	0.5	0.9	0.9	0.7	0.6	0.4	0.3
Homeless Students	1.5%	2.4%	2.8%	4.7%	4.2%	4.0%	3.0%
* age 25+; ** per 100,000 population; *** age 65+							
+ 1 indicates highest vulnerability; @in the past 30 days							

## LEBANON COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, CONT.

	Camden County, MO	Dallas County, MO	Laclede County, MO	Lebanon Community	ORC Region	Missouri	United States
<b>CT: Social &amp; Community Context</b>							
Social Vulnerability Index (SVI)+	0.7	0.6	0.7	0.6	0.6	0.4	0.4
SVI- Household Composition+	1.0	0.7	0.3	0.6	0.5	0.4	0.3
SVI- Housing & Transportation+	0.5	0.6	0.7	0.6	0.6	0.5	0.6
SVI- Minority Status+	0.2	0.1	0.6	0.3	0.4	0.5	0.8
SVI- Socioeconomic+	0.7	0.8	0.6	0.7	0.6	0.4	0.3
Homeless Students	12.9%	2.8%	3.8%	4.7%	4.2%	4.0%	3.0%
<b>CT: Health Behaviors</b>							
Adult Binge Drinking@	14.3%	15.7%	15.8%	16.6%	16.1%	17.5%	16.9%
Physical Inactivity	23.0%	23.1%	28.3%	26.2%	26.0%	24.5%	22.1%
Current Smokers	20.0%	24.7%	24.2%	22.6%	21.9%	20.3%	17.0%
Fruit/Vegetable Expenditures (\$)	*****	*****	*****	\$665.26	\$635.03	\$665.08	\$744.71
Chlamydia Incidence**	302.4	311.9	414.8	417.8	482.2	568.1	539.9
Gonorrhea Incidence**	122.7	90.0	251.1	156.3	192.7	246.8	179.1
HIV Prevalence**	99.5	136.3	40.9	86.6	129.0	245.6	372.8
* age 25+; ** per 100,000 population; *** age 65+							
+ 1 indicates highest vulnerability; @in the past 30 days							

	Pulaski County, MO	Texas County, MO	Wright County, MO	Lebanon Community	ORC Region	Missouri	United States
<b>CT: Social &amp; Community Context</b>							
Social Vulnerability Index (SVI)+	0.3	0.9	0.8	0.6	0.6	0.4	0.4
SVI- Household Composition+	0.4	1.0	0.9	0.6	0.5	0.4	0.3
SVI- Housing & Transportation+	0.3	0.7	0.7	0.6	0.6	0.5	0.6
SVI- Minority Status+	0.2	0.3	0.3	0.3	0.4	0.5	0.8
SVI- Socioeconomic+	0.5	0.9	0.9	0.7	0.6	0.4	0.3
Homeless Students	1.5%	2.4%	2.8%	4.7%	4.2%	4.0%	3.0%
<b>CT: Health Behaviors</b>							
Adult Binge Drinking@	21.1%	14.8%	14.7%	16.6%	16.1%	17.5%	16.9%
Physical Inactivity	26.1%	33.4%	24.9%	26.2%	26.0%	24.5%	22.1%
Current Smokers	20.3%	24.8%	27.0%	22.6%	21.9%	20.3%	17.0%
Fruit/Vegetable Expenditures (\$)	*****	*****	*****	\$665.26	\$635.03	\$665.08	\$744.71
Chlamydia Incidence**	714.6	182.6	294.6	417.8	482.2	568.1	539.9
Gonorrhea Incidence**	217.1	73.8	60.0	156.3	192.7	246.8	179.1
HIV Prevalence**	89.6	*****	*****	86.6	129.0	245.6	372.8
* age 25+; ** per 100,000 population; *** age 65+							
+ 1 indicates highest vulnerability; @in the past 30 days							

## MONETT COMMUNITY- ASSESSED HEALTH ISSUES

	Barry County, MO	Lawrence County, MO	Monett Community	ORC Region	Missouri	United States
<b>Assessed Health Issue: Cancer</b>						
Cancer Incidence Rate*	386.1	441.9	413.5	419.9	454.9	448.7
Cancer Mortality*	170.0	174.1	172.1	171.3	166.4	152.3
Recent Mammogram**	65.7	65.0	65.3	67.6	70.8	73.7
Recent Pap Smear***	81.2%	82.2%	81.7%	82.1%	84.1%	83.9%
Adequate Colorectal Cancer Screening	62.9%	62.5%	62.7%	63.8%	67.0%	65.5%
<b>Assessed Health Issue: Diabetes</b>						
Annual Hemoglobin A1c Test+	83.9%	88.4%	86.2%	84.8%	86.3%	85.7%
Diabetes Prevalence	11.0%	14.2%	12.5%	10.4%	10.1%	9.5%
Poor Physical Health	17.9%	17.0%	17.4%	15.7%	14.0%	13.0%
Obesity Prevalence	40.0%	31.4%	35.6%	32.6%	32.4%	29.5%
<b>Assessed Health Issue: Lung Disease</b>						
Lung Disease Mortality*	59.4	67.4	63.5	60.7	50.4	40.2
Asthma Prevalence	10.1%	10.2%	10.2%	10.1%	9.7%	9.5%
COPD Prevalence	11.7%	11.1%	11.4%	10.0%	8.5%	7.2%
<b>Assessed Health Issue: Heart Disease</b>						
Stroke Mortality*	41.0	38.4	39.6	40.1	39.6	37.3
Heart Disease Mortality*	244.2	217.1	230.2	212.3	191.2	164.8
High Blood Pressure Prevalence	37.5%	36.2%	36.8%	35.1%	33.2%	32.9%
High Cholesterol Prevalence	40.2%	39.4%	39.8%	37.7%	36.0%	34.2%
Coronary Heart Disease Prevalence	10.1%	9.3%	9.7%	8.6%	7.5%	6.9%
<b>Assessed Health Issue: Mental Health</b>						
Suicide Mortality*	18.4	20.4	19.4	22.1	18.3	13.8
Poor Mental Health	15.9%	16.2%	16.1%	15.7%	14.5%	13.4%
Depression Prevalence+	18.9%	18.9%	18.9%	20.8%	21.3%	18.4%
<b>Assessed Health Issue: Substance Use and Recovery</b>						
Drug Poisoning Mortality*	12.2	17.5	14.9	22.8	25.3	21.6
Alcohol Use Disorder Prevalence+	1.8%	1.9%	1.8%	1.7%	1.9%	2.1%
Substance Use Disorder Prevalence+	3.2%	3.2%	3.2%	3.5%	3.3%	3.5%
<b>Assessed Health Issue: Oral Health</b>						
Recent Dental Visit	53.3%	52.6%	52.9%	56.4%	61.4%	64.4%
PWSD Fluoridation+	48.7%	0.0%	24.7%	50.4%	71.8%	*****
Early Childhood Caries Referrals!	*****	*****	*****	7.0%	4.5%	*****
<b>Assessed Health Issue: COVID-19</b>						
COVID-19 Mortality*	172.8	271.1	223.6	236.3	191.3	217.5
COVID-19 Case Rate*	12040.9	13543.1	12817.0	14423.4	12973.0	13846.0
COVID-19 Fully Vaccinated Adults	49.4%	43.8%	46.6%	47.4%	54.7%	64.7%

\* per 100,000 population; \*\* females age 50-74

\*\*\* females age 21-65; +Medicare population

+ Missouri counties only

! Missouri Preventive Services Program (PSP) participants only

## MONETT COMMUNITY- SOCIAL DETERMINANTS OF HEALTH

	Barry County, MO	Lawrence County, MO	Monett Community	ORC Region	Missouri	United States
<b>CT: Economic Stability</b>						
Population Below 200% FPL	45.2%	44.7%	44.9%	40.7%	32.1%	30.9%
Children Below 200% FPL	61.3%	61.2%	61.2%	52.1%	41.0%	40.1%
Per Capita Income (\$)	\$25,068.00	\$22,956.00	\$23,974.00	\$-	\$30,810.00	\$34,102.00
Unemployment Rate	4.2%	3.8%	4.0%	4.0%	4.7%	5.5%
Cost Burden, Severe (50%)	10.9%	9.4%	10.1%	10.9%	11.0%	14.0%
Affordable Housing (60% AMI)	38.7%	43.1%	41.0%	36.6%	38.8%	29.9%
<b>CT: Education Access &amp; Quality</b>						
No High School Diploma*	16.4%	15.3%	15.9%	11.8%	10.1%	12.0%
Associate's Level Degree or Higher*	22.0%	23.0%	22.5%	30.0%	37.1%	40.6%
Bachelor's Degree or Higher*	14.6%	16.0%	15.3%	22.1%	29.2%	32.2%
Chronic Absence Rate	11.3%	10.8%	11.1%	11.7%	11.8%	15.9%
<b>CT: Healthcare Access &amp; Quality</b>						
Uninsured Adults	22.3%	21.2%	21.7%	18.3%	14.1%	12.8%
Uninsured Children	10.0%	10.0%	10.0%	8.2%	6.5%	5.6%
Population Receiving Medicaid	24.1%	24.0%	24.1%	20.7%	16.3%	22.2%
Population Living in a HPSA	45.4%	44.7%	45.0%	41.6%	27.6%	22.6%
Primary Care Physicians Provider Rate**	64.6	54.9	59.6	63.2	70	76.7
Mental Health Care Provider Rate**	72.6	133.0	103.9	200.5	204.2	261.6
Addiction/Substance Abuse Provider Rate**	0.0	0.0	0.0	11.0	2.2	9.4
Dentists Provider Rate**	27.9	39.3	33.8	44.3	54.2	65.6
Core Preventative Services for Men***	32.9%	33.1%	33.0%	33.0%	34.7%	31.0%
Core Preventative Services for Women***	33.3%	31.6%	32.4%	33.8%	36.3%	31.1%
Households with No Motor Vehicle	4.5%	5.1%	4.8%	6.0%	6.9%	8.6%
<b>CT: Neighborhood &amp; Built Environment</b>						
Substandard Housing	26.9%	25.2%	26.0%	26.8%	26.0%	31.9%
Violent Crime Rate**	234.1	425.1	324.5	426.4	524.3	416
Households with No or Slow Internet	33.2%	22.9%	27.8%	25.1%	19.8%	17.3%
Low Food Access	19.7%	18.6%	19.1%	24.8%	24.9%	22.2%
Respiratory Hazard Index Score	1.3	1.3	1.3	1.5	1.7	1.8
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @in the past 30 days						

## MONETT COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, CONT.

	Barry County, MO	Lawrence County, MO	Monett Community	ORC Region	Missouri	United States
<b>CT: Neighborhood &amp; Built Environment</b>						
Substandard Housing	26.9%	25.2%	26.0%	26.8%	26.0%	31.9%
Violent Crime Rate**	234.1	425.1	324.5	426.4	524.3	416
Households with No or Slow Internet	33.2%	22.9%	27.8%	25.1%	19.8%	17.3%
Low Food Access	19.7%	18.6%	19.1%	24.8%	24.9%	22.2%
Respiratory Hazard Index Score	1.3	1.3	1.3	1.5	1.7	1.8
<b>CT: Social &amp; Community Context</b>						
Social Vulnerability Index (SVI)+	0.8	0.7	0.8	0.6	0.4	0.4
SVI- Household Composition+	0.9	0.8	0.8	0.5	0.4	0.3
SVI- Housing & Transportation+	0.5	0.3	0.4	0.6	0.5	0.6
SVI- Minority Status+	0.6	0.7	0.6	0.4	0.5	0.8
SVI- Socioeconomic+	0.8	0.7	0.7	0.6	0.4	0.3
Homeless Students	5.3%	3.4%	4.3%	4.2%	4.0%	3.0%
<b>CT: Health Behaviors</b>						
Adult Binge Drinking@	15.0%	16.3%	15.7%	16.1%	17.5%	16.9%
Physical Inactivity	32.4%	27.7%	30.0%	26.0%	24.5%	22.1%
Current Smokers	23.4%	24.2%	23.8%	21.9%	20.3%	17.0%
Fruit/Vegetable Expenditures (\$)	*****	*****	\$681.10	\$635.03	\$665.08	\$744.71
Chlamydia Incidence**	213.1	338.2	278.0	482.2	568.1	539.9
Gonorrhea Incidence**	81.3	122.3	102.6	192.7	246.8	179.1
HIV Prevalence**	156.3	69.8	112.0	129.0	245.6	372.8
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @in the past 30 days						



# MOUNTAIN VIEW COMMUNITY- ASSESSED HEALTH ISSUES

	Douglas County, MO	Howell County, MO	Ozark County, MO	Shannon County, MO	Mountain View Community	ORC Region	Missouri	United States
<b>Assessed Health Issue: Cancer</b>								
Cancer Incidence Rate*	329.5	393.5	366.5	334	368.9	419.9	454.9	448.7
Cancer Mortality*	154.5	195.0	159.1	177.1	180.6	171.3	166.4	152.3
Recent Mammogram**	62.3	63.0	64.4	64.4	63.2	67.6	70.8	73.7
Recent Pap Smear***	80.3%	81.2%	80.4%	79.6%	80.7%	82.1%	84.1%	83.9%
Adequate Colorectal Cancer Screening	60.1%	61.4%	60.2%	60.1%	60.9%	63.8%	67.0%	65.5%
<b>Assessed Health Issue: Diabetes</b>								
Annual Hemoglobin A1c Test+	75.0%	86.6%	88.6%	81.9%	86.1%	84.8%	86.3%	85.7%
Diabetes Prevalence	8.9%	15.6%	5.7%	6.8%	11.5%	10.4%	10.1%	9.5%
Poor Physical Health	20.4%	17.8%	21.3%	20.4%	19.0%	15.7%	14.0%	13.0%
Obesity Prevalence	30.6%	35.4%	28.9%	28.8%	32.8%	32.6%	32.4%	29.5%
<b>Assessed Health Issue: Lung Disease</b>								
Lung Disease Mortality*	64.8	64.2	53.3	62.0	62.6	60.7	50.4	40.2
Asthma Prevalence	10.6%	10.4%	10.6%	10.8%	10.5%	10.1%	9.7%	9.5%
COPD Prevalence	14.2%	11.7%	15.0%	14.1%	12.9%	10.0%	8.5%	7.2%
<b>Assessed Health Issue: Heart Disease</b>								
Stroke Mortality*	41.7	47.6	37.8	44.4	44.8	40.1	39.6	37.3
Heart Disease Mortality*	207.4	202.8	171.6	217.7	201.4	212.3	191.2	164.8
High Blood Pressure Prevalence	42.4%	38.6%	44.1%	41.6%	40.4%	35.1%	33.2%	32.9%
High Cholesterol Prevalence	43.2%	40.1%	45.1%	42.5%	41.6%	37.7%	36.0%	34.2%
Coronary Heart Disease Prevalence	12.2%	9.8%	13.5%	11.8%	11.0%	8.6%	7.5%	6.9%
<b>Assessed Health Issue: Mental Health</b>								
Suicide Mortality*	30.0	23.9	*****	*****	25.4	22.1	18.3	13.8
Poor Mental Health	16.9%	16.4%	16.4%	17.5%	16.6%	15.7%	14.5%	13.4%
Depression Prevalence+	19.0%	19.2%	15.4%	17.1%	18.4%	20.8%	21.3%	18.4%
<b>Assessed Health Issue: Substance Use and Recovery</b>								
Drug Poisoning Mortality*	*****	11.2	*****	*****	11.2	22.8	25.3	21.6
Alcohol Use Disorder Prevalence+	1.3%	1.4%	1.8%	1.6%	1.5%	1.7%	1.9%	2.1%
Substance Use Disorder Prevalence+	3.4%	4.1%	3.4%	3.8%	3.8%	3.5%	3.3%	3.5%
* per 100,000 population; ** females age 50-74 *** females age 21-65; +Medicare population ***** no data + Missouri counties only ! Missouri Preventive Services Program (PSP) participants only								

## MOUNTAIN VIEW COMMUNITY- ASSESSED HEALTH ISSUES, CONT.

	Douglas County, MO	Howell County, MO	Ozark County, MO	Shannon County, MO	Mountain View Community	ORC Region	Missouri	United States
<b>Assessed Health Issue: Oral Health</b>								
Recent Dental Visit	48.7%	50.3%	49.4%	49.0%	49.7%	56.4%	61.4%	64.4%
PWSD Fluoridation+	0.0%	0.0%	0.0%	0.0%	0.0%	50.4%	71.8%	*****
Early Childhood Caries Re-ferrals!	25.2%	*****	5.1%	3.3%	13.8%	7.0%	4.5%	*****
<b>Assessed Health Issue: COVID-19</b>								
COVID-19 Mortality*	344.0	192.1	332.7	158.8	243.4	236.3	191.3	217.5
COVID-19 Case Rate*	12271.0	14297.8	12254.6	12126.0	13401.7	14423.4	12973.0	13846.0
COVID-19 Fully Vaccinated Adults	27.3%	36.5%	34.0%	34.6%	33.1%	47.4%	54.7%	64.7%
<p>* per 100,000 population; ** females age 50-74            *** females age 21-65; +Medicare population            ***** no data            + Missouri counties only            ! Missouri Preventive Services Program (PSP) participants only</p>								

## MOUNTAIN VIEW COMMUNITY- SOCIAL DETERMINANTS OF HEALTH

	Douglas County, MO	Howell County, MO	Ozark County, MO	Shannon County, MO	Mountain View Community	ORC Region	Missouri	United States
<b>CT: Economic Stability</b>								
Population Below 200% FPL	53.2%	47.5%	53.9%	51.4%	49.9%	40.7%	32.1%	30.9%
Children Below 200% FPL	70.3%	58.6%	71.6%	58.8%	62.2%	52.1%	41.0%	40.1%
Per Capita Income (\$)	\$21,083.00	\$21,048.00	\$18,738.00	\$17,387.00	\$20,330.00	\$ -	\$30,810.00	\$34,102.00
Unemployment Rate	4.4%	4.9%	4.9%	5.2%	4.9%	4.0%	4.7%	5.5%
Cost Burden, Severe (50%)	10.8%	12.3%	8.7%	10.0%	11.3%	10.9%	11.0%	14.0%
Affordable Housing (60% AMI)	30.6%	35.2%	31.5%	33.9%	33.7%	36.6%	38.8%	29.9%
<b>CT: Education Access &amp; Quality</b>								
No High School Diploma*	17.9%	13.0%	17.7%	20.0%	15.4%	11.8%	10.1%	12.0%
Associate's Level Degree or Higher*	18.1%	26.5%	16.4%	19.6%	22.7%	30.0%	37.1%	40.6%
Bachelor's Degree or Higher*	10.8%	18.0%	11.0%	14.9%	15.3%	22.1%	29.2%	32.2%
Chronic Absence Rate	12.1%	4.3%	10.6%	6.4%	6.7%	11.7%	11.8%	15.9%
* age 25+; ** per 100,000 population; *** age 65+								
+ 1 indicates highest vulnerability; @in the past 30 days								
***** no data								

## MOUNTAIN VIEW COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, CONT.

	Douglas County, MO	Howell County, MO	Ozark County, MO	Shannon County, MO	Mountain View Community	ORC Region	Missouri	United States
<b>CT: Neighborhood &amp; Built Environment</b>								
Substandard Housing	25.4%	25.9%	27.0%	25.1%	25.9%	26.8%	26.0%	31.9%
Violent Crime Rate**	166.8	289.4	232.4	295.8	259.2	426.4	524.3	416
Households with No or Slow Internet	37.8%	27.8%	32.4%	37.9%	31.4%	25.1%	19.8%	17.3%
Low Food Access	37.6%	20.5%	36.9%	10.1%	24.7%	24.8%	24.9%	22.2%
Respiratory Hazard Index Score	1.3	1.5	1.4	1.4	1.4	1.5	1.7	1.8
<b>CT: Social &amp; Community Context</b>								
Social Vulnerability Index (SVI)+	0.7	0.5	0.6	0.6	0.6	0.6	0.4	0.4
SVI- Household Composition+	0.9	0.6	0.6	0.9	0.8	0.5	0.4	0.3
SVI- Housing & Transportation+	0.7	0.2	0.4	0.3	0.5	0.6	0.5	0.6
SVI- Minority Status+	0.1	0.2	0.0	0.1	0.1	0.4	0.5	0.8
SVI- Socio-economic+	0.7	0.9	0.9	0.9	0.8	0.6	0.4	0.3
Homeless Students	1.4%	4.6%	3.4%	4.1%	3.7%	4.2%	4.0%	3.0%
* age 25+; ** per 100,000 population; *** age 65+								
+ 1 indicates highest vulnerability; @in the past 30 days								
***** no data								

## MOUNTAIN VIEW COMMUNITY- SOCIAL DETERMINANTS OF HEALTH, CONT.

	Douglas County, MO	Howell County, MO	Ozark County, MO	Shannon County, MO	Mountain View Community	ORC Region	Missouri	United States
<b>CT: Health Behaviors</b>								
Adult Binge Drinking@	13.7%	14.8%	12.6%	14.2%	14.2%	16.1%	17.5%	16.9%
Physical Inactivity	26.7%	30.6%	30.5%	25.7%	29.2%	26.0%	24.5%	22.1%
Current Smokers	25.7%	24.5%	25.6%	26.9%	25.2%	21.9%	20.3%	17.0%
Fruit/Vegetable Expenditures (\$)	*****	*****	*****	*****	\$654.18	\$635.03	\$665.08	\$744.71
Chlamydia Incidence**	270.7	309.2	130.6	157.6	261.2	482.2	568.1	539.9
Gonorrhea Incidence**	37.6	77.3	21.8	0.0	53.6	192.7	246.8	179.1
HIV Prevalence**	221.5	45.1	*****	*****	89.9	129.0	245.6	372.8
* age 25+; ** per 100,000 population; *** age 65+								
+ 1 indicates highest vulnerability; @in the past 30 days								
***** no data								

## SPRINGFIELD COMMUNITY- ASSESSED HEALTH ISSUES

	Christian County, MO	Greene County, MO	Webster County, MO	Springfield Community	ORC Region	Missouri	United States
<b>Assessed Health Issue: Cancer</b>							
Cancer Incidence Rate*	418.3	418.1	439.3	420.1	419.9	454.9	448.7
Cancer Mortality*	153.1	157.6	178.2	158.6	171.3	166.4	152.3
Recent Mammogram**	72.1	68.6	67.3	69.2	67.6	70.8	73.7
Recent Pap Smear***	85.2%	82.0%	82.4%	82.7%	82.1%	84.1%	83.9%
Adequate Colorectal Cancer Screening	68.1%	65.6%	63.1%	65.9%	63.8%	67.0%	65.5%
<b>Assessed Health Issue: Diabetes</b>							
Annual Hemoglobin A1c Test+	90.9%	89.3%	86.1%	89.3%	84.8%	86.3%	85.7%
Diabetes Prevalence	12.7%	10.7%	11.4%	11.2%	10.4%	10.1%	9.5%
Poor Physical Health	13.5%	14.0%	16.6%	14.1%	15.7%	14.0%	13.0%
Obesity Prevalence	33.8%	31.0%	33.1%	31.8%	32.6%	32.4%	29.5%
<b>Assessed Health Issue: Lung Disease</b>							
Lung Disease Mortality*	41.2	55.0	49.8	51.7	60.7	50.4	40.2
Asthma Prevalence	9.6%	9.7%	10.2%	9.7%	10.1%	9.7%	9.5%
COPD Prevalence	8.4%	8.4%	10.6%	8.6%	10.0%	8.5%	7.2%
<b>Assessed Health Issue: Heart Disease</b>							
Stroke Mortality*	43.3	36.0	48.3	38.7	40.1	39.6	37.3
Heart Disease Mortality*	158.7	189.3	198.3	183.8	212.3	191.2	164.8
High Blood Pressure Prevalence	31.8%	30.6%	34.8%	31.2%	35.1%	33.2%	32.9%
High Cholesterol Prevalence	36.2%	35.3%	38.7%	35.8%	37.7%	36.0%	34.2%
Coronary Heart Disease Prevalence	7.0%	7.1%	8.6%	7.2%	8.6%	7.5%	6.9%
<b>Assessed Health Issue: Mental Health</b>							
Suicide Mortality*	20.7	22.5	22.5	22.2	22.1	18.3	13.8
Poor Mental Health	14.2%	15.5%	16.5%	15.3%	15.7%	14.5%	13.4%
Depression Prevalence+	21.7%	24.9%	22.7%	24.1%	20.8%	21.3%	18.4%
* per 100,000 population; ** females age 50-74 *** females age 21-65; +Medicare population + Missouri counties only ! Missouri Preventive Services Program (PSP) participants only							

## SPRINGFIELD COMMUNITY- ASSESSED HEALTH ISSUES, CONT.

	Christian County, MO	Greene County, MO	Webster County, MO	Springfield Community	ORC Region	Missouri	United States
<b>Assessed Health Issue: Substance Use and Recovery</b>							
Drug Poisoning Mortality*	14.3	31.1	29.3	27.5	22.8	25.3	21.6
Alcohol Use Disorder Prevalence+	1.4%	2.0%	1.9%	1.9%	1.7%	1.9%	2.1%
Substance Use Disorder Prevalence+	3.3%	4.4%	3.8%	4.1%	3.5%	3.3%	3.5%
<b>Assessed Health Issue: Oral Health</b>							
Recent Dental Visit	64.0%	60.5%	53.0%	60.5%	56.4%	61.4%	64.4%
PWSD Fluoridation+	40.3%	86.1%	0.0%	73.2%	50.4%	71.8%	*****
Early Childhood Caries Referrals!	2.3%	*****	*****	2.3%	7.0%	4.5%	*****
<b>Assessed Health Issue: COVID-19</b>							
COVID-19 Mortality*	182.8	228.3	230.1	219.1	236.3	191.3	217.5
COVID-19 Case Rate*	14868.4	14863.2	14692.3	14848.3	14423.4	12973.0	13846.0
COVID-19 Fully Vaccinated Adults	51.9%	52.8%	50.7%	52.5%	47.4%	54.7%	64.7%
* per 100,000 population; ** females age 50-74 *** females age 21-65; +Medicare population + Missouri counties only ! Missouri Preventive Services Program (PSP) participants only							

## SPRINGFIELD COMMUNITY - SOCIAL DETERMINANTS OF HEALTH

	Christian County, MO	Greene County, MO	Webster County, MO	Springfield Community	ORC Region	Missouri	United States
<b>CT: Economic Stability</b>							
Population Below 200% FPL	29.5%	38.9%	40.5%	37.1%	40.7%	32.1%	30.9%
Children Below 200% FPL	37.5%	46.1%	53.9%	44.9%	52.1%	41.0%	40.1%
Per Capita Income (\$)	\$28,215.00	\$27,524.00	\$22,960.00	\$27,241.00	\$-	\$30,810.00	\$34,102.00
Unemployment Rate	3.2%	3.6%	3.5%	3.5%	4.0%	4.7%	5.5%
Cost Burden, Severe (50%)	8.4%	13.5%	6.6%	12.0%	10.9%	11.0%	14.0%
Affordable Housing (60% AMI)	37.5%	29.2%	41.3%	31.7%	36.6%	38.8%	29.9%
<b>CT: Education Access &amp; Quality</b>							
No High School Diploma*	8.0%	8.3%	13.9%	8.7%	11.8%	10.1%	12.0%
Associate's Level Degree or Higher*	37.9%	38.3%	24.2%	36.9%	30.0%	37.1%	40.6%
Bachelor's Degree or Higher*	28.6%	30.5%	16.8%	28.8%	22.1%	29.2%	32.2%
Chronic Absence Rate	8.0%	19.6%	8.1%	15.8%	11.7%	11.8%	15.9%
<b>CT: Healthcare Access &amp; Quality</b>							
Uninsured Adults	14.5%	15.1%	18.3%	15.3%	18.3%	14.1%	12.8%
Uninsured Children	6.3%	8.0%	7.7%	7.6%	8.2%	6.5%	5.6%
Population Receiving Medicaid	16.2%	16.2%	24.7%	16.9%	20.7%	16.3%	22.2%
Population Living in a HPSA	29.9%	38.2%	40.0%	36.7%	41.6%	27.6%	22.6%
Primary Care Physicians Provider Rate**	44.5	98.1	25.8	80.3	63.2	70	76.7
Mental Health Care Provider Rate**	106.1	381.5	58.1	293.2	200.5	204.2	261.6
Addiction/Substance Abuse Provider Rate**	1.2	2.8	0.0	2.2	11.0	2.2	9.4
Dentists Provider Rate**	30.0	69.4	26.7	57.5	44.3	54.2	65.6
Core Preventative Services for Men***	33.1%	33.5%	33.1%	33.4%	33.0%	34.7%	31.0%
Core Preventative Services for Women***	37.8%	34.3%	33.5%	35.0%	33.8%	36.3%	31.1%
Households with No Motor Vehicle	2.1%	7.2%	7.1%	6.2%	6.0%	6.9%	8.6%
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @in the past 30 days							



## SPRINGFIELD COMMUNITY - SOCIAL DETERMINANTS OF HEALTH, CONT.

	Christian County, MO	Greene County, MO	Webster County, MO	Springfield Community	ORC Region	Missouri	United States
<b>CT: Neighborhood &amp; Built Environment</b>							
Substandard Housing	24.0%	29.5%	23.7%	28.0%	26.8%	26.0%	31.9%
Violent Crime Rate**	186.2	825.4	177.0	634.8	426.4	524.3	416
Households with No or Slow Internet	17.3%	23.5%	30.3%	22.9%	25.1%	19.8%	17.3%
Low Food Access	21.5%	23.5%	8.9%	21.8%	24.8%	24.9%	22.2%
Respiratory Hazard Index Score	1.5	1.8	1.3	1.7	1.5	1.7	1.8
<b>CT: Social &amp; Community Context</b>							
Social Vulnerability Index (SVI)+	0.2	0.4	0.6	0.4	0.6	0.4	0.4
SVI- Household Composition+	0.4	0.1	0.4	0.2	0.5	0.4	0.3
SVI- Housing & Transportation+	0.1	0.8	0.8	0.7	0.6	0.5	0.6
SVI- Minority Status+	0.2	0.4	0.4	0.4	0.4	0.5	0.8
SVI- Socioeconomic+	0.3	0.4	0.6	0.4	0.6	0.4	0.3
Homeless Students	1.4%	5.5%	4.6%	4.4%	4.2%	4.0%	3.0%
<b>CT: Health Behaviors</b>							
Adult Binge Drinking@	17.6%	17.4%	17.2%	17.4%	16.1%	17.5%	16.9%
Physical Inactivity	22.9%	22.7%	24.4%	22.9%	26.0%	24.5%	22.1%
Current Smokers	20.0%	19.5%	25.0%	20.1%	21.9%	20.3%	17.0%
Fruit/Vegetable Expenditures (\$)	*****	*****	*****	\$607.67	\$635.03	\$665.08	\$744.71
Chlamydia Incidence**	317.2	779.1	323.3	641.2	482.2	568.1	539.9
Gonorrhea Incidence**	124.1	342.3	134.5	277.8	192.7	246.8	179.1
HIV Prevalence**	103.7	236.9	85.8	196.2	129.0	245.6	372.8
* age 25+; ** per 100,000 population; *** age 65+ + 1 indicates highest vulnerability; @in the past 30 days							

# 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: 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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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:

$$\text{Rate Change} = \left( \frac{[\text{Total Population 2010}] - [\text{Total Population 2000}]}{[\text{Total Population 2000}]} \right) * 100$$

### 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:

$$\text{Percentage} = [\text{Population by Family Type}] / [\text{Total Population}] * 100$$

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.

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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.

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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.

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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.

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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.

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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.

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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.

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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:

$$\text{Percentage} = [\text{Veteran Population}] / [\text{Total Population Age 18+}] * 100$$

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:

$$\text{Percentage} = [\text{Urban or Rural Population}] / [\text{Total Population}] * 100$$

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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:

$$\text{Per Capita Income} = [\text{Total Income of Population Age 16+}] / [\text{Total Population}]$$

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:

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

...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:

$$\text{Unemployment Rate} = [\text{Total Unemployed}] / [\text{Total Labor Force}] * 100$$

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:

$$\text{[Households with Costs Exceeding 30\% of Income]} / \text{[Total Households]} * 100$$

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.

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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

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:

$$\begin{aligned} \text{Units with GR under } \$562 = & [\# \text{ GR } \$1.00 - \$100] + \\ & [\# \text{ GR } \$100 - \$200] + [\# \text{ GR } \$200 - \$300] + [\# \text{ GR } \$300 - \$400] + [\# \text{ GR } \$400 - \$500] + \\ & [\# \text{ GR } \$500 - \$600] * [(562 - 500) / 100] \end{aligned}$$

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.

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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

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:

$$\text{Percentage} = [\text{Households by Composition or Type}] / [\text{Total Households}] * 100$$

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.

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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 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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population Age 25+}] * 100$$

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population Age 25+}] * 100$$

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. For 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:

$$\text{Percentage} = \text{SUM [Uninsured Population]} / \text{SUM [Total Population]} * 100$$

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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- 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:

$$\text{Percentage} = \text{SUM [Uninsured Population]} / \text{SUM [Total Population]} * 100$$

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:

$$\text{Percentage} = [\text{Subgroup Population}] / [\text{Total Population}] * 100$$

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:

$$\text{Crime Rate} = [\text{Number Violent Crimes}] / [\text{Total Population}] * 100,000$$

\*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 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:

$$\text{Percent Prevalence} = [\text{Risk Factor Population}] / [\text{Total Population}] * 100.$$

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]<sup>2</sup>) 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.

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 - 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

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.

## 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:

$$\text{Percentile} = [\text{County Within State Rank}] / [\text{Total Number of Counties in State}] * 100$$

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 age-adjusted 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.

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.

## POOR PHYSICAL 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.

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 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:

$$\text{Adj. Population} = ([\text{Cancer Incidence}] / ([\text{Adj. Incidence Rate}] / 100,000) )$$

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

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

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.

## **Race and Ethnicity**

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 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.

## **CHRONIC CONDITIONS - ASTHMA PREVALENCE (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 web page.

## **CHRONIC CONDITIONS - COPD (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.

## **CHRONIC CONDITIONS - HEART DISEASE (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.

## **CHRONIC CONDITIONS - HIGH BLOOD PRESSURE (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.

## **CHRONIC CONDITIONS - HIGH CHOLESTEROL (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.

## **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:

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

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 - 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:

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

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 - 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:

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

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 - 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:

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

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 - 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:

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

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 - 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:

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

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 - 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:

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

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:

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

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:

$$\text{Percent Prevalence} = [\text{Risk Factor Population}] / [\text{Total Population}] * 100.$$

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]<sup>2</sup>) 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:

$$\text{Percent Prevalence} = [\text{Risk Factor Population}] / [\text{Total Population}] * 100.$$

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]<sup>2</sup>) 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 census 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:

$$\text{Provider Rate} = \left[ \frac{\text{Number of Dentists}}{\text{Total Population}} \right] * 100,000$$

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:

$$\text{Provider Rate} = \left[ \frac{\text{Number of Primary Care Physicians}}{\text{Total Population}} \right] * 100,000$$

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:

$$\text{Percentage} = [\text{HPSA Population}] / [\text{Report Area Population}] * 100$$

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.

# APPENDIX D

## Qualitative Research Overview

The qualitative primary research methodology consisted of stakeholder interviews and focus group discussions with key community stakeholders, policymakers, and residents.

Seventy-five (75) one-on-one interviews that lasted approximately 30 minutes in length were conducted. This provided the opportunity to have in-depth and private conversations about community-wide strengths, barriers to getting care, impacts of the COVID-19 pandemic, and ideas to improve their communities. Although an interview guide (Appendix D-1) was used to help guide the conversation, participants were encouraged to speak about their particular areas of concern, interest, or experience. In addition, ten (10) virtual focus group discussions in many areas across the seven communities allowed regional voices to highlight areas they see as the biggest health-related needs facing the community. Complementary to the individual interviews, the lively conversations in the focus groups added insight and depth to community needs perceptions.

Focus group members were recruited from the regional communities through mass and personal emails, one-on-one conversations, social media, and through word of mouth. Many of their opinions and observations were grounded in both personal and professional experiences. The focus group interview guide (Appendix D-2) mirrored the discussion guide used for the one-on-one interviews. The groups started with introductions, and then participants were asked to think broadly about the topic areas. The discussions then narrowed into what they saw as the biggest concerns facing their community and what possible solutions they envisioned.

The combination of individual interviews and focus group discussions elicited several qualitative themes about areas of need. Each of these themes cuts across and impacts the subsequent Needs and Action Areas, and they are identified below with a short explanation. The Needs and Action Area sections follow the themes, and each includes an overview of the Action Area and utilizes de-identified illustrative observations in italics which are representative of respondents' consensus perspectives. In some cases, the observations highlight examples of potential interventions.

**In total, across both qualitative research stages, almost 200 individuals provided input from the following segments. The table below represents a sample of, but not all, sectors of unique communities heavily engaged in the qualitative research processes:**

### HEALTH SYSTEMS, HEALTHCARE PROVIDERS & LEADERSHIP

- Freeman Hospital System
- Good Samaritan Care Clinic
- HealthTran/Missouri Rural Health Network
- Healthy Nevada
- Mercy Hospital System
- Missouri Ozarks Community Health
- Access Family Care
- Burrell Behavioral Health
- CoxHealth
- Community Health Center of Southeast Kansas
- Cark Community Mental Health Center
- Community Clinic of Southwest Missouri
- Jordan Valley Community Health Center
- Ozark Senior Center
- Aurora Hospital
- Atlantic Coast Dental

## NONPROFIT ORGANIZATIONS & COMMUNITY-BASED SERVICES

- Nevada Housing Authority
- Ozark Senior Center
- Texas County Food Pantry
- Grupo Latinoamericano
- Watered Gardens Ministries
- Boys & Girls Club of Southwest Missouri
- Community Foundation of the Ozarks
- Christian County Neighborhood Center
- West Plains Rotary
- Gift of Hope

## GOVERNMENTAL ORGANIZATIONS & HEALTH DEPARTMENTS

- Barton County Health Department
- Christian County Health Department
- City of West Plains
- Dallas County Health Department
- Christian County Library
- Neighborhood Adult Literacy Action
- Springfield Greene-County Health Department

## SCHOOL SYSTEMS & LIBRARIES

- Joplin R-8 School District
- Nevada R-5 & R-8 School Districts
- Christian County Library
- Franklin Technology Center Adult Education
- Parsons District Schools

## TRIBAL COMMUNITIES

- Inter-Tribal Emergency Management Coalition

## VULNERABLE POPULATIONS

- Refugee & Immigrant Services & Education

## HEALTH EDUCATION ORGANIZATIONS

- Live Well Crawford County
- Eat Well
- Community Partnership of the Ozarks
- Elevate Branson
- Ozarks Wellness Network
- Springfield Drug Taskforce
- McDonald County Coalition

## FAITH-BASED ORGANIZATIONS & COMMUNITIES

- Christian Action Ministries
- Connecting Grounds
- First Baptist Church of Ozarks
- Water Gardens Ministries, Homeless Shelter

## LGBTQ+ COMMUNITY ADVOCATES

- PROMO

## HIGH-LEVEL QUALITATIVE DISCUSSION THEMES

Across the region, many participants shared comments and insights specific to their communities. However, in some rural communities, community engagement was low, such as the Bolivar Community. The following are some key highlights from the qualitative research for the combined seven regions:

- The COVID-19 pandemic, specifically stemming from low vaccination rates in the area, will have long-lasting effects on many health and social aspects of the population.
- Transportation remains a barrier for individuals and families trying to get the healthcare they need, and travel for regular employment.
- Mental health and substance misuse have always plagued the area, but the COVID-19 pandemic has greatly increased the problem and not nearly enough treatment options exist.
- Healthcare has become highly and increasingly politicized, and this has affected both medical and mental health needs of residents across the region.
- The cycle of generational poverty makes it difficult for some residents to envision and build a more positive future for families today and tomorrow.
- Recruiting and retaining the necessary number of and types of providers exacerbates the already challenging health issues, especially of the more rural areas of the region.
- Many shared the hope for children's futures, but isolation due to poverty and COVID-19 risk is creating what they feel are permanent educational and behavioral health challenges for many in our next generation, especially since the true impacts of the pandemic will not be known for years.
- Telehealth is not a viable solution to help solve rural health care needs due to the lack of broadband infrastructure, as well as costs of hardware, consistent internet access, and knowledge gaps.
- The culture of the Ozarks lends itself to how people think, who they trust, and their subsequent actions, many times with long-lasting effects, especially in relation to the pandemic.

In addition to interventions associated with the themes above, there are interventions which flow naturally from the Action Areas below. These are important to include in any planning response. The following High-Level Action Areas are most representative of respondents' consensus in both the qualitative interviews and the focus group discussion. Please note, the Action Areas are not in prioritized order. Items in italics are direct quotes from participants.

### THE COVID-19 PANDEMIC

The Ozarks is one area of the United States that was hit particularly hard by the COVID-19 pandemic, especially during the delta variant surge in the summer of 2021. Much of what is reported below and throughout this report includes references to the influence of the pandemic, since it's next to impossible to isolate it from the remainder of the health needs of the communities studied. Yet due to the magnitude of the infection rates in the research target area, as well as the unknowns with respect to the future health of the communities this project included, it warrants its own section.

- *Provider burnout was bad before COVID, but now it's worse. Resources are stressed and things are bad in Oklahoma, hospitals are full, we have COVID tents. COVID funding from the government comes with so many strings attached, i.e., they're having many emergency issues due to COVID and have to reduce emergency room clinic hours and we'd like to build a new clinic but have to refer to another clinic. (Joplin Community)*
- *Testing, vaccinations, vaccination hesitancy – it's very political, and so very challenging. (Lebanon Community, Douglas County)*

- *We've been seeing residual effects of COVID – kidney disease, heart disease, PTSD. Nobody was prepared for that. (Mountain View Community)*
- *Vaccination efforts continue – through working with employees and watching social media. There's lots of misinformation and push back and feelings of distrust from what I perceived as trusted resources, including doctors and school nurses. (Lebanon & Mountain View Communities)*
- *COVID-19 has helped bring mental health and substance misuse into the 21st century and make it relevant. We've discovered new ways to provide services virtually, but we just need better internet access. This is an opportunity. Virtual treatment had a bit of a negative effect since people didn't have the connections and interactions. There are more acute mental health issues due to COVID, more suicidal ideations, more depression, and lots of anxiety. Social interactions were disrupted and people in recovery for years have had reoccurrences of use. (Springfield Community)*
- *Providers were open, but there may have been people who had a yearly checkup and chose not to go. (Mountain View Community, Howell County)*
- *Isolation is hard, especially for the elderly. When the senior center closed, they lost friends either due to COVID or other illnesses. Churches closed. Expect long-term mental health issues for older adults. (Lebanon Community, Dallas County)*
- *My daughter was pregnant and got COVID. She was on a vent for 17 days and received the highest oxygen she could get. COVID ate a hole in her lung. The child was born 2 months early. My daughter has really bad anxiety and my grandchild has separation anxiety. The experience was a nightmare because the only contact you have is with the nurse. Long-term, her lungs look like someone who smoked for 40 years. If she ever gets pneumonia, then she will need to be hospitalized. My son-in-law had heart issues and almost had a heart attack. (Joplin Community, Vernon County)*

## MENTAL HEALTH & SUBSTANCE USE DISORDER

Mental health (MH) and substance use disorders (SUD) affect people of all ages, genders, race, and ethnic groups. Prior to Covid-19, out of the 330.1 million people living in America, nearly one in five (61.2 million) were living with a mental illness and/or substance use disorder which is a 5.9% increase from the prior year. Of these people 25.5% (13.1 million) are experiencing a severe mental illness, which can be defined as an individual over 18 having (within the past year) a diagnosable mental, behavior, or emotional disorder that causes serious functional impairment that substantially interferes with or limits one or more major life activities.



**People feel that the 'good life' isn't for them.**

**Branson Community**

In the region included in this community health needs assessment, access to mental health and substance use disorder treatment is highly varied with many stating that access is limited in their local area, and this is exacerbated in rural areas of the states. Stigma continues to act as a barrier to getting care, and lack of housing options make matters worse.

- *Our area has high percentage of people on drugs. Meth is big. If you have a record, it's hard to get housing, so people live in extended stay hotels and drugs are prevalent – people can't get out of the cycle. (Branson Community, Taney County)*
- *Addiction is huge. Suicidal ideation of teenagers is growing, and the internet makes an impact, plus not being in school and no face-to-face interactions. Parents' addictions, spousal abuse, food insecurity, housing, jobs – all impact behavioral health. (Lebanon Community, Douglas County)*
- *Need an increase in medical detox beds, i.e., people with high blood pressure, asthma who want to go through detox. They've detoxed people in ways that aren't safe, i.e., putting them in a hotel room and have a doctor check on them every few hours. (Springfield Community)*

- *Meth is a major problem, including with Medicaid moms with no social support. People with substance use and mental health are very stigmatized. (Joplin Community, Cherokee County)*
- *There's a stigma to seeking psych care. People have been suffering from mental health for years and haven't gotten care. (Mountain View Community, Howell County)*
- *We're seeing more kids with lack of direction, diagnoses, or lack of diagnoses when they should have one in our programs. There has been slow growing anxiety behaviors and autism since the pandemic, but our area wasn't affected like east or west coast – they were back in school earlier. We have a huge population of divorced parents and so many mixed families. They need family education and support. (Joplin Community, Jasper County)*
- *Mental health is still taboo and stigmatized. We have residual effects from facility closures a few decades ago. (Joplin Community, Vernon County)*
- *Slow progress on stigma, but it's still progress. Awareness at Olympics helps, but it's very stigmatized. I keep hearing things like, "I thought I was alone in this." Still siloed for co-occurring treatment – most treatments still pay attention to one side or the other, not looking at whole package. (Springfield Community)*

## TRANSPORTATION & INTERNET ACCESS



**Uniqueness of communities isn't considered when developing solutions for communities.**

### Mountain View Community

Simply seeing a healthcare provider – whether in person or via telehealth – is a major barrier for many in the region to get the care they need. When asked to name one of the biggest challenges to living in the area, participants regularly cited transportation, even though transportation is a central beneficiary of the 2021 Federal infrastructure bill. Less often offered when asked a general question about challenges in the area, but frequently told was a major issue when specifically asked about telehealth, is the lack of broadband or internet access, especially for more rural areas of the study's geography and for low income or people experiencing homelessness in the community. The following are representative comments from across the areas of study

access, especially for more rural areas of the study's geography and for low income or people experiencing homelessness in the community. The following are representative comments from across the areas of study

- *Public transportation in Branson would be life changing. (Branson Community, Taney County)*
- *Access (including transportation) to specialty care is hard, including women's health, endocrinologist, orthopedic surgeons. (Mountain View Community, Howell County)*
- *The low-income community has few resources to travel for healthcare due to unreliable transportation. They need more basic services in community, and to work with others to get more advanced care including appointments, transportation Mission Fund to help patients pay for services or equipment, but there's still a large gap and access to services. 35-45 minutes from Aurora to Springfield, but 1:15-1:25 from Cassville to Springfield. (Monett Community, Barry County)*
- *No real public transportation in this rural area. There is a little bus, but it has limited hours and it's only within city limits. Hard for people to get to the bus station. No taxis, even though they have funding. (Lebanon Community, Texas County)*
- *We need to get all hands-on deck to provide phone lines and return calls to help people complete the really long application forms. Advocacy for changing payment structure, making it easier. (Lebanon Community, Douglas County)*

## CHRONIC CONDITIONS, CANCER, DENTAL HEALTH & AGING

Due to the difficulty of accessing healthcare providers, whether due to transportation, insurance or cost considerations, the general avoidance of healthcare unless in case of an emergency, unhealthy lifestyles, and other reasons, leads to a large number of people who indicated that chronic conditions are a major issue in the region. Diabetes, heart disease, obesity, Chronic Obstructive Pulmonary Disease (COPD), and hypertension were consistently cited. People feel that many of the health issues are preventable, and that people make poor choices about their diet and exercise. Many feel that this can be improved by education, but cultural changes are also needed. The increasing needs of the aging population were also noted by various participants, both for the patients themselves and for their caregivers, including care for patients with Alzheimer's Disease or dementia.

**Cancer is gaining ground.** Many participants cited cancer as a major and growing problem.

**Care for the body, and the mind, is needed.** More and more, people are realizing that the body is an entire system and needs to be treated as one, rather than siloed care depending on the body part.

**Rural dental care is severely lacking.** Many participants shared a need for affordable and accessible dental care, especially for pediatric patients.

What many of these have in common is the need for preventative care, and that was commonly cited as a major need. The belief is a large number of residents – especially those that don't have insurance or are affected by poverty – use the emergency departments for their regular care, or only visit the emergency room, clinic, or doctor when the situation escalates.

- *People think there's something wrong with the water or other system in West Plains that makes them more susceptible to cancers. (Mountain View Community)*
- *90% of our patients are two times under poverty level. Two-thirds of the patients have multiple chronic conditions. People drop out of workforce so they could qualify for healthcare. (Branson Community, Taney County)*
- *Since COVID, we've seen increase in pulmonary issues, and post-COVID issues like needing inhalers, other breathing issues, etc. We desperately need more inhalers. (Joplin Community, Jasper & Newton Counties)*
- *Kids are overweight and unhealthy. (Springfield Community, Greene County)*
- *There's no follow up or preventative care for diabetes. Not enough knowledge about diabetes. (Mountain View Community)*
- *Pediatric dental providers are real need unless you have insurance or pot of gold. (Lebanon Community, Dallas County)*
- *End of life care (emotional and social support) in both home care and in facilities is needed. (Joplin Community, Crawford County)*
- *With the aging population, we need adequate nursing homes or add one or two more. Mental and behavioral health issues (rather than medical health) for aging the population with Alzheimer's or dementia; not enough internal medicine/geriatric providers. Kids are moving away but old people are staying. Men are too proud to ask for help, especially with Alzheimer's or dementia. (Mountain View Community, Howell County)*
- *People who are trying to make an honest living, the working poor, can't afford health insurance and other help. Only excessively poor can get help. (Lebanon Community, Texas County)*
- *Universal healthcare in some form. Healthcare is a right up to a certain point. Our current system doesn't work for all. (Lebanon Community, Douglas County)*
- *We need an umbrella organization or community hub, like Healthy Nevada, that connects each service and has case managers. (Joplin Community, Vernon County)*
- *We need wider availability of all medical and dental services and give all people a means to access those services - make it easy to access re transportation, costs, etc. More affordable medications (i.e., for diabetes). (Springfield Community, Christian County)*

## SOCIAL DETERMINANTS OF HEALTH

**Maslow's original hierarchy of needs is still relevant today.** In addition to shelter, food, clothing, and warmth remain essential for well-being. Just before the COVID-19 pandemic, the Urban Institute found that nearly 40 percent of American families struggled to meet at least one basic need for housing, utilities, or food, and this directly correlates to healthcare needs, both acute and chronic.

### Social Determinants of Health



Social Determinants of Health  
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Healthy People 2030

**Housing.** While the housing first model is espoused by many social service providers across the country, even those who are not directly engaged with this delivery feel that if an individual or family does not have a home, then the other social determinants of health are harder, or next to impossible, to attain.

**Food.** Healthy eating habits may be a choice, but barriers such as the cost of fresh fruit and vegetables, the inability to find transportation to purchase healthy food, the time to prepare healthy meals, cultural considerations, and others make this a more complex situation.

**People leaving or not re-entering the workforce.** One cannot separate these basic needs from the requirement of employment. The pandemic put a strain on many aspects of employment, and people have been afraid of being infected at work or not returning to the workforce. Among those not in the labor force as of September, 1.6 million people were prevented from

looking for work due to the pandemic. Referring to the issues above and other Social Determinants of Health issues, community members had many insightful comments; several are shown below in order to illustrate the granular perspectives.

- *People break into abandoned houses; there is some stigma around vouchers, and many don't want to play by the rules; hard to find landlords right now. Usually twice a year (before school and after Christmas break) people move or relocate – this past year no one relocated; we have had people turn in vouchers because they couldn't find anything. We have a lot of homeless and has it increased. (Joplin Community, Vernon County)*
- *Food insecurity is one of the three main health issues in our area. The YMCA does a grocery grab weekly for kids in school, ages 3-18, but there's a gap through the farm to family food program. We should work with farmer's markets to provide families with a complete meal with fresh produce, recipes, videos how to prepare. Create a healthy mindset and that educate that healthy doesn't have to be expensive. (Joplin Community, Vernon County)*
- *Social determinants of health issues are the biggest that need to be addressed like housing and food. Healthcare is now coming together with public health, whereas before they were siloed. (Springfield Community, Greene County)*
- *Before COVID you could rent a house, but there's none. There's a one year waiting list for Section 8 and public housing with 200 units is about full. The housing market here is very slim; a lot of houses aren't suitable and are owned by slumlords. (Joplin Community, Vernon County)*
- *Homeless have a lot of unmet needs because no homeless shelter, but we do have a daytime shelter to shower, get food, get resources, etc. There's no place for homeless to sleep, so they have to keep walking. If they stop, the cops will tell them to move on. There are two shelters in Joplin where people may go at night, but not enough beds. (Joplin Community, Cherokee County)*



- *Homeless teens and homeless in general are a major problem. We have a lot of couch surfers or multifamily homes, not enough homes for growing community in Durham. The number of people without a permanent address is extremely staggering for kids in schools. (Lebanon Community, Dallas County)*
- *Homelessness is an issue and depends on how you define it – couch surfing is fairly rampant. If you look at the community from the outside, then you don't see it outright. People may be under a bridge, in abandoned houses, couch surfing. (Joplin Community, Vernon County)*
- *Childcare has long waited lists and limited access. It's expensive, especially with low pay. Head Start has a waiting list, at some point it will return to full capacity, but what to do in the meantime? The need outpaces the capacity even without COVID. Quality is also an issue. Some childcare programs closed during COVID and have not reopened. Personally, I do not trust outside of family to watch my youngest. (Springfield Community)*
- *Affordable housing is a problem. This is a poor community in general, but with COVID at the beginning the employers were paying people, but now they're not, including people in quarantine, so now first timers are visiting because they and their spouse are not getting paid. New faces show up to get services. (Lebanon Community, Texas County)*
- *We need double or triple classroom teacher staff. Academically there's not much correlation to student performance and class size, but on the social and emotional side much more needs to be addressed. Teachers need to be able to focus on fewer students. Teachers are feeling beat up due to masking, critical race theory debates, and polarization. (Joplin Community, Jasper County)*

## **THE CULTURE OF THE OZARKS**

Almost every community research participant directly mentioned or alluded to what can generally be described as the culture of the Ozarks. The sense of community resiliency, independence, and caring for one's neighbors reflect the strong fabric of the region. This sense of independence was often given as a reason why some people have a mistrust of government institutions or others from outside of their local area (or not personally known to them). Some suggest that cultural aspects can be a great draw for some healthcare providers interested in the Ozarks lifestyle, yet it can pose challenges to recruiting and retaining healthcare providers in other instances. Due to the rural nature of many of the communities included in this study, the number of physicians and higher-level providers is severely lacking. An unstable healthcare provider base (as seen in many rural areas of the project research) may further foster ongoing trust issues between healthcare system providers and community members. Community members shared some insightful and very direct comments regarding these issues.

- *The culture of the Ozarks has distrust of medicine, even though I have a master's degree. Some of my ancestors were distrustful of doctors. We have a patriarchal view of the world. (Mountain Community)*
- *Send speakers into schools to talk to kids about building self-esteem and that there are ways out of poverty. Showcase local people who have risen above. (Branson Community)*
- *McDonald County has a very high and noticeable teen pregnancy rate, it's part of the culture. Get a hip nurse practitioner to get on social media and encourage education. There's an opportunity to work through churches to reduce teen pregnancy. We can't use term "family planning" because people hear "abortion," and many are against contraceptives. Abstinence and purity are good messages, but it's too late. (Joplin Community, Newton County)*
- *There is no consistency of care. Doctors come after residency for a few years then they leave when their term is done. (Monett Community, Lawrence County)*

- *Early on, about 50% of my staff refused to get vaccinated. Since then, they're at 80% vaccinated, but some employees don't want their friends and co-workers to know they received the vaccine, as they were initially so against it. Our company offered a private room for people who wanted to get vaccinated privately. (Mountain View Community, Howell County)*
- *The history of Joplin is a really rough town. It's a mining community-- lead and zinc mines. I think there is a lack of interest [in community pride, as well as health-related issues]. Not a ton of great industry to attract new people. It's heavily a trucking/transition industry. (Joplin Community, Jasper & Newton Counties)*
- *No industry when poultry company closed over 10 years ago. School system has been the biggest employer. (Lebanon Community, Dallas County)*
- *The Arkansas governor has been going around the state with a pop-up vaccine clinic and having conversations with the community. People can share their stories and help reverse how social media has influenced people in certain circles who won't look for other information. I heard a story about this on NPR. Doing it in person has a huge impact, according to the story. (Mountain View Community)*

## HIGH-LEVEL COMMUNITY-FOCUSED ACTION AREAS & OBSERVATIONS

In addition to the community summaries below, there are certainly actions which flow naturally from the themes above. These are important to include in any planning response. The following High Level Action Areas are most representative of respondents' consensus in both the qualitative interviews and the focus group discussion. Comments and community summaries which follow beginning in the next section, include granular insight about each High-Level Action Area. Each community-level summary below includes some similar project level information regarding the total extent of the research so that individual community sections can be easily shared, if desired.

### HIGH-LEVEL ACTION AREAS



*PLEASE NOTE, THE ACTION AREAS ARE IN ALPHABETICAL NOT PRIORITIZED ORDER. EACH COMMUNITY-LEVEL SUMMARY BELOW INCLUDES SOME SIMILAR PROJECT LEVEL INFORMATION REGARDING THE TOTAL EXTENT OF THE RESEARCH SO THAT INDIVIDUAL COMMUNITY SECTIONS CAN BE EASILY SHARED, IF DESIRED.*

## REGIONAL INSIGHTS FROM THE BOLIVAR COMMUNITY

The Bolivar Community, consisting of Dade, Hickory, and Polk Counties, was also included in the scope of this process. Over the course of the assessment, engagement with certain communities was a challenge, and nowhere is that more evident than in the Bolivar Community. The timing of the CHNA occurred during the peak of the COVID-19 pandemic's delta variant spread which has had a significant impact on the Ozarks. Understandably, many of the professionals and organizations who may have been tapped to assist with CHNA efforts were overwhelmed and understaffed and focused on pandemic-related tasks. Qualitative analysis was unable to be conducted due to a lack of participants for either one-on-one stakeholder interviews or focus groups with residents living in the Bolivar Community. A small number of people who identified as either living or working in counties in the Bolivar Community participated in the online community survey as well as a one resident from a focus group in the broader area.

### BOLIVAR COMMUNITY COMMENTS & IDEAS

#### Community Positives:

- Strong sense of community, strong school system.
- Giving and caring community with the resources they have. Good police chief.
- Tremendous growth in a lot of areas that seemed to be stagnant for over a decade, and it's encouraging. Downtown revitalization and coffee shops.

#### Housing & Homelessness:

- There are a lot of couch surfers or multifamily homes, not enough homes for growing community.
- The number of people without a permanent address are extremely staggering for kids in schools.
- Homeless teens and teens in general. Teens are homeless and couch surfing, may not have transportation, don't have transportation. Can give them nutrition education but they're not buying the food.

#### Behavioral Health Treatment & Services:

- There are more mental health issues. Isolation is hard, especially for the elderly. When the senior center closed, they lost friends either due to COVID or illnesses.
- There is stigma asking for help. Elderly have pride and don't want to ask for help.

#### Access to Healthcare:

- People need to choose between healthcare and other bills. Not much help for financial assistance and refer people to patient assistance program, but it's more work for primary care physicians.

#### Magic Wand Highlight:

- Fitness or activity or social place where people can gather in a cost-effective way, and the transportation to get there.

## REGIONAL INSIGHTS FROM THE BRANSON COMMUNITY

Seven one-on-one interviews that lasted approximately 30 minutes in length were conducted. This provided the opportunity to have in-depth and private conversations about community-wide strengths, barriers to getting care, impacts of the COVID-19 pandemic, and ideas to improve their communities. Although an interview guide was used to help guide the conversation, participants were encouraged to speak about his or her particular areas of concern, interest, or experience. In addition, virtual focus group discussions were held in Toney and Stone Counties to allow regional voices to highlight challenges that they see as the biggest health-related needs facing the community.

*Community members provided input from the following community organizations:*

- Christian Action Ministries
- CoxHealth
- Elevate Branson
- Faith Community Health
- Gift of Hope
- MU Extension
- Ozarks Wellness Network
- Table Rock Chamber

## **BRANSON COMMUNITY COMMENTS & IDEAS**

### **Top Challenges Identified:**

- Access to Healthcare
- Housing & Homelessness

### **Community Positives:**

- There is great community support. People are helping people and there are great school districts.
- There is legacy of servant leadership in community, people want to give back.

### **Housing & Homelessness:**

- Housing is expensive, substandard, and unsafe.
- Topographically it's a hard and expensive area to build. The land is expensive, housing is expensive, housing problems, people live in converted extended stay motels that are substandard.
- Women sleep with duct tape around their clothes, so they won't be attacked.
- For homeless individuals, it's very, very hard to get healthcare and food because they don't have identification.

### **Transportation & Broadband:**

- Public transportation in Branson would be life changing. Everyone struggles with transportation and if this was addressed it would improve housing, food insecurity, jobs, and health.
- There is no public transportation in Branson. There is one taxi in town and it's \$20 a ride.
- Terrible broadband, even near major highways. Many people are older, and they can't use telehealth.
- Everyone struggles with transportation, and if this was addressed it would improve housing, food insecurity, jobs, and health.

### **Workforce:**

- It's hard to "just get a job" especially for people with intellectual disabilities or if people are in fight or flight mode or, if they don't have good relationships with family.

### **Behavioral Health Treatment & Services:**

- There are very little treatment options and very few therapists who work with children.
- Mental health issues for kids on the rise. There are no interactions with peers and few options for childcare and kids are home alone, even young kids.

### **Substance Use Treatment & Services:**

- Our area has high percentage of people on drugs. Meth is big. If you have a record, it's hard to get housing, so people live in ex-tended stay hotels and drugs are prevalent – people can't get out of the cycle.
- There is no free help for substance abuse. Sometimes neighbors try to get clean themselves, they show up to church.

### **Access to Healthcare:**

- Ninety percent of our patients are two times under poverty level. Two-thirds of the patients have multiple chronic conditions. People drop out of workforce so they could qualify for healthcare.
- Generationally poor people don't understand access or need for healthcare.
- Definitely access issues to physicians in county. More doctors are closer to hospital, which is about 45-minute drive. Older population in county and want physicians closer.
- The clinic operates on a shoestring budget, and they don't have marketing funds. There is constant turnover of people and employees and it's tough to reach certain people. We could see 2 to 3 times the number of patients if people knew the clinic existed.

### **Access to Basic Needs:**

- Knowledge of what to do with healthy food is the issue. Many think food is handed through a window. They get raw or canned fruits and veggies and frozen meats and don't know what to do with it when they take it home. They need education about how to cook healthy food.
- Health is a big issue for people living in poverty because they don't understand proper nutrition, do fast food and prepackaged foods. People have access to food, healthy food at farmer's markets, but don't know how to cook healthier foods.
- Many people who were laid off from tourism-related employment showed up for the first time at the food pantry.

### **Impact of COVID-19:**

- Huge impact on people with substance abuse and those in recovery and many relapses due to lack of access, isolation, COVID-19 re-restrictions.
- The health department can't be a part of anything besides COVID. They are such a resource but don't have capacity to deal with COVID-19 plus all other health issues.

### **Magic Wand Highlight:**

- It's not a money situation, it's a heart situation. There is a Christian approach to dealing with healthcare. It's going to be a God-ordained solution when it happens. We need to find that right structure when it happens.
- Send speakers into schools to talk to kids about building self-esteem and that there are ways out of poverty. Showcase local people who have risen above.

## **REGIONAL INSIGHTS FROM THE JOPLIN COMMUNITY**

Twenty-five (25) interviews that lasted approximately 30 minutes in length were conducted. This provided the opportunity to have in-depth and private conversations about community-wide strengths, barriers to getting care, impacts of the COVID-19 pandemic, and ideas to improve their communities. Although an interview guide was used to help guide the conversation, participants were encouraged to speak about his or her particular areas of concern, interest, or experience. In addition, three (3) virtual focus group discussions were held with local school districts and housing authorities, as well as other sectors of the Joplin community to allow regional voices to highlight challenges that they see as the biggest health-related needs.

*Community members provided input from the following community organizations:*

- 3M
- ACCESS Family Care
- Barton County Health Department
- Boys & Girls Club of Southwest Missouri
- Children's Center
- Community Health Center of Southeast Kansas
- Community Support Services of Missouri

- Eat Well
- Freeman Hospital System
- Freeman Technology Center
- Healthy Nevada
- Inter-Tribal Emergency Management
- Joplin R-8 School District
- Live Well, Crawford County
- McDonald County Coalition
- Neighborhood Adult Literacy Action
- Nevada Housing Authority
- Nevada R-5 & R-8 School Districts
- Parsons District Schools
- Refugee and Immigrant Services & Education
- Watered Gardens

## **JOPLIN COMMUNITY COMMENTS & IDEAS**

### **Top Challenges Identified:**

- Access to Healthcare
- Housing & Homelessness

### **Community Positives:**

- Great culture of non-profits working together to avoid duplication.
- They're a shining light in Native healthcare community and they're doing the best they can.

### **Housing & Homelessness:**

- The housing market here is very slim; a lot of houses aren't suitable and are owned by slumlords. People break into abandoned houses; some stigma around vouchers and many don't want to play by the rules; hard to find landlords right now.
- Homelessness is an issue and depends on how you define it – couch surfing is fairly rampant. If you look at the community from the outside, then you don't see it outright. People may be under a bridge, in abandoned houses, couch surfing.
- Crawford County is very poor. Homeless have a lot of unmet needs because no homeless shelter, but we do have a daytime shelter to shower, get food and get resources.
- Homeless, transient kids, and those who sleep on couches are a problem. There is not much housing availability in Pineville, so families move in with friends.
- There are two shelters in Joplin where people may go at night, but not enough beds.
- Major institutions have been closed, and by moving to a community-based model presents a challenge since people are limited to affordable and accessible housing.

### **Workforce:**

- The history of Joplin is that it's a really rough town. It's a mining community with lead and zinc mines. I think there is a lack of interest in community pride, as well as a health-related issues.
- Not a ton of great industry to attract new people

### **Behavioral Health Treatment & Services:**

- More social and emotional support for kids in schools, preteens, more social workers to strengthen families.
- Mental health was huge issue before the pandemic, and it's still an issue - needs may be higher as pandemic has increased anxiety and depression. This has resulted in more domestic abuse, more drug and alcohol use, etc.

- We are seeing more kids with lack of direction, diagnoses, or lack of diagnoses when they should have one, in our programs.
- Slow growing anxiety, behaviors, autism since pandemic, but their area wasn't affected like east or west coast - they were back in school earlier.
- Social isolation a major problem especially for those with mental health disorders.
- Mental health was huge issue before the pandemic, and it's still an issue. The pandemic has increased anxiety and depression. This has resulted in more domestic abuse, more drug and alcohol use.

#### **Access to Healthcare:**

- Holistic health screening needed to understand where people are physically and mentally, then a decision tree afterwards to help them as best as they can.
- There's an opportunity to work through churches to reduce teen pregnancy. Anti-abortion is very high; we can't use term "family planning" because people hear "abortion," and many are against contraceptives. Abstinence and purity are good messages, but it's too late.
- Since COVID, we've seen increase in pulmonary issues and issues like needing inhalers and other breathing issues. We desperately need more inhalers.
- Food insecurity is one of the three main health issues in our area. The YMCA does a grocery grab weekly for kids in school ages 3 to 18, but there's a gap through farm to family food program.
- People want to be seen face to face. Midwestern culture thinks internet is for city people, not for them.
- End of life care, emotional and social support, in both home care and in facilities is needed.

#### **Impact of COVID-19:**

- Substance abuse has taken a back burner with COVID. Mental health is still playing its part, people are not receiving appropriate care.
- Physicians question whether they want to continue working. One surgeon who had COVID-19 and never felt like he recovered is quitting next month. Some nurses have walked away from nursing. We will see a major shift.
- Provider burnout was bad before COVID, but now it's worse. Resources are stressed and things are bad in Oklahoma, hospitals are full, we have COVID tents. COVID funding from the government comes with so many strings attached.

#### **Magic Wand Highlight:**

- Find a way to get to people who are falling through the cracks, those who have given up on their lives.
- Give everyone free training and education classes to help everyone get jobs and have a better life.
- Clean up homeless population, help them move in a different direction, get life, and work skills.

## **REGIONAL INSIGHTS FROM THE LEBANON COMMUNITY**

Five (5) interviews that lasted approximately 30 minutes in length were conducted. This provided the opportunity to have in-depth and private conversations about community-wide strengths, barriers to getting care, impacts of the COVID-19 pandemic, and ideas to improve their communities. Although an interview guide was used to help guide the conversation, participants were encouraged to speak about his or her particular areas of concern, interest, or experience. In addition, a virtual focus group discussion was held in Dallas County to allow regional voices to highlight challenges that they see as the biggest health-related needs facing the community.

*Community members provided input from the following community organizations:*

- Dallas County Health Department
- Live Well Alliance, Dallas County
- Dallas County Resource Group
- Missouri Ozarks Community Health
- Texas County Food Pantry

## **LEBANON COMMUNITY COMMENTS & IDEAS**

### **Top Challenges Identified:**

- Access to Healthcare

### **Housing & Homelessness:**

- Homeless teens and homeless in general are a major problem. We have a lot of couch surfers or multifamily homes, not enough homes for growing community in Durham. The number of people without a permanent address is extremely staggering for kids in schools.

### **Transportation & Broadband:**

- No real public transportation in this rural area. There is a little bus, but it has limited hours and it's only within city limits. Hard for people to get to the bus station. No taxis, even though they have funding.

### **Workforce:**

- People who work minimum wage or service jobs who don't make any money or don't have insurance. Parents work different shifts because they can't afford childcare; some people can't afford to work.
- We are losing a lot of public health people due to the stress. People do it for love of their community.

### **Substance Use Treatment & Services:**

- Addiction is huge. Suicidal ideation of teenagers is growing, and the internet makes an impact, plus not being in school and no face-to-face interactions. Parents' addictions, spousal abuse, food insecurity, housing, jobs – all impact behavioral health.

### **Access to Healthcare:**

- People who are trying to make an honest living, the working poor can't afford health insurance and other help. Only excessively poor can get help.
- Affordable pediatric dental providers are needed unless you have insurance or pot of gold.
- We need to get all hands-on deck to provide phone lines and return calls to help people complete really long application forms as well as advocacy for changing payment structure, making it easier. Improving visibility in schools - being in touch with school leadership about services available.

### **Impact of COVID-19:**

- Leadership in Jefferson City doesn't listen to public health leaders. There is a nonbelief of science, people need to try to have people have faith in programs like tobacco cessation and women's health). We need to work on trust.

### **Magic Wand Highlight:**

- Set up public transportation system that's free and a very large radius beyond downtown.
- Continue partnerships, don't be afraid to reach out to county hospitals and other clinics to include them in discussions on how to improve services, not duplicate, improve access.



## REGIONAL INSIGHTS FROM THE MONETT COMMUNITY

Six (6) one-on-one interviews that lasted approximately 30 minutes in length were conducted. This provided the opportunity to have in-depth and private conversations about community-wide strengths, barriers to getting care, impacts of the COVID-19 pandemic, and ideas to improve their communities. Although an interview guide was used to help guide the conversation, participants were encouraged to speak about his or her particular areas of concern, interest, or experience. In addition, virtual focus group discussions were held to allow regional voices to highlight challenges that they see as the biggest health-related needs facing the community.

*Community members provided input from the following community organizations:*

- Cassville Chamber of Commerce
- Clark Community Mental Health Center
- Mercy Hospital, Aurora
- Mercy Hospital, Cassville
- Ozarks Area Community Action Corporation, Lawrence County

## MONETT COMMUNITY COMMENTS & IDEAS

### Top Challenges Identified:

- Behavioral Health Treatment & Services
- Transportation & Broadband

### Housing & Homelessness:

- Lower income rentals simply aren't available anymore, so people get put up in hotels. People have jobs put kids with relatives and the parents work out of their cars.
- Housing costs have outpaced salaries. There are huge wait lists for lower cost rentals, and people are charging more for rent.
- Many people are displaced. There has always had a lot of homeless people, but they were more transitionally homeless. Now more locals are homeless, it's harder to get healthcare and no homeless shelters.
- People have really good working relationships with service providers, but there are roadblocks like transportation.
- If you don't have a safe place to live, how can you be healthy?

### Transportation & Broadband:

- Small town with low socioeconomic status, limited public transportation and lucky that hospital is in town.
- If people don't have transportation, they don't get healthcare.
- People must reserve transportation to medical appts 24 to 48 hours in advance, and sometimes people can't do that.
- The low-income community has few resources to travel for healthcare due to unreliable transportation. They need more basic services in community, and to work with others to get more advanced care including appointments, transportation Mission Fund to help patients pay for services or equipment, but there's still a large gap and access to services. 35 to 45 minutes from Aurora to Springfield, but 1:15-1:25 from Cassville to Springfield.
- The low-income community has few resources to travel for healthcare due to unreliable transportation.

### Workforce:

- Workforce is a problem and was before the pandemic, especially in mental health in rural conservative America due to stigma. Their mantra is that everyone has mental health needs.

- People are getting resourceful but it's tough on bottom line and fearful of future, many paid their employees even when business closed for a week.

#### **Behavioral Health Treatment & Services:**

- All roads lead to Wal-Mart, so the mental health centers in communities with Wal-Mart are busier. There is a correlation between rural towns with Wal-Mart and Dollar Stores and busier mental health clinics.
- It's taboo in some older generations to seek help for mental health. Younger generations are more open to getting help.
- Stigma to mental healthcare, and when support went digital, many people lost out.

#### **Substance Use Treatment & Services:**

- There are a lot of drugs like meth and prescription drugs, and few treatment options. People must pay cash to go rehab facility and few places for people to detox safely.
- There are no inpatient substance abuse facilities nearby, they're 50-60 miles away.
- We have money for mental health first aid training for adults and youth but having trouble getting people trained.

#### **Access to Healthcare:**

- People are frustrated and go without care.
- There is no consistency of care. Doctors come after residency for a few years then they leave when their term is done.

#### **Safe & Affordable Childcare:**

- Parents work different shifts because they can't afford childcare some people can't afford to work.
- State harps on unlicensed care, but everyone knows everyone in the community.

#### **Impact of COVID-19:**

- COVID-19 has impacted housing - landlords have contracted COVID and died, investors bought homes and kicked renters out and they have nowhere to go.
- Right away people stopped coming to emergency, maybe people realized that not all problems were emergencies, but others died of problems they didn't need to because they didn't get care.
- People don't trust government, but it's a close-knit community so they don't necessarily mistrust the local healthcare providers who are friends or family members.

#### **Magic Wand Highlight:**

- Start a detox clinic; it would keep people out of emergency room, and it's really needed.
- Addressing housing issue, homeless. Keeping seniors stable with the pandemic. Coordination among service providers, understanding how they function to best serve individuals.

## **REGIONAL INSIGHTS FROM THE MOUNTAIN VIEW COMMUNITY**

Eleven (11) one-on-one interviews that lasted approximately 30 minutes in length were conducted. This provided the opportunity to have in-depth and private conversations about community-wide strengths, barriers to getting care, impacts of the COVID-19 pandemic, and ideas to improve their communities. Although an interview guide was used to help guide the conversation, participants were encouraged to speak about his or her particular areas of concern, interest, or experience. In addition, two (2) virtual focus group discussions were held with local rotary clubs and local health system leaders, as well as other sectors of the Mountain View community to allow regional voices to highlight challenges that they see as the biggest health-related needs.

*Community members provided input from the following community organizations:*

- Airvac Flight Team
- Atlantic Coast Dental
- Good Samaritan Care Clinic
- City of West Plains
- Mercy Hospital Foundation Board
- Missouri Rural Health Association
- West Plains Rotary
- HealthTran
- Ozarks Healthcare

## **MOUNTAIN VIEW COMMUNITY COMMENTS & IDEAS**

### **Top Challenges Identified:**

- Behavioral Health Treatment & Services
- Access to Healthcare

### **Community Positives:**

- Close knit, unique communities, each with specific barriers and resources. Dedicated volunteers who help people in their community. Communities can adjust quickly to change.
- Great community of people to help others, great friends.
- People are helpful to fellow neighbor, raise money for people in healthcare crisis.

### **Transportation & Broadband:**

- There is no broadband in rural areas, so telehealth is tough. Money came in to improve broadband, but companies decided where to put it.
- Telehealth is tough due to lack of broadband.

### **Behavioral Health Treatment & Services:**

- There are not enough mental health inpatient beds, especially in rural areas. How do we transport them to a rural area which may or may not have beds?
- During lockdowns they had a spike in teen suicides and adults feeling overwhelmed. There is a massive sense of depression and isolation.
- It's natural to be depressed about the pandemic and the situation, but people are now suffering from major depression.
- There's a stigma to seeking psychiatric care. People have been suffering from mental health for years and haven't gotten care.

### **Substance Use Treatment & Services:**

- Most liquor stores sold out of certain types of beer. The supply chain for alcohol was disrupted yet people were staying home and drinking more than ever.
- The primary drug is meth in lower income, rural areas. The hospital saw increase in drug overdoses.
- When people got a lump sum of money, they could buy more drugs and they overdosed. Overdoses make up a small percent of transport volume, but they still saw a noticeable increase.

### **Access to Healthcare:**

- People tend to put their heads in the sand – don't get care since they don't want to know if something is wrong, or don't want the inconvenience.
- People don't have primary care providers. This is a very rural area, and the cost of gas is high. People wait until the last minute to get care or end up in the emergency room and let problems go longer than they should.

- Doctors are viewed with suspicion. People didn't go to doctors but used natural remedies. People don't have doctors, but those who have them trust them.
- If people aren't in pain, they don't come to dentist. Gum disease, which causes a lot of health issues, doesn't cause pain unless it's advanced.
- This is a very poor area so people can't afford healthcare. Fear is second biggest reason people don't get dental care.

#### **Impact of COVID-19:**

- People tend to put their heads in the sand – don't get care since they don't want to know if something is wrong, or don't want the inconvenience.
- People don't have primary care providers. This is a very rural area, and the cost of gas is high. People wait until the last minute to get care or end up in the emergency room and let problems go longer than they should.
- Doctors are viewed with suspicion. People didn't go to doctors but used natural remedies. People don't have doctors, but those who have them trust them.
- If people aren't in pain, they don't come to dentist. Gum disease, which causes a lot of health issues, doesn't cause pain unless it's advanced.
- This is a very poor area so people can't afford healthcare. Fear is second biggest reason people don't get dental care.

#### **Magic Wand Highlight:**

- Spread empathy so people can see the cares and concerns of others. People need to realize not everyone is the same. Get rid of hatred and "foaming at the mouth." Buy social media and control messaging or turn off social media.
- One single source to schedule any type of transportation to anywhere for any reason.

### **REGIONAL INSIGHTS FROM THE SPRINGFIELD COMMUNITY**

Twenty (20) one-on-one interviews that lasted approximately 30 minutes in length were conducted. This provided the opportunity to have in-depth and private conversations about community-wide strengths, barriers to getting care, impacts of the COVID-19 pandemic, and ideas to improve their communities. Although an interview guide was used to help guide the conversation, participants were encouraged to speak about his or her particular areas of concern, interest, or experience. In addition, three (3) virtual focus group discussions were held local health system leaders, community outreach organizations, and a local drug task force as well as other sectors of the Springfield community to allow regional voices to highlight challenges that they see as the biggest health-related needs.

*Community members provided input from the following community organizations:*

- Burrell Behavioral Health
- Christian County Health Department
- Christian County Library
- Christian County Neighborhood Center
- Community Partnership of the Ozarks
- Connecting Grounds
- CoxHealth
- First Baptist Church of Ozark
- Grupo Latinoamericano
- Jordan Valley Community Health Center
- Mercy Hospital Board
- Missouri State University
- Ozark Senior Center
- Ozarks Area Community Action Corporation
- PROMO
- Springfield Chamber of Commerce
- Southwest Drug Positioning Taskforce
- Springfield-Greene County Health Department

## **SPRINGFIELD COMMUNITY COMMENTS & IDEAS**

### **Top Challenges Identified:**

- Transportation & Broadband
- Access to Healthcare

### **Community Positives:**

- The town and the county have excellent support from the Ozark Police, Sheriff, and Fire Department.
- Friendly people and everyone willing to help others in community.

### **Housing & Homelessness:**

- Homeless or those without a fixed address use the library – it's one of the last spaces they can use and not spend money. Use library as space to hang out but not connect to other resources.
- It is difficult to afford housing if you have a criminal record and there is exploitation by the local motels.

### **Transportation & Broadband:**

- Many rural or lower income residents don't have internet access. Broadband and internet are a problem, even for businesses.
- Electronics have been a disaster for seniors and people over 60, even cell phones. They don't know how to operate phones or computers. People have been trained to be leery of who is reaching out to them over computers, so they're scared to access healthcare over the computer, or even answer the door for people other than their housekeeper or caretaker.
- There is a lack of public transportation in rural areas and people may have to leave hours early for an appointment and there are delays. Medicaid supported transportation is not always reliable. The transportation options can be difficult to coordinate.
- Many people are using telehealth, but many want to see their doctors in person. There is spotty internet in Christian County and rural areas are bad.
- We've discovered new ways to provide services virtually, but we just need better internet access.

### **Workforce:**

- Some businesses in Springfield have decent wages, there is a lack of job skills. Unemployment pays more and there is a lack of living wages.
- Legal histories can be a hinderance.

### **Behavioral health Treatment & Services:**

- Depression and suicide rates are increasing in rural areas where people are isolated anyway. People still need human contact whether you're an introvert or an extrovert. Quarantine didn't help.
- There has been a slow process with reducing the stigma on mental health. The biggest barrier is silos with mental health and sub-stance use.
- COVID-19 has helped bring mental health and substance misuse in-to the 21st century and make it relevant This is an opportunity. Vir-tual treatment had a bit of a negative effect since people didn't have the connections and interactions.

### **Substance Use Treatment & Services:**

- We need an increase in medical detox beds, i.e., people with high blood pressure, asthma who want to go through detox.
- People have detoxed in ways that aren't safe, i.e., being put in a hotel room and have a doctor check on them every few hours.

**Access to Healthcare:**

- Providers are overburdened and understaffed and don't have time to provide individual care. It's hard to get people to work in healthcare in rural areas, physicians, community health workers, admin staff, dentists, psychiatrists.
- Medicaid recipients receiving transgender-related care, there are many restrictions and denied services. LGBTQ+ communities don't get preventative care, they are worried about what providers will say, especially for transgender men getting pap smears because they don't want to go into a women's care.
- Same sex couples get denied services. There is no holistic support or health support in Springfield to support transgender kids.
- It's bad and getting worse. There was a lack of healthcare, even before pandemic.

**Safe & Affordable Childcare:**

- Only wealthy families can access care for their kids in Springfield.
- Childcare has long waiting lists and limited access. It's expensive, especially with low pay. Head Start has a waiting list, at some point it will return to full capacity, but what to do in the meantime?
- Some childcare programs closed during COVID and have not reopened. The need outpaces the capacity even without COVID. Quality is also an issue.

**Impact of COVID-19:**

- The community has pulled together for shots and testing,
- Long term impacts on kids who have been home, fearful of their social skills. Helping Kids need eyes on them – they may put on a smile for the computer, but abuse may be unseen.

**Magic Wand Highlight:**

- People have to want to be helped, whether it's drugs, alcohol, etc. How do we do that? We don't have programs for homeless and others who want to be helped, like a halfway house, or freeway ministry.
- Change the culture of how we live. This starts with children and their families: cooking classes with healthy food, have the right support for their needs. Healthy culture and lifestyle, including mental health support. Education for disease states, how to avoid diabetes, obesity.

# APPENDIX D-1

## Stakeholder Interview Guide

### OZARKS HEALTH COMMISSION COMMUNITY HEALTH NEEDS ASSESSMENT 2022 STAKEHOLDER INTERVIEW GUIDE

#### INTRODUCTION & OBJECTIVE

Good morning [or afternoon]. My name is Tara Auclair [or Scott Good or Katelyn Michaud or Katelyn Malloy] from Crescendo Consulting Group. We are working with the Ozarks Health Commission and the [Springfield-Green County Health Department or other health department/community leader] to conduct the community health needs assessment.

The purpose of this call is to learn more about community strengths and resources, healthcare-related needs, ways that people generally seek services, ongoing impacts of the COVID-19 pandemic, and to collect your insights regarding service gaps and ways to better meet community needs.

Do you have any questions for me before we start?

To start with, please tell me a little about ways that you interact with the community and the populations your organization (or you) serves, if any.

#### ACCESS, AVAILABILITY, AND DELIVERY OF SERVICES

1. When you think of the good things about living in this community, what are some of the first things that come to mind? [PROBE: outdoor activities, lifestyle, strong sense of “family,” other]
2. Generally, what are some of the challenges to living here?
3. When people have needs – healthcare-related, community services, or otherwise – who do they tend to turn to for assistance? [Prompts: friends and family, Town Hall, local Health Department, their doctor, churches, others]
4. To what degree do people struggle with getting appropriate healthcare, or other related issues? [PROBE: are there certain types of care that are more difficult to find?]
5. What would you say are the two or three most pressing healthcare-related needs?
6. How are people accessing care, for example, virtual, face-to-face?
7. To what degree are healthcare services equally available to all citizens? Are there any disparities in access to services based on economic, race / ethnicity, gender or other factors? If so, describe them.

#### COVID-19 IMPACTS

8. What impact has COVID-19 had on overall community health and specific issues related to services required to care for heart, lung, diabetes, oral health, cancer or other issues?
9. How has the pandemic affected mental health or substance misuse issues?
10. What impact has COVID-19 had on community well-being, social impacts, education, or the economy? Which of these do you think will be short-term effects (e.g., “After COVID is behind us, so will the effects”) or long-term effects (e.g., “The impact will be long-lasting.”)?
11. How do you think COVID-19 will impact health behaviors and how people interact with the healthcare system or providers, such as for screenings or routine services, vaccine perceptions, virtual healthcare, or others?
12. How, if at all, has COVID-19 affected trust of healthcare providers or systems and the public health system?

## ENHANCING COMMUNICATIONS AND INFORMATION

13. To what degree do you think that the community at large is aware of the breadth of available services – COVID-related or other health-related) – in the area? What are the challenges to greater awareness and understanding of the availability of services and ways to access them? What might help overcome the challenges? What types of activities would best reach communities of color, people experiencing homelessness, people living with disabilities, or other diverse or hard-to-reach populations?
14. How do consumers generally learn about access to and availability of services in the area (e.g., on-line directory; social media; hotline; word of mouth)? What method tends to work the best or worst?

## LOOKING FORWARD

15. What are some of the community-level actions that can be done to more equitably provide for community health and wellbeing? Are there any low hanging fruit that could be addressed quickly? What policies would you change or create to provide more equitable community health and well-being?
16. Health equity is an important consideration. How can you improve current services for marginalized or hard-to-reach populations in your community?
17. What organizations in the area provide services for individuals and families struggling with poverty, employment, addiction, and housing issues? What programs seem to be the most helpful?
18. Magic Wand Question: If money and resources weren't an issue, what is one thing you would do for your community?

## ADDITIONAL INFORMATION

- Based on our conversation and your knowledge about the community, are there others that you suggest we speak with?
- We're going to reach out to others, and we'd appreciate your support.
- First, we're going to develop a brief online survey, and we'd like for you to share the link with your constituents.
- Also, we're going to plan some virtual focus groups, and we'd like for you to participate and/or help us invite individuals who you feel would provide value.
- Would you mind if we reach out to you to assist us with these items when the time is right?
- Thank you for your time today and continued support.

## RESEARCHER NOTES

- Bring up each of the following topics and include prompts (subcategories) in the dialogue. Note comments and particular areas of emphasis. Include comparisons between topics where helpful, e.g., "So which do you think requires more attention: substance abuse education in schools or opioid abuse intervention among the homeless?"
- Not all topics will be covered with all interviewees. Discussion content will be modified to respond to interviewees' professional background and availability of time during the interview.

Your name is not going to be used and the responses will be aggregated with many more results.  
[PROBE: Note discussion about the magnitude and severity of "high focus" needs.]



NEED PROMPTS	NOTES/COMMENTS
Chronic disease Services for adults Services for adolescents / children	
Substance Use Services for adults Services for adolescents / children	
Chronic disease Education / Early intervention Treatment / Access / Stigma Post-treatment support / care	
Chronic disease Education / Early intervention Treatment / Access / Stigma Post-treatment support / care	
Homeless services	
Alcohol Use Education / Early intervention Treatment / Access / Stigma Post-treatment support / care	
Access to care Transportation Insurance / financial Language barriers / cultural issues Wait times to see a provider	
Mental Illness and Trauma Informed Care	
Intellectual Disability	
Access to care (specify type: IP, OP, IOP, PHP)	
SDOH related issues	
Transitional Housing Access / Availability (i.e. Group Homes)	
Emergency Department Care Utilization, Quality, Reliance	
Geriatric Population Behavioral Health Dementia, Alzheimer's Disease Treatment / Access / Stigma	
[OTHER TO BE ADDED, AS NEEDED]	

# APPENDIX D-2

## Focus Group Moderator's Guide

### OZARKS HEALTH COMMISSION COMMUNITY HEALTH NEEDS ASSESSMENT 2022 FOCUS GROUP MODERATOR'S GUIDE

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).

#### INTRODUCTION

- Welcome participants and introduce yourself. Thank you for taking the time to join us for this important discussion. My name is {NAME} and I work for Crescendo Consulting Group.
- Explain the general purpose of the discussion. As mentioned in your invitation, we are working with the Ozark Health Commission and the City of Springfield to evaluate regional health needs. The purpose of this meeting is to learn more about your insights regarding the community, gaps you've identified, and ways to better meet community needs.
- Explain the necessity for notetaking and recording. We're taking notes and recording the session to assist us in recalling what you say. We will describe our discussion in a written report; however, individual names will not be used. Please consider what you say and hear here to be confidential.
- Describe protocol for those who have not been to a group before. For those of you who have not participated in a focus group before, the basic process is that I will ask questions throughout our session, however, please feel free to speak up at any time. In fact, I encourage you to respond directly to the comments other people make. If you don't understand a question, please let me know. We are here to ask questions, listen, and make sure everyone has a chance to share and feels comfortable. Please be respectful of the opinions of others.
- Seek participants' honest thoughts and opinions. Honest opinions are the key to this process, and there are no right or wrong answers to the questions. I'd like to hear from each of you and learn more about your opinions, both positive and negative.
- Questions? Do you have any questions for me before we start?

#### ACCESS, AVAILABILITY, AND DELIVERY OF SERVICES

19. When you think of the good things about living in this community, what are some of the first things that come to mind? [PROBE: outdoor activities, lifestyle, strong sense of "family," other]
20. Generally, what are some of the challenges to living here?
21. When people have needs – healthcare-related, community services, or otherwise – who do they tend to turn to for assistance? [Prompts: friends and family, Town Hall, local Health Department, their doctor, churches, others]
22. To what degree do people struggle with getting appropriate healthcare, or other related issues? [PROBE: are there certain types of care that are more difficult to find?]
23. What would you say are the two or three most pressing healthcare-related needs?
24. How are people accessing care, for example, virtual, face-to-face?
25. To what degree are healthcare services equally available to all citizens? Are there any disparities in access to services based on economic, race / ethnicity, gender or other factors? If so, describe them.

#### COVID-19 IMPACTS

26. What impact has COVID-19 had on overall community health and specific issues related to services required to care for heart, lung, diabetes, oral health, cancer or other issues? How has the pandemic affected mental health or substance misuse issues?
27. What impact has COVID-19 had on community well-being, social impacts, education, or the economy? Which of these do you think will be short-term effects (e.g., "After COVID is behind us, so will the effects") or long-term effects (e.g., "The impact will be long-lasting.")?

28. How do you think COVID-19 will impact health behaviors and how people interact with the healthcare system or providers, such as for screenings or routine services, vaccine perceptions, virtual healthcare, or others?
29. How, if at all, has COVID-19 affected trust of healthcare providers or systems and the public health system?

### **ENHANCING COMMUNICATIONS AND INFORMATION**

30. To what degree do you think that the community at large is aware of the breadth of available services – COVID-related or other health-related) – in the area? What are the challenges to greater awareness and understanding of the availability of services and ways to access them? What might help overcome the challenges? What types of activities would best reach communities of color, people experiencing homelessness, people living with disabilities, or other diverse or hard-to-reach populations?
31. How do consumers generally learn about access to and availability of services in the area (e.g., on-line directory; social media; hotline; word of mouth)? What method tends to work the best or worst?

### **LOOKING FORWARD**

32. What are some of the community-level actions that can be done to more equitably provide for community health and wellbeing? Are there any low hanging fruit that could be addressed quickly? What policies would you change or create to provide more equitable community health and well-being?
33. Health equity is an important consideration. How can you improve current services for marginalized or hard-to-reach populations in your community?
34. What organizations in the area provide services for individuals and families struggling with poverty, employment, addiction and housing issues? What programs seem to be the most helpful?
35. Magic Wand Question: If money and resources weren't an issue, what is one thing you would do for your community?

Thank you for your time today and continued support!