2023 Columbia/Boone County Community Health Assessment

COMMUNITY HEALTH

TABLE OF CONTENTS

Executive Summary

In 2023, Columbia/Boone County Public Health and Human Services (PHHS) and its community partners conducted a Community Health Assessment (CHA) using the Mobilizing for Action through Planning and Partnerships (MAPP) process.

The process included analysis of primary and secondary data.

Working with community partners, PHHS identified five strategic issues:
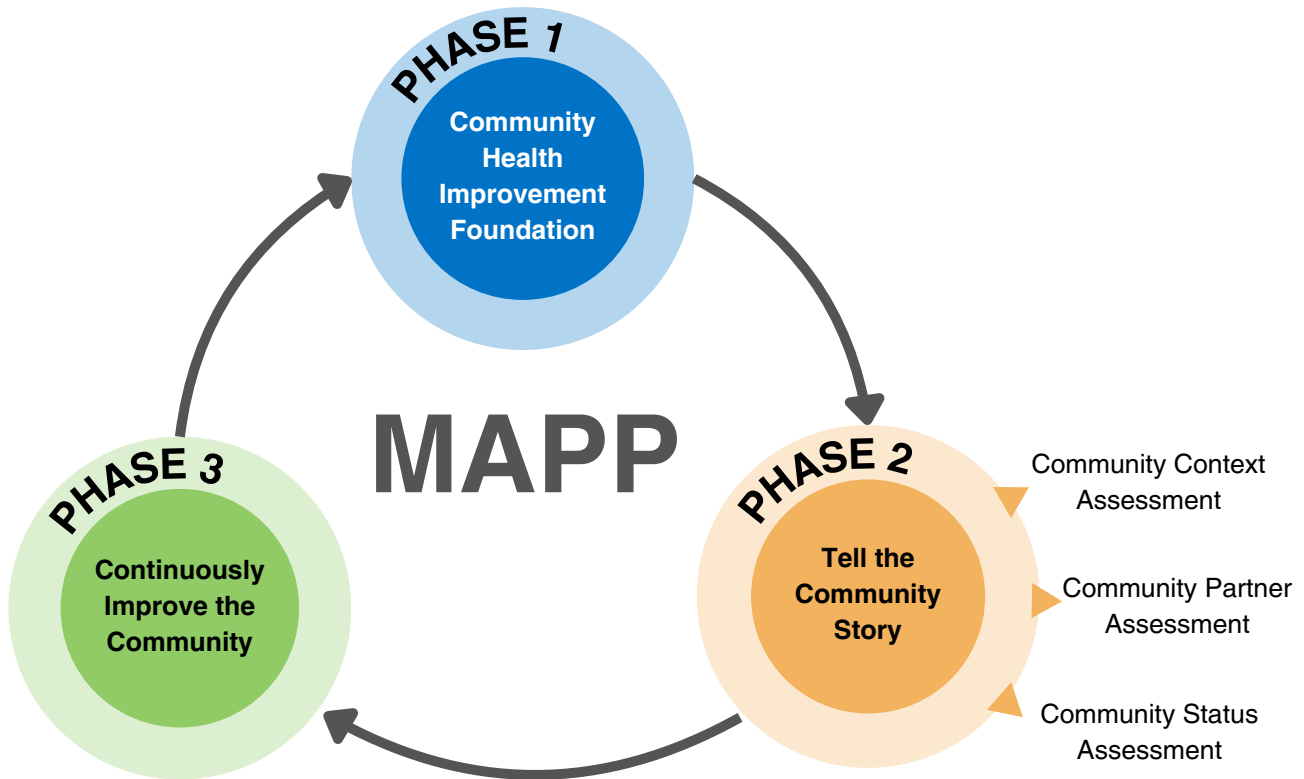
Mental Health

Healthy Behaviors

Affordable Housing/Homelessness

Barriers to Health Care

Substance Use

Our Process

Mobilizing for Action through Planning and Partnerships (MAPP)
is a community-driven, three-phase process.

Phase One: Building the Community Health Infrastructure includes three critical and interrelated activities: convening community partners, creating or updating the community vision, and planning the assessment. Phase One concludes with the formation of Live Well Boone County Community Health Partnership and the Steering Committee.

Phase Two: Tell the Community Story includes preparation, application and analysis of three assessments. These include the Community Context Assessment (CCA), the Community Partnership Assessment (CPA) and the Community Status Assessment (CSA). Phase Two concludes with a robust collection of data and information from several perspectives, including primary and secondary sources.

Phase Three: Continuously Improve the Community centers on developing a Community Health Improvement Plan (CHIP), which is a three- to five-year, systematic effort to address public health issues based on the results of the CHA from Phase One and Phase Two. This plan is used in collaboration with community partners to set priorities, coordinate actions and target resources.

The following document summarizes both the process used and the data collected for Phase One and Phase Two.

BUILD THE
COMMUNITY HEALTH IMPROVEMENT
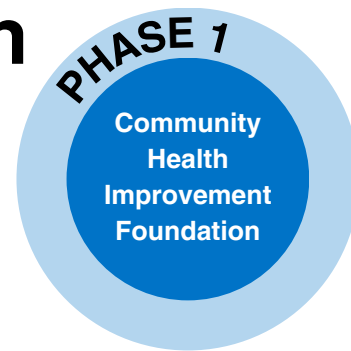# FOUNDATION
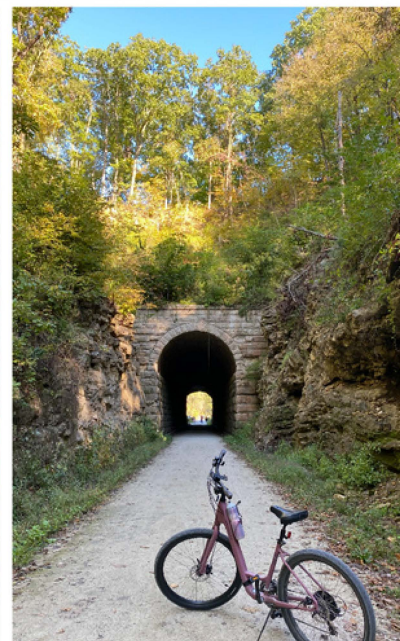
Build the Community Health Improvement Foundation

Background

This phase structures a planning process that builds commitment, engages participants as active partners, makes efficient use of participants' time and results in an implementation plan. This phase identifies who should be involved and how the partnership will approach and organize the process.

The Live Well Boone County Community Health Partnership includes members from the larger public health system and various sectors of the community, such as higher education, parks and recreation, public schools, elected officials, municipalities, representatives of populations with poorer health outcomes, for-profit businesses and major employers in the community.

Process

The Live Well Boone County kick-off meeting was held Nov. 17, 2022. Goals were set and the vision statement was adopted.

Goals:
- Assembling a team of community partners
- Informing partners about the MAPP process
- Gaining support for the MAPP process

Vision Statement

A caring and inclusive community where everyone can achieve their optimum well-being.

Live Well Boone County Steering Committee

Stephanie Browning - Columbia/Boone County Public Health and Human Services

Rebecca Roesslet - Columbia/Boone County Public Health and Human Services

Jennifer Clark-Williams - Columbia/Boone County Public Health and Human Services

Andrew Grabau - Heart of Missouri United Way

Conrad Hake - Love Columbia

D'Andre Thompson - City of Columbia

Liz Harrison - MU Extension

Heather Brown - Harry S. Truman Memorial Veterans' Hospital

Jessica Macy - Partner For Better

Joanne Nelson - Boone County Community Services

Gina Jenkins - Boone County Community Services

Janet Thompson - Boone County Commission

Sabrina Weaver - Defense Against Diabetes

Shannon Stokes - The Food Bank for Central & Northeast Missouri

Megan Steen - Burrell Behavioral Health

Karen Cade - Compass Health Network

Live Well Boone County Partners

- Aging Best
- Boone County Commission
- Boone County Community Resources
- Boone County Family Resources
- Boone County Resource Management
- Boone Hospital Center
- Burrell Behavioral Health
- Catholic Charities of Central and Northern Missouri
- Central Missouri Community Action
- Centralia Chamber of Commerce
- City of Columbia - City Manager's Office (Diversity, Equity and Inclusion)
- City of Columbia - Climate and Environment Commission
- City of Columbia - Community Development
- City of Columbia - Convention and Visitors Bureau
- City of Columbia - Office of Cultural Affairs
- City of Columbia - Office of Neighborhood Services
- City of Columbia - Office of Sustainability
- City of Columbia - Parks and Recreation
- City of Columbia - Public Works (Vision Zero)
- City of Columbia - Utilities
- City of Columbia Board of Health
- City of Refuge
- Columbia Center for Urban Agriculture
- Columbia Chamber of Commerce
- Columbia College - Plant and Facilities Operations
- Columbia Housing Authority
- Columbia Public Schools
- Community Foundation of Central Missouri
- Compass Health Network
- Daniel Boone Regional Library
- Defense Against Diabetes
- Flourish
- Fresh Start
- Harry S. Truman Memorial Veterans' Hospital
- Heart of Missouri United Way
- Impact Support Services
- In2Action
- Local Motion
- Love Columbia
- Meals on Wheels
- Mid-Missouri Legal Services
- Missouri Center for Public Health Excellence
- Missouri Connections for Health
- Missouri Department of Transportation (MODOT)
- MU Extension
- Partner for Better
- Regional Economic Development Inc. (REDI)
- Services for Independent Living
- Southern Boone YMCA
- The Center Project
- The Food Bank of Central & Northeast Missouri
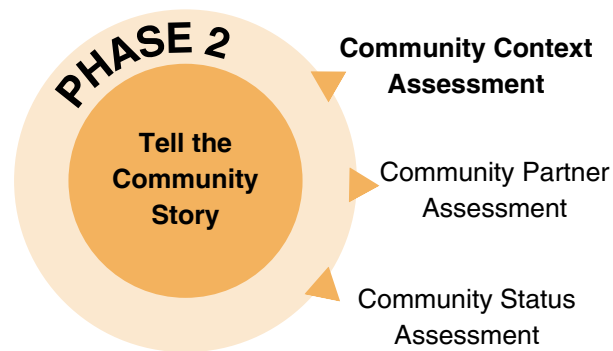- University of Missouri Environmental Health and Safety
- Voluntary Action Center

Special thanks to Leah Moser and the Missouri Center for Public Health Excellence

PHASE 2
TELL
THE
COMMUNITY
STORY

Community Context Assessment

PHASE 2

Tell the Community Story

Community Context Assessment

Community Partner Assessment

Community Status Assessment

The Community Context Assessment (CCA) focuses on gathering the thoughts, opinions and perceptions of community members to better understand what issues are important to the community.

The CCA seeks to understand the following questions:

What strengths and resources does the community have that support health and well-being?

What forces of change are occurring locally, regionally, nationally and globally that shape conditions for community members?

What assets exist in the built environment? How do those vary by neighborhood?

What is the community doing to improve health outcomes?

Methodology

The CCA was conducted between November 2022 and July 2023. Live Well Boone County used four data collection tools to gather information from the community:

Community survey

Focus groups with community members

Focus groups with built environment professionals

Forces of Change Assessment which uses a health equity lens to identify forces that can affect the community and the public health system

Community Survey

Background

The survey was developed in collaboration with several community partners. One of these partners, Central Missouri Community Action (CMCA), serves low-income individuals and families in central Missouri. There was a great deal of collaboration with CMCA during the development and distribution of the survey. The final version for Boone County consisted of 40 questions, which included questions from the 2018 Community Health Survey, the USDA Food Security Survey, and questions created by CMCA and its partners.
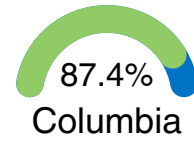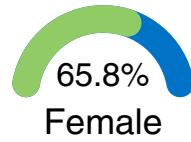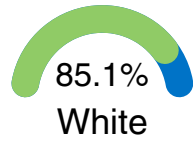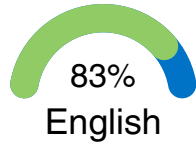
Process

The survey was distributed in March and April 2023. SurveyMonkey was used to create, distribute and analyze the electronic version of the survey. Hard copies of the survey were also distributed to partner organizations throughout Boone County. The electronic and paper versions of the survey were available in English and Spanish. Focus group participants received the survey as part of their participant packet. The electronic survey was distributed through various platforms including listservs, social media, websites and email. Paper copies were available at various locations, including government offices, libraries and community centers. In addition, the survey was accessible through the City of Columbia's BeHeardCoMo community engagement website, the City Source newsletter, Columbia Public Schools' digital flyer system and various flyers distributed throughout the community. PHHS' Live Well by Faith and Community Health Worker programs also assisted with survey distribution.

Key Findings

- **Access to parks and recreation sites** ranked as the top strength of the community, while **affordable housing/homelessness** fell near the bottom.
- **Mental health** was identified as the top issue affecting both youth and adults.
- **Too much screen time** was identified as the second-highest issue affecting youth.

Survey Respondent Demographics

83% English

85.1% White

65.8% Female

87.4% Columbia

Education Level

Percentage

- Graduate or professional degree
- Bachelor's degree
- Some college, no degree
- High school diploma or GED
- Associate degree
- No high school diploma

Yearly Income

Income	
Under $10,000	
$10,000-$14,999	
$15,000-$24,999	
$25,000-$24,999	
$35,000-$49,999	
$50,000-$74,999	
$75,000-$99,000	
$100,000-$149,999	
$150,000+	
Choose not to answer	
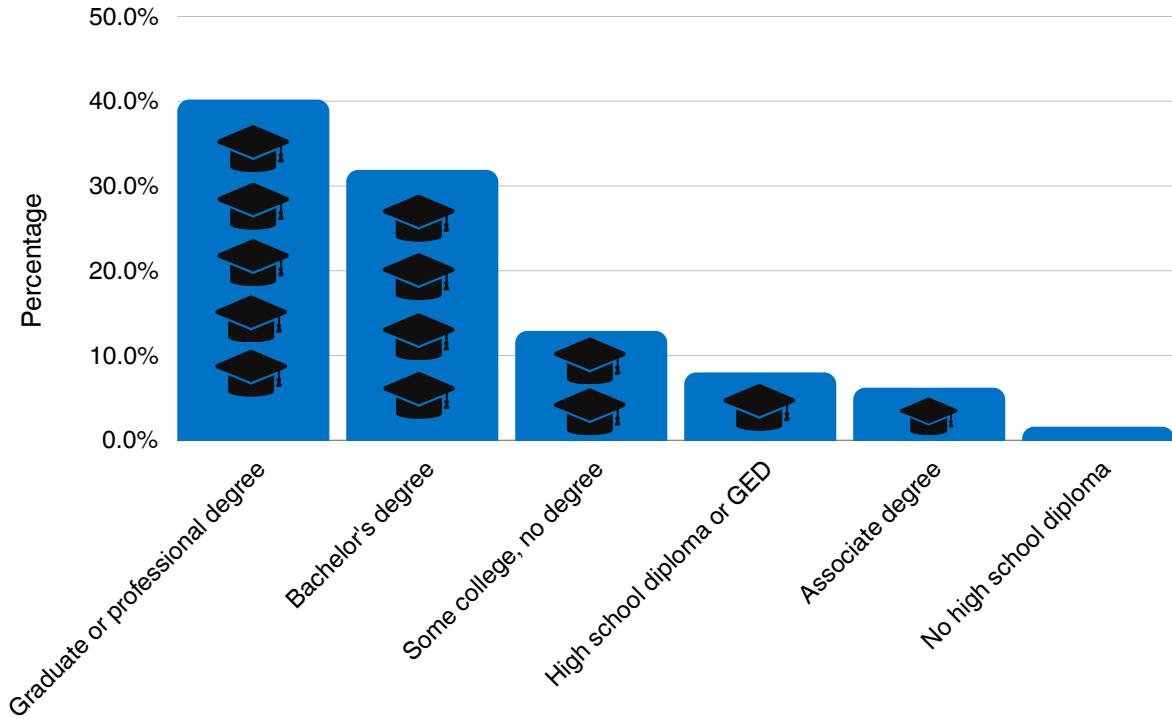
Percentage
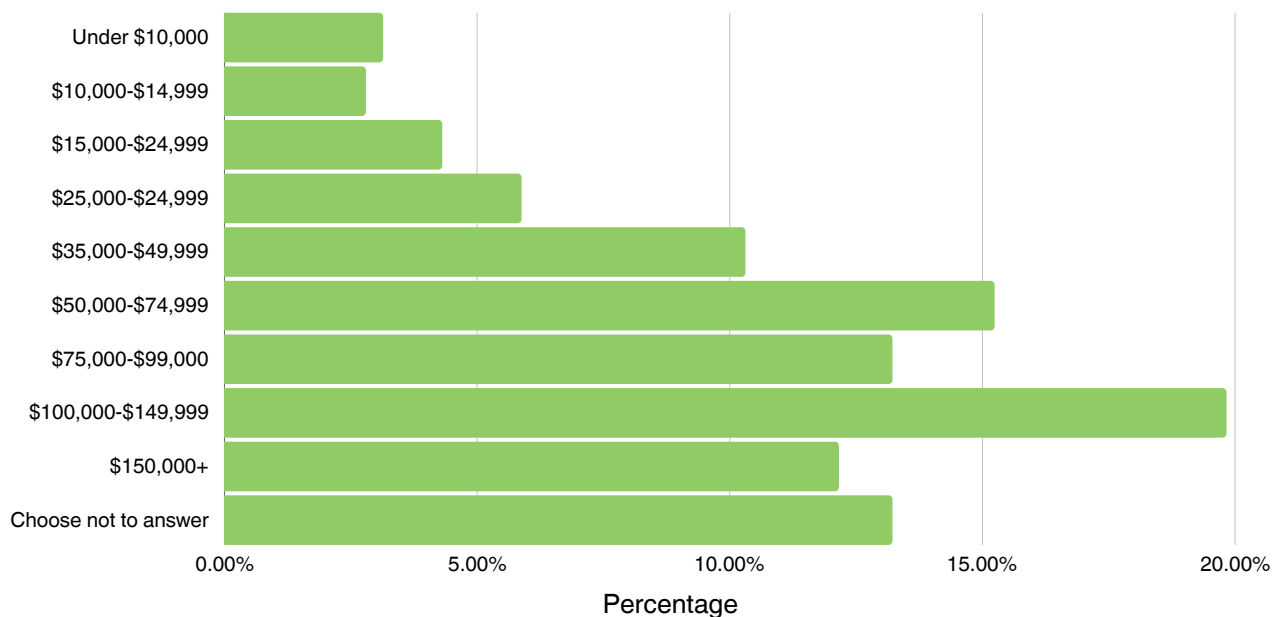
Survey Findings

Responses from survey respondents about community strengths, challenges and opportunities are available in the following four figures.

Figure 1
Top Community Strengths
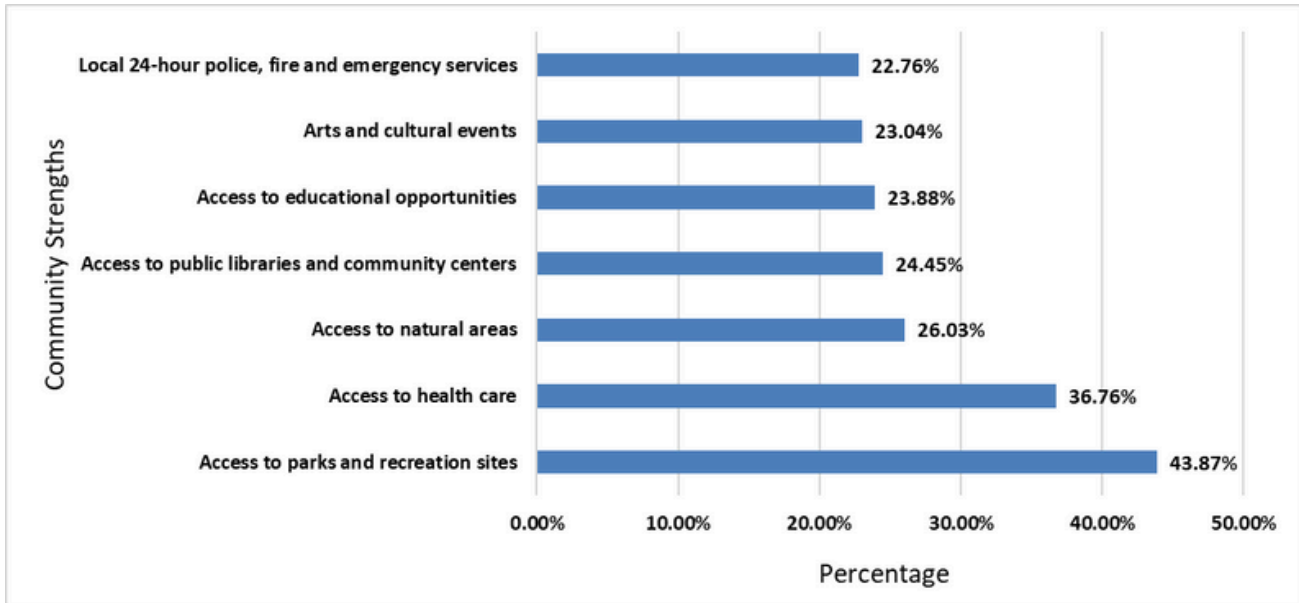
Figure 2
Top Community Issues Affecting Youth (ages 0-18)
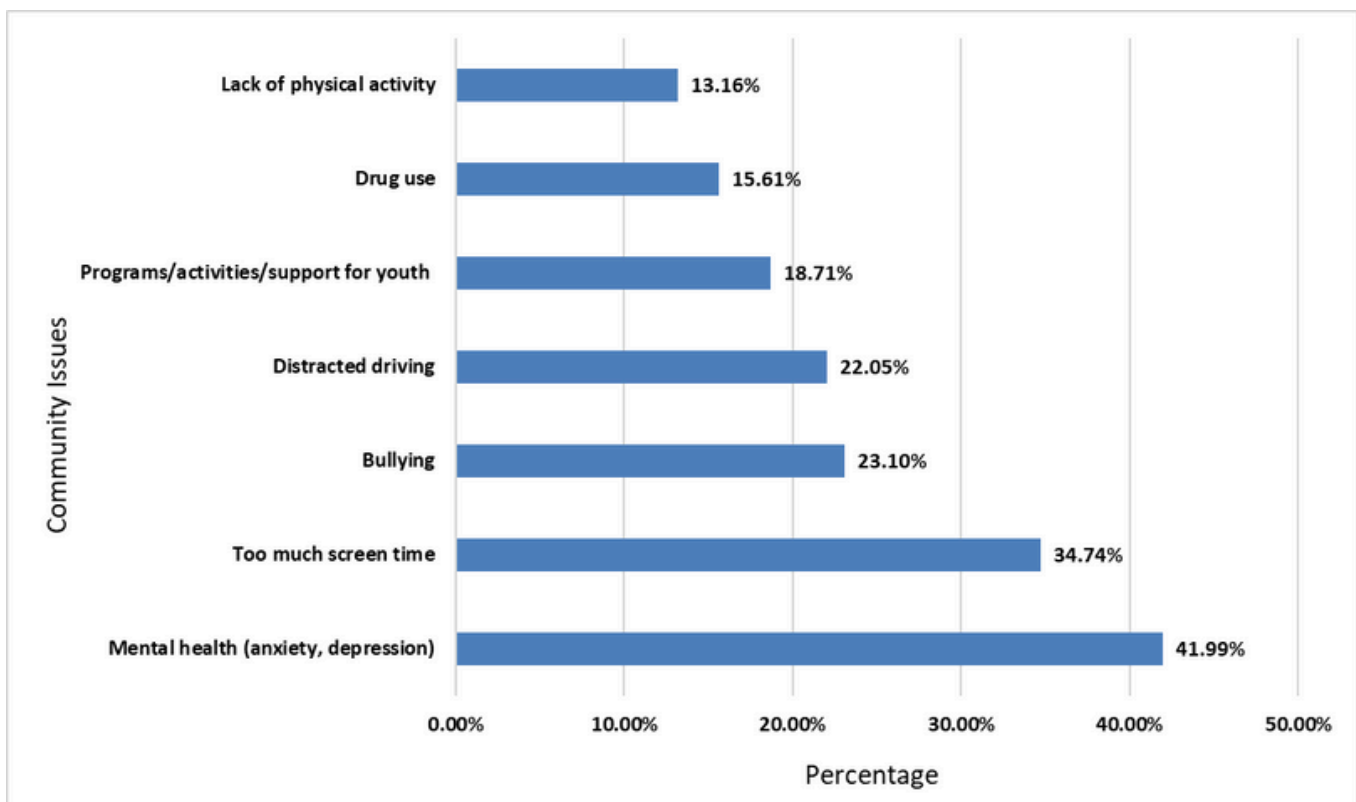
Figure 3
Top Community Issues Affecting Adults (19 and older)
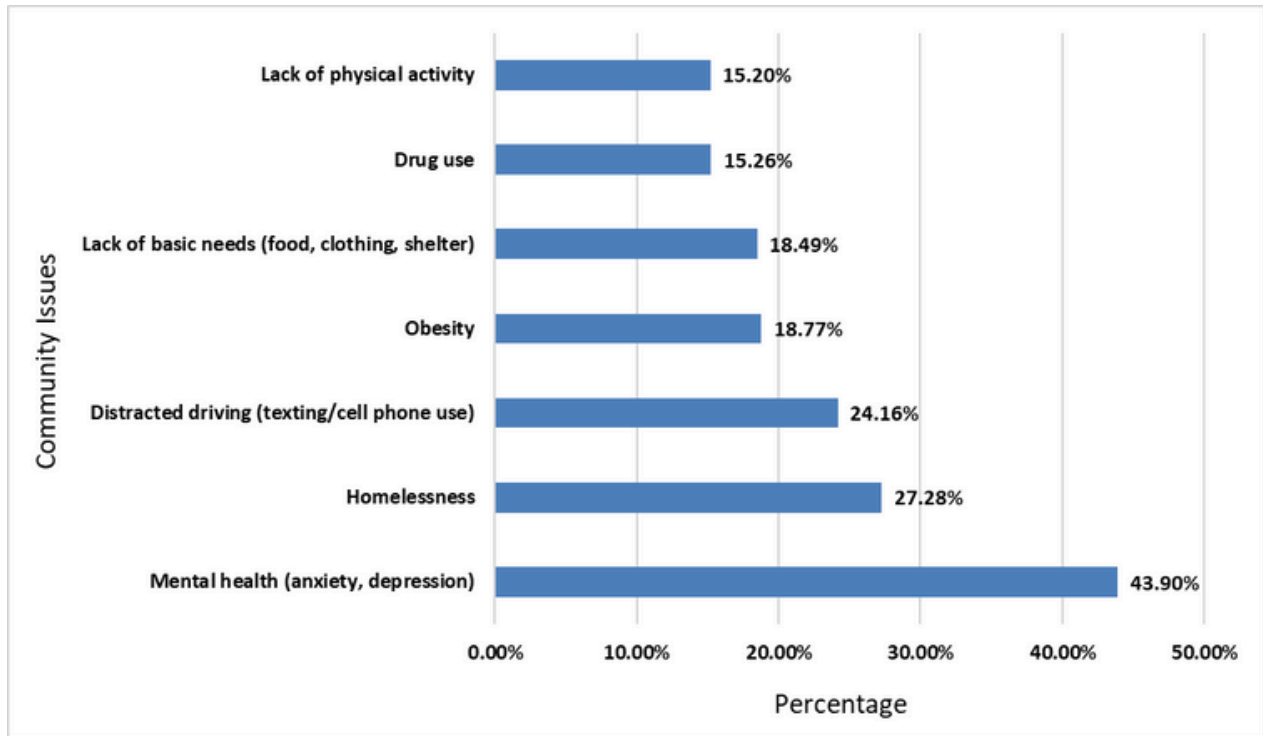
Figure 4
When asked what would improve the quality of life in the community, survey respondents identified the following areas to focus on.

- Lower crime and safe neighborhoods
- Meet basic needs for everyone
- Better access to mental health care
- An end to homelessness
- More affordable housing
- More affordable child care
- Improved police, fire and emergency services
- More respect for different cultures and races
- Health equity
- More affordable senior care

- Better schools
- More jobs and a healthier economy
- Better access to health care
- A cleaner and healthier environment
- More safe walking and biking routes
- Better access to healthy food
- Less abuse (domestic, elder, child)
- More parks and recreation opportunities
- More arts and cultural events
- Protection from extreme weather

Community Focus Groups

Background

Eight focus groups were conducted. Three of these groups were open to the general public and were advertised in Columbia, Ashland and Centralia. The remaining five were scheduled for priority populations. Staff or users from The Center Project, Oak Towers, Compass Health, Columbia Public Schools and Flourish participated. In addition, a focus group was held with Hispanic/Latino community members.

Process

Recruitment efforts for the three general public focus groups included a combination of email, social media and personal connections. For the priority population focus groups, recruitment was conducted through social media, host site staff and personal invitations. Appropriate locations for the focus groups were selected with consideration given to public spaces, ample parking, proximity to public transportation, ADA accessibility and child-friendly environments whenever possible. To encourage attendance and participation, each participant received a meal, child care (if needed) and a gift card. RSVPs were requested in advance to accommodate child care and dietary needs. The number of participants was limited to 12 per session.

Key Findings

- **Health care was identified as the second-highest community strength**. However, attendees perceived a low number of options for residents with Medicaid/Medicare/no insurance.
- **Youth attendees expressed that substance use should be more of an issue** than where it was ranked in the community survey (see Figure 2 on page 13).
- **Community engagement was identified as the top solution to becoming a more equitable and inclusive community.** Examples of community engagement included volunteer and mentorship opportunities, connecting people with their needs, funding and sustaining programs, and leveraging community assets.

Focus Group Attendee Demographics

83%
English

73%
White

62%
Female

85%
U.S. Born
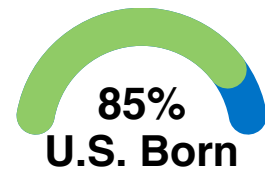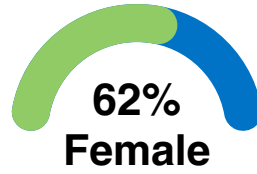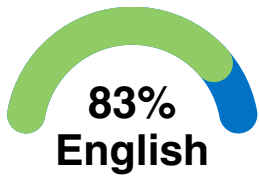
Focus Group	Number of Attendees
Centralia/Northern Boone	12
Oak Towers	12
Ashland/Southern Boone	10
Health Care Providers	9
Spanish Speakers	9
Flourish	5
Columbia Public Schools	4
The Center Project	4
Total	**65**

Education Level
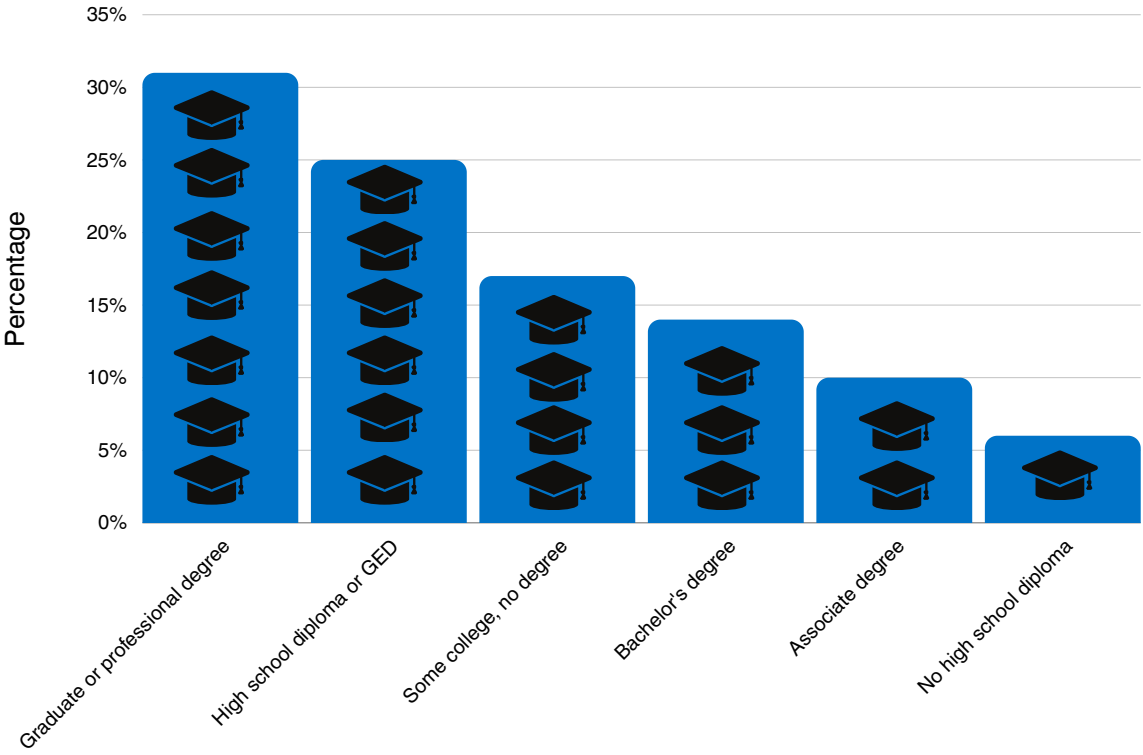
Yearly Income
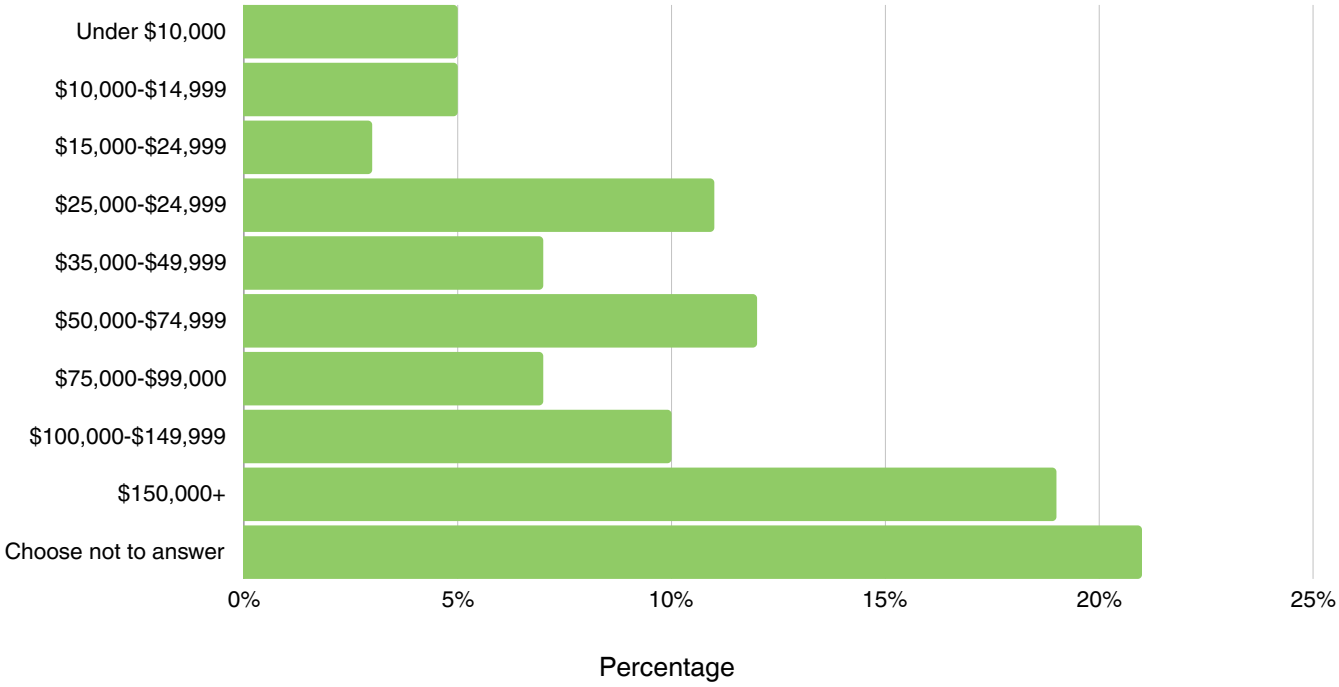
Focus Group Findings

Focus group attendees were asked the following questions.
Their top responses are highlighted below.

When thinking about health, what are the greatest strengths in our community?

1. Community assets
   a. Examples include service clubs, libraries, pharmacies, newspapers, senior centers, schools, churches, cultural events, non-profit organizations and places to socially gather
2. Health care services (wide range of specialty care)
3. Parks, trails and facilities
4. Community engagement
5. Health care facilities (number of facilities)

What are the most important health-related issues in our community?

1. Health care
2. Health behavior
3. Mental health
4. Chronic disease
5. COVID-19

What solutions would help us become a more equitable and inclusive community where everyone can achieve their optimum well-being?

1. Community engagement
2. Health care
3. Economic opportunity
4. Health behavior
5. Education

Built Environment Assessment

Background

The built environment is the human-made setting that influences the overall health of a community, including individual behaviors that affect health (CDC, 2022). Not all residents of a community will have the same experiences, even within the same built environment. Assets, services and infrastructure can vary across neighborhoods, especially those with the greatest health disparities. Examples include housing, schools, businesses, sidewalks, tree canopies, public spaces, health centers and grocery stores.

Process

Three focus groups consisting of experts in the following categories were conducted:

1. **Infrastructure** – examples include roads, streets, highways, stormwater, wastewater, parks, trails and utilities
2. **Community** – examples include community gardens, advocacy groups, public art and resource management
3. **Buildings** – examples include housing, schools, businesses and workplaces, health care and developers/builders

Built Environment Findings

The aesthetics and beautification of the built environment create a sense of place and ownership. Respondents were asked several questions about the conditions and impacts of the built environment. They felt conditions and maintenance of the built environment in low-income areas in the county are lacking. The respondents highlighted how the built environment impacts the physical health of residents.

Access to nature, outdoor activities/parks and recreation, and community involvement were all identified as ways to improve the health of the community.

Additionally, respondents were asked how the built environment affects the three issues identified in the community health survey: **homelessness, distracted driving and obesity**. Respondents discussed at length the lack of affordable housing throughout the county, which contributes to homelessness. The need for calming streets was mentioned as a way to address distracted driving. Finally, lack of access to healthy food and sidewalk availability in older neighborhoods were identified as factors that impact obesity.

Links to Built Environment Plans

Built Environment Plans
City of Columbia Climate Action and Adaptation Plan
City of Columbia Parks and Recreation Master Plan
City of Columbia Sidewalk Master Plan
City of Columbia Urban Forest Master Plan
City of Columbia Greenhouse Gas Inventory Report
Boone County Assessor Parcel Viewer
City of Columbia Planning and Development Department Land Use Plans
City of Columbia Unified Development Code
City of Columbia Consolidated Plan
Boone County Master Plan
City of Ashland Comprehensive Plan
City of Ashland Parks Master Plan
City of Centralia Comprehensive Plan
City of Sturgeon Comprehensive Plan
City of Hallsville Comprehensive Plan

Forces of Change Assessment

Background

The Forces of Change Assessment uses a health equity lens to identify forces that can affect the community and the public health system. It can focus on past, present or future events. The primary reason for conducting this assessment is that the community and operating environment are constantly evolving, so it is important to assess how they are changing and respond accordingly.

Forces of change are grouped as trends, factors or events. These can be grouped into the following types: social, economic, political, technological, environmental, scientific, legal, ethical and other. Classifying forces of change can help determine their degree of influence (local, regional, national, global).

Process

At the Community Partnership meeting held June 28, 2023, the Forces of Change Assessment was conducted. Meeting participants were divided into small groups for brainstorming sessions to identify these forces. Each group listed its top five forces. The forces were then entered into Mentimeter for partners to vote on in real time.

Thirteen forces of change affecting Boone County were identified. They are listed below.

Key Findings

1. Affordable housing
2. Equitable access to health care
3. Economic mobility/safety net
4. Inflation
5. Behavioral health
6. Community violence
7. Climate change
8. Shifting political priorities
9. Reduction of workforce
10. Inclusive community engagement
11. ARPA funds
12. Social media
13. Infrastructure changes

Community Partnership Assessment

PHASE 2

Tell the Community Story

Community Context Assessment

Community Partner Assessment

Community Status Assessment
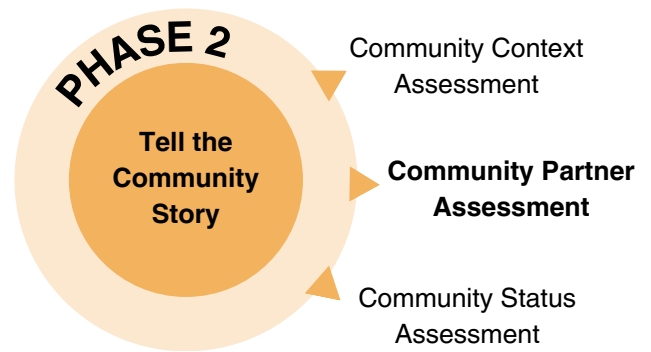
The Community Partnership Assessment (CPA) helps members of the assessment partnership to critically analyze their systems, capacities and processes while assessing their collective capacity to address health disparities.

This assessment captures the capabilities and relevance of organizations outside the "traditional health care system" to improve community health, as many factors that affect health occur outside the traditional health care system.

Methodology

Community Partner Assessment Questionnaire

The 35-question assessment was distributed via SurveyMonkey and completed by 12 organizations.

Key Findings

The majority of respondents identified as nonprofit organizations with experience in facilitating community-led decision-making around policies, actions or programs. When asked their top interests in joining a community health partnership, creating long-term, permanent social change, planning and launching community-wide initiatives, and delivering programs effectively and efficiently were top responses.

Seventy-five percent of respondents conduct community health assessments and collect information about access to services, social determinants of health, health behaviors and how to improve their services. Respondents are skilled in data collection and use a variety of tools like data tracking systems, surveys, feedback forms, community engagement and secondary sources.

Community Partnership Assessment Findings

When organizations were asked about the populations they serve, the following information was identified:

67% report working with immigrants, refugees, asylum seekers or other populations who speak English as a second language.

67% have access to interpretation and translation services.

92% report offering services to transgender, nonbinary and other members of the LGBTQIA+ community.

25% report providing services specifically for people with disabilities.

67% report working with groups not addressed in previous questions. (For example, groups identifiable by gender, socioeconomic status, education, disability, immigration status, religion, insurance status, housing status, occupation, age, neighborhood and involvement in the criminal legal system.)

Figure 1
How much does your organization focus on each of these topics?
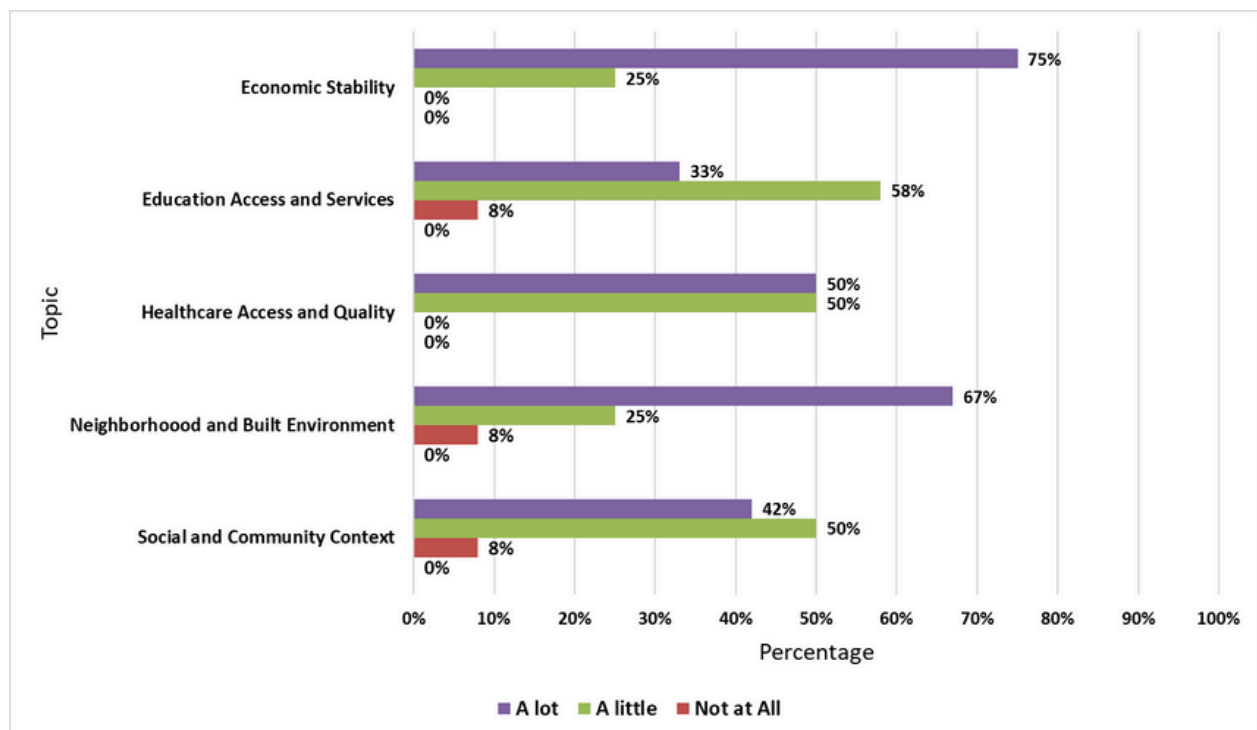
Figure 2
Which of the following categories does your organization work on/with?

Category	Percentage
Public health	58.33%
Housing	58.33%
Faith communities	58.33%
Education	58.33%
Businesses and for-profit organizations	58.33%
Transportation	66.67%
Community economic development	66.67%
Health care access/utilization	75.00%
Food access and affordability (e.g., food bank)	83.33%
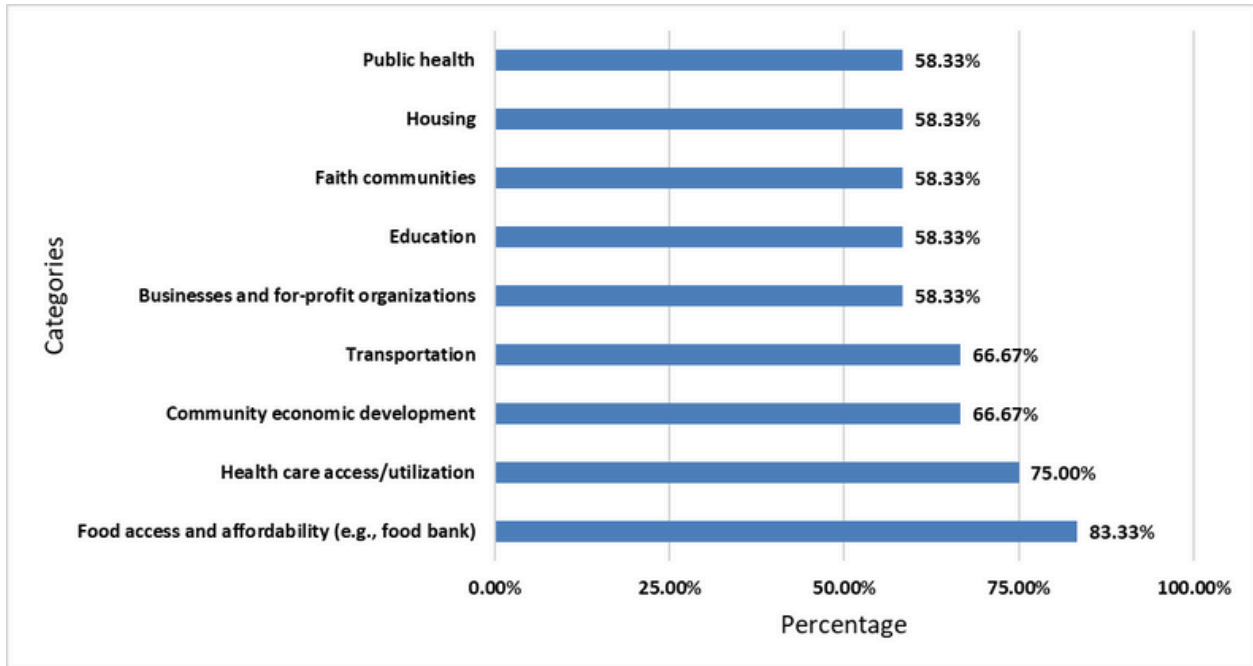
Figure 3
Which of the following health topics does your organization work on?

Health Topic	Percentage
Cancer	9.09%
Tobacco and substance use and prevention	18.18%
HIV/STD prevention	18.18%
Infectious disease	18.18%
WIC/food stamps	36.36%
Health insurance	36.36%
Injury and violence prevention	36.36%
Mental or behavioral health	45.45%
Health equity	45.45%
Physical activity	54.55%
Immunizations and screenings	54.55%
Family/maternal health	54.55%
Chronic disease	63.64%
Health care access/utilization	81.82%

Figure 4

Which of the following activities does your organization regularly participate in?
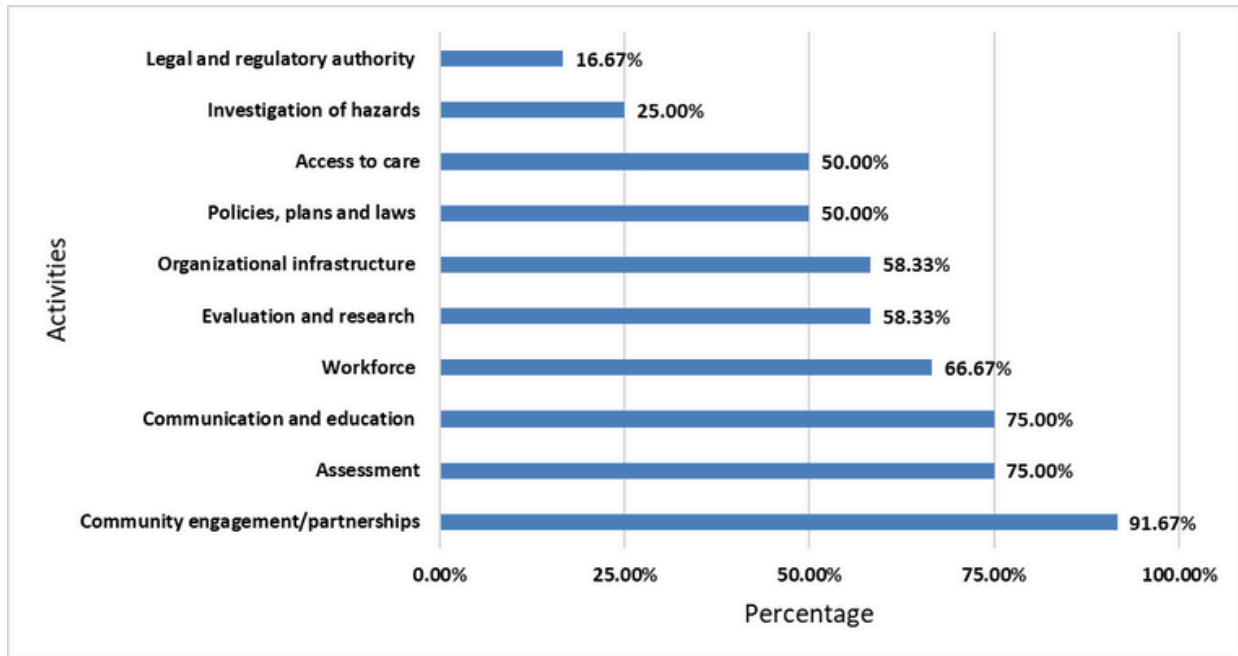
Most organizations regularly engage in community partnerships, conduct assessments, provide education, and perform research and evaluation. Less than one-quarter of organizations participate in investigation of hazards and legal and regulatory authority.

When asked what policy and advocacy work their organization participates in, zero percent lobby for policy change and 25% advocate for policy change.

However, 75% of organizations report they educate decision-makers and will respond to questions.

When asked if their organization has a clear communication strategy, 33% agreed and 25% were unsure.

Community Status Assessment

The Community Status Assessment (CSA) provides quantitative information on community health conditions.

PHASE 2

Tell the Community Story

Community Context Assessment

Community Partner Assessment

Community Status Assessment

It seeks to answer the following questions:

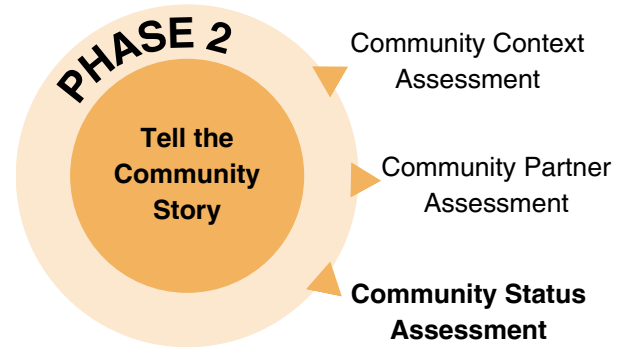> "What does the status of your community look like, including health, socioeconomic, environmental and quality-of-life outcomes?"
>
> "What populations are experiencing inequities across health, socioeconomic, environmental and quality-of-life outcomes?"
>
> "How do systems influence outcomes?"

Methodology

Data collection and analysis

The data used for this assessment came from sources such as the U.S. Census Bureau, Missouri Department of Health and Senior Services, Centers for Disease Control and Prevention, Missouri Highway Patrol, Missouri Hospital Association, and County Health Rankings and Roadmaps. When possible, state and national data was used to compare against county-level data and analyzed by race, gender and income to give a clearer picture of the community.

Key Findings

Overall, Boone County is a healthy community with well-educated residents, a stable economy, and many health and community resources. Although good health outcomes and behaviors are prominent in Boone County, there are still gaps to be addressed.

Disparities were identified between racial and socioeconomic groups within income, education, birth outcomes, chronic diseases and health outcomes.

Demographic Characteristics

Population

Boone County, Missouri, is a centrally located county along Interstate 70 between Kansas City and St. Louis. There are 11 major U.S. cities within 500 miles of the county seat, Columbia. (Regional Economic Development Inc., 2017/2018).

Population growth has been occurring in Boone County for the last two decades. The 2000 census estimated the population of Boone County at 135,434. It is estimated that the population of the county has grown to 183,310 as of 2020, a 26% increase. This same period saw Missouri's population increase by about 9%. A significant positive shift in population over time impacts health care and the utilization of community resources.

Boone County covers 685.5 square miles with an estimated 2020 population density of 267.41 people per square mile (American Community Survey, 2023).

Figure 1

Population Percentage Change, Boone County, Missouri and the United States

Geography	2012	2016	2021	Percent change from 2011-2020
Boone County	163,266	172,773	182,170	10.00%
Missouri	5,982,413	6,059,651	6,141,534	2.20%
United States	309,138,711	318,558,162	329,725,481	5.80%

Boone County has 10 incorporated cities: Ashland, Centralia, Columbia, Hallsville, Harrisburg, Hartsburg, McBaine, Pierpont, Rocheport and Sturgeon. Approximately 74% of all Boone County residents live within an incorporated city. The largest city, Columbia, is the county seat, with a population of 124,342 (American Community Survey, 2023). The majority of the county's population (68%) lives in Columbia as shown in Figure 2.

Figure 2
Population of Boone County Communities

Population	2012-2016 Estimated Population*	2017-2021 Estimated Population*
Boone County	172,773	182,170
Ashland	3,851	4,680
Centralia	4,167	4,531
Columbia	117,165	124,342
Hallsville	1,421	1,994
Harrisburg	344	407
Hartsburg	97	143
McBaine	8	8**
Pierpont	63	79
Rocheport	253	213
Sturgeon	803	1,002

Note: Population of Boone County cities and towns by *2017-2021 American Community Survey 5-year Estimates Table B01003
**2020 American Community Survey 5-year estimates

Age

Figure 3 shows the estimated population of Boone County by age group between 2017-2021 relative to both Missouri and the United States. Twenty-five percent of the population is under age 18. Nearly 14% of the population is between the ages of 20 and 24, compared to 6.5% in Missouri and 6.6% in the United States.

Multiple colleges located in the county may impact this age distribution. As a whole, the 25-44-year-old age group accounts for the largest proportion (27%) and number of county residents (49,247). Compared with Missouri and the United States, Boone County has fewer residents aged 65 and older.

Figure 3
Comparison of Boone County, Missouri, and the United States by Age Group

Age Group	Boone County	Missouri	United States
Under 5	5.70%	6.00%	5.90%
5 to 14	11.50%	12.80%	12.70%
15-19	8.30%	6.50%	6.60%
20-24	13.60%	6.50%	6.50%
25-44	27.00%	25.70%	26.60%
45-64	21.30%	25.70%	25.60%
65 and Over	12.50%	16.80%	16.00%

Note: Boone County, Missouri, and the United States age group comparison from the 2017-2021 American Community Survey 5-year Estimates Table S0101

In Boone County's 2017-2021 population estimate, 51.2% of the population is female and 48.8% is male. In Figure 4, the median age of Boone County is compared to the median age of Missouri and the United States.

Figure 4
Comparison of Median Age between Boone County, Missouri, and the United States

Boone County Median Age	Missouri Median Age	United States Median Age
31.9 years	38.8 years	38.4 years

Note: Comparison of median age between Boone County, Missouri, and the United States from 2017-2021 American Community Survey 5-year estimates Table S0101

Race and Ethnicity

According to the 2017-2021 American Community Survey (ACS), 93.5% of Boone County residents were born in the United States, Puerto Rico, another U.S. island area or abroad to American parent(s). The remaining 6.5% of the estimated population is foreign-born. Boone County's highest percentage of foreign-born residents is Asian (57%).

The majority of the population of Boone County is white, followed by Black/African Americans (Figures 5 and 6). Based on the 2017-2021 ACS estimate, Boone County has 80% white residents, compared with 80.3% in Missouri; Black residents have a slightly lower percentage (9.2% compared to 10.7%).

Figure 5
Boone County and Missouri Population by Race and Ethnicity

| Race | Boone County | | Missouri |
	Number	Percentage	Percentage
White	145,668	80.00%	80.30%
Black/African American	16,717	9.20%	10.70%
Two or More Races	9,589	5.30%	4.60%
Asian	8,046	4.40%	2.00%
Other	1,513	0.80%	1.40%
Hispanic or Latino*	6,502	3.60%	4.40%

*Hispanic or Latino may be of any race
Note: Boone County and Missouri population by race and ethnicity from 2017-21 American Community Survey 5-year Estimates Tables B02001 and B03002

Figure 6
Boone County Population by Race and Ethnicity
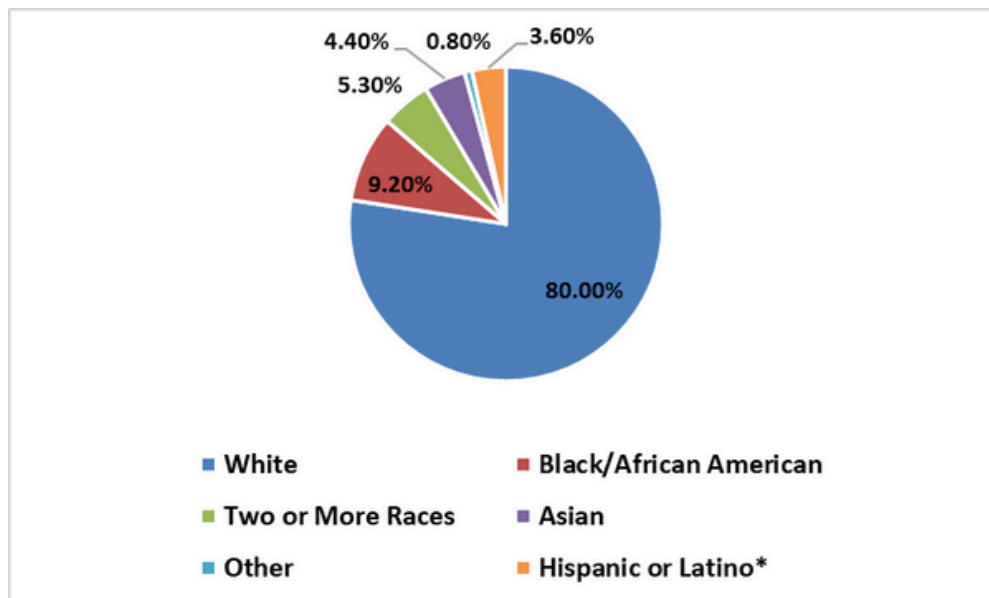

*Hispanic or Latino can be any race
Note: Boone County population by race from 2017-2021 American Community Survey 5-year Estimates Table B02001

Persons with Disabilities

Approximately 12.4% of the Boone County population has a disability, according to the 2017-2021 American Community Survey. In Boone County, 62% percent of those with disabilities live in Columbia. The accessibility of health care, shopping, social services, public transportation and social services within Columbia's city limits make living in the city easier for some disabled adults.

Figure 7
Boone County Residents Living with a Disability by Age Group
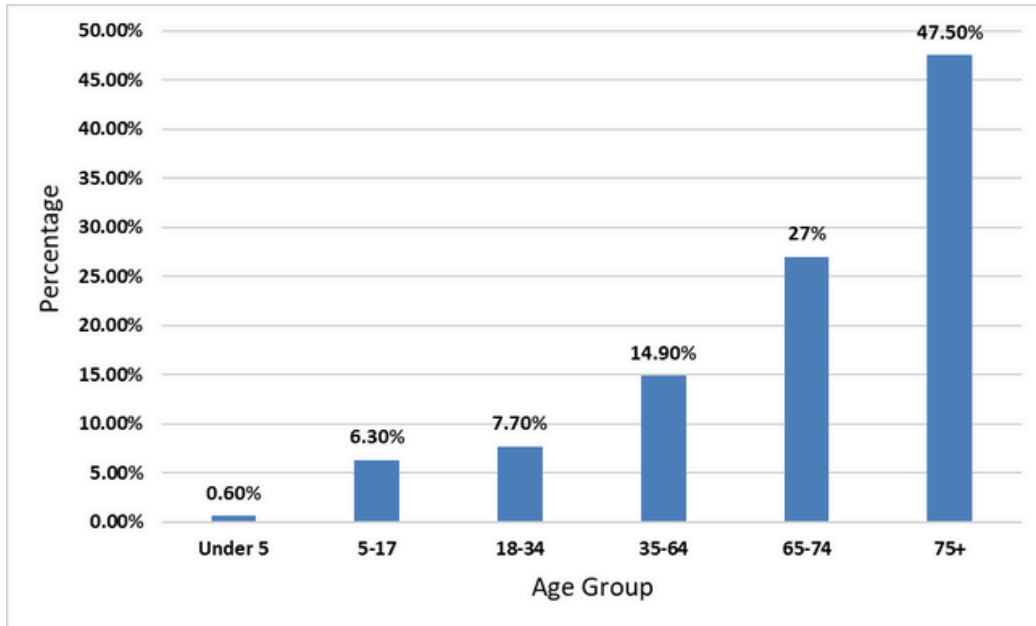

Note: Percentage of the Boone County population by age group living with a disability from 2017-2021 American Community Survey 5-year Estimates Table S1810

Veterans

Boone County has a civilian veteran population age 18 and over of 5.9%. A breakdown of veterans based on their gender, age, poverty level and disability status can be found in Figure 8. Nearly 90% of the veterans living in Boone County have served in the military from the Vietnam War era to the present.

Figure 8
Veteran Demographics in Boone County
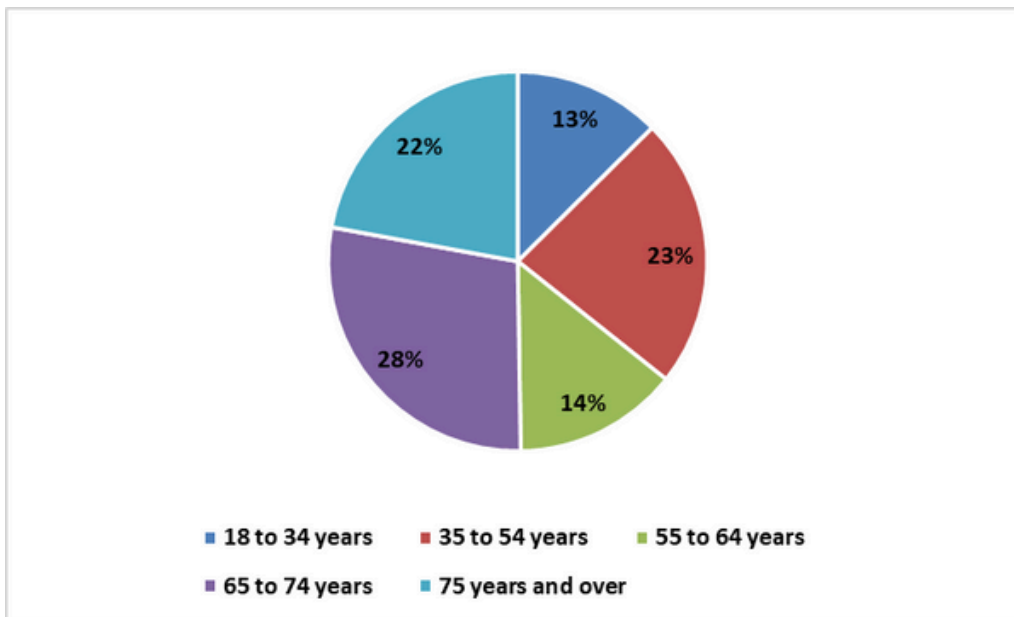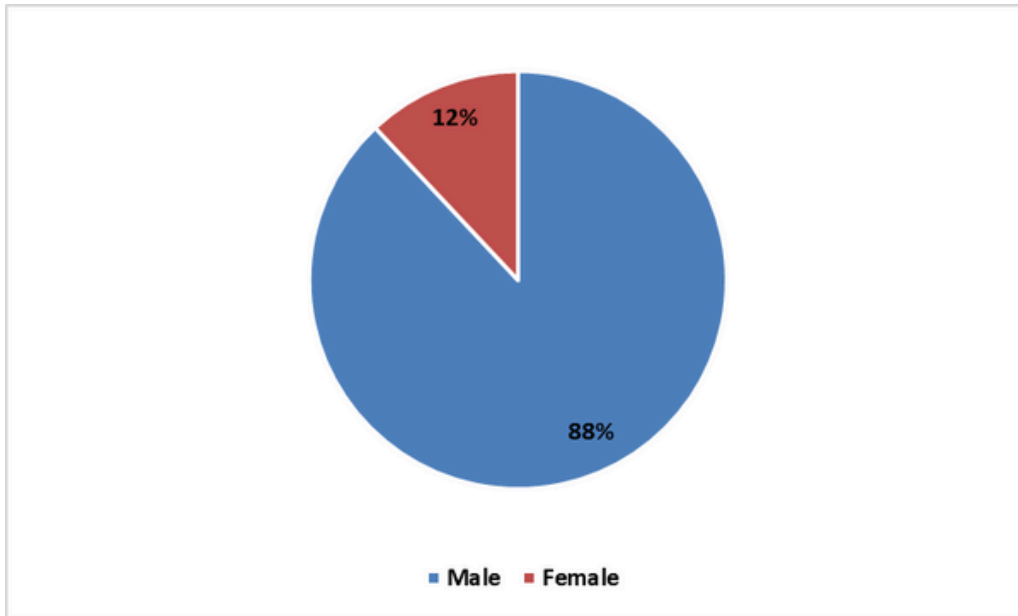
Note: Status of veterans in Boone County by service period, age group, poverty level and disability status from 2017-2021 American Community Survey 5-year Estimates Table S2101

Figure 8, continued
Veteran Demographics in Boone County
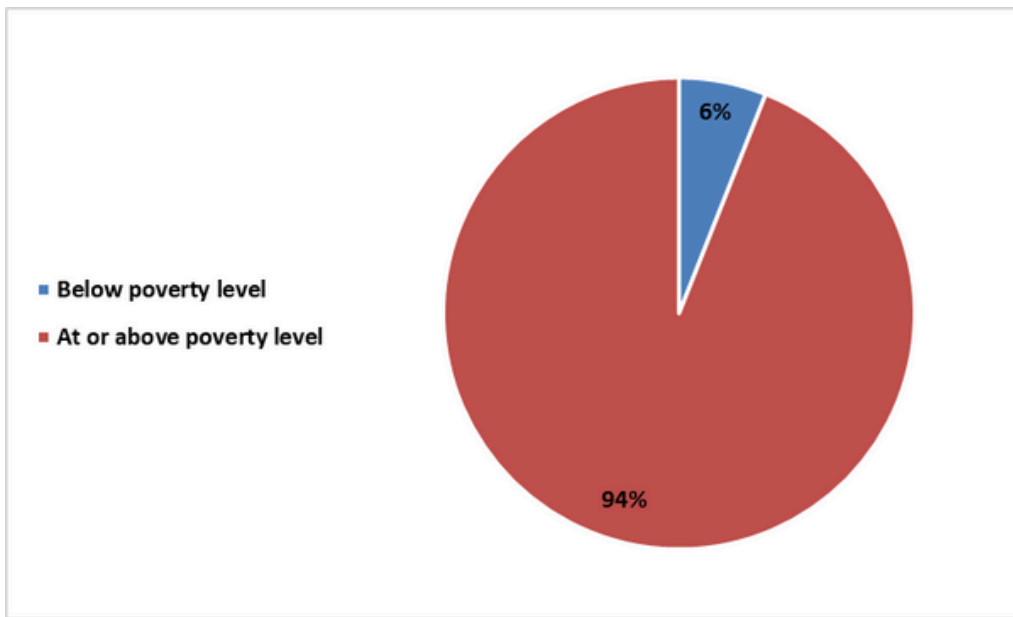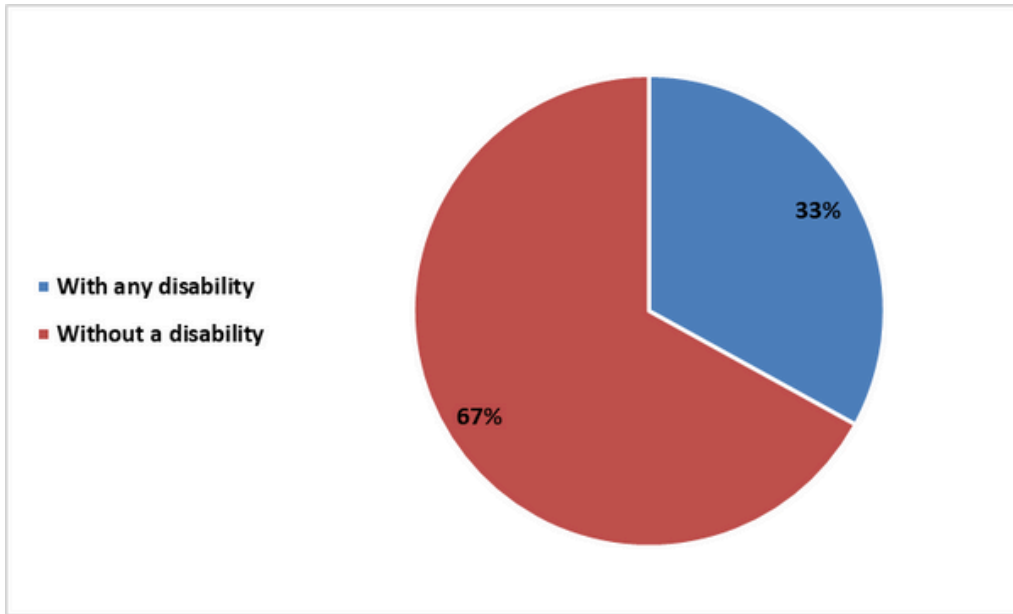
Note: Status of veterans in Boone County by service period, age group, poverty level and disability status from 2017-2021 American Community Survey 5-year Estimates Table S2101

Households and Families

As defined by the Census Bureau, a household comprises all the people living within it. A family household consists of two or more people related by birth, marriage or adoption. It may include unrelated members residing in the same house.

In the United States, married couple households consist of a married couple who may or may not have children living with them (U.S. Census). According to the 2017-2021 American Community Survey, there were 73,113 total households in Boone County with an average household size of 2.98.

Married-couple households made up 43.6% of the total, while cohabiting households made up 5.9%. Male householders without a spouse made up 21.9% of the total, and female householders without a spouse made up 28.6%.

Figure 9
Boone County Households by Type
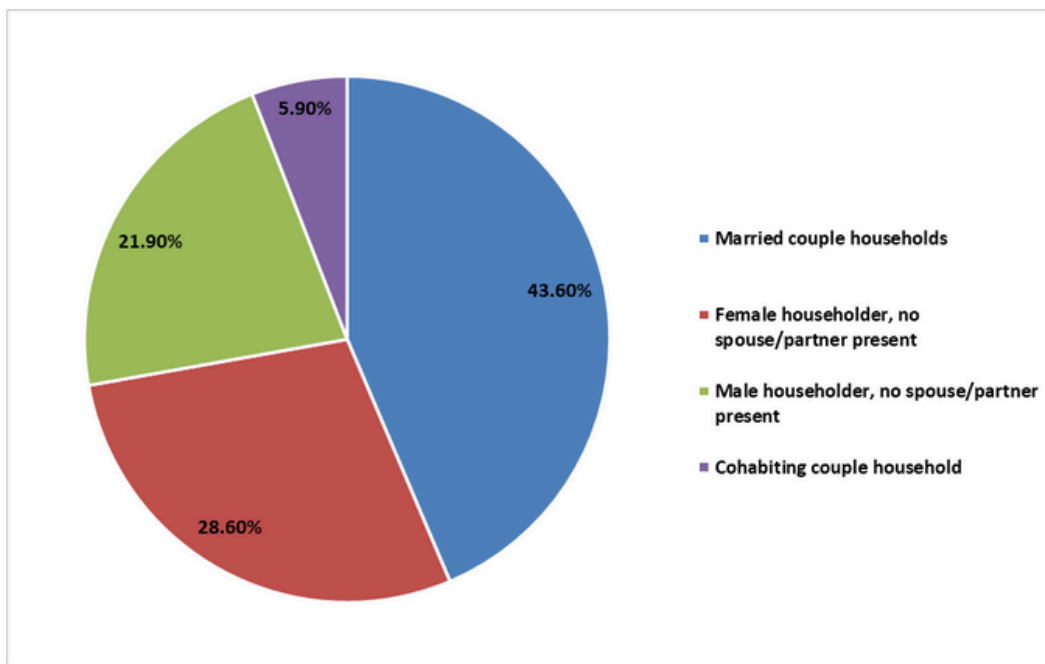
Note: Boone County households by type from the 2017-2021 American Community Survey 5-year Estimates Table DP02

Language

English is the primary language spoken in Boone County with 92.1% of households speaking only English in the home. The remaining 7.9% of households speak a language other than English in the home. Of limited English-speaking households, 32.1% speak Asian and Pacific Islander languages, while 12.8% speak Spanish, 9.4% other languages and 4.4% other Indo-European languages.

These households may have difficulties due to a limited ability to speak English, creating barriers to education, jobs, social services and health care. Three percent of the population in Boone County age 5 and up have limited English proficiency. Hispanic and Latino individuals are the largest ethnic groups with limited English proficiency in the county.

Figure 10 displays languages spoken at home, while Figure 11 shows the percentage of limited English-speaking households.

Figure 10
Languages Spoken at Home in Boone County
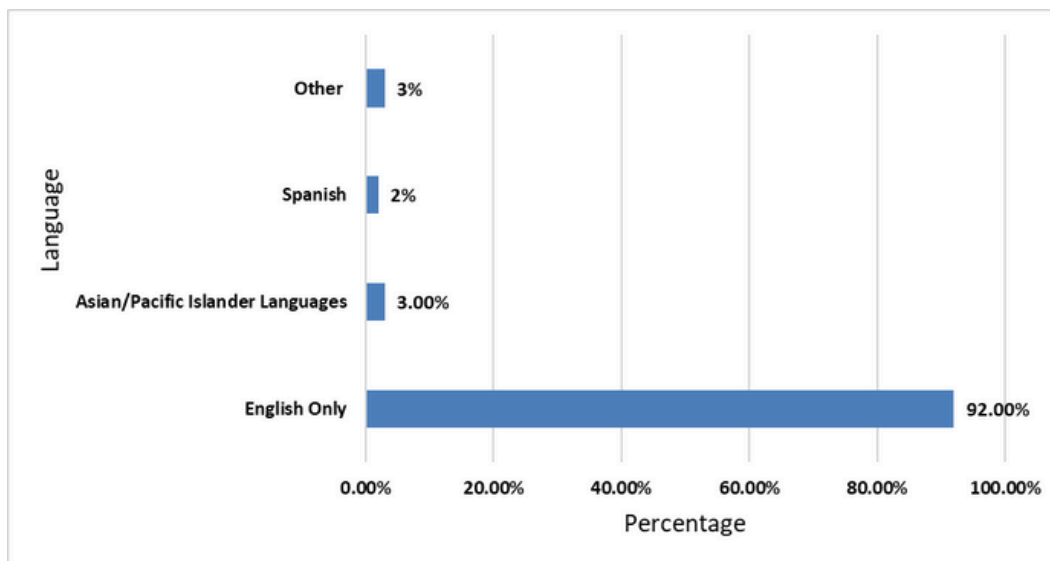
Note: Languages spoken at home in Boone County according to 2017-2021 5-year American Community Survey Estimates Table DP02

Figure 11

Percentage of Limited English-speaking Households in Boone County

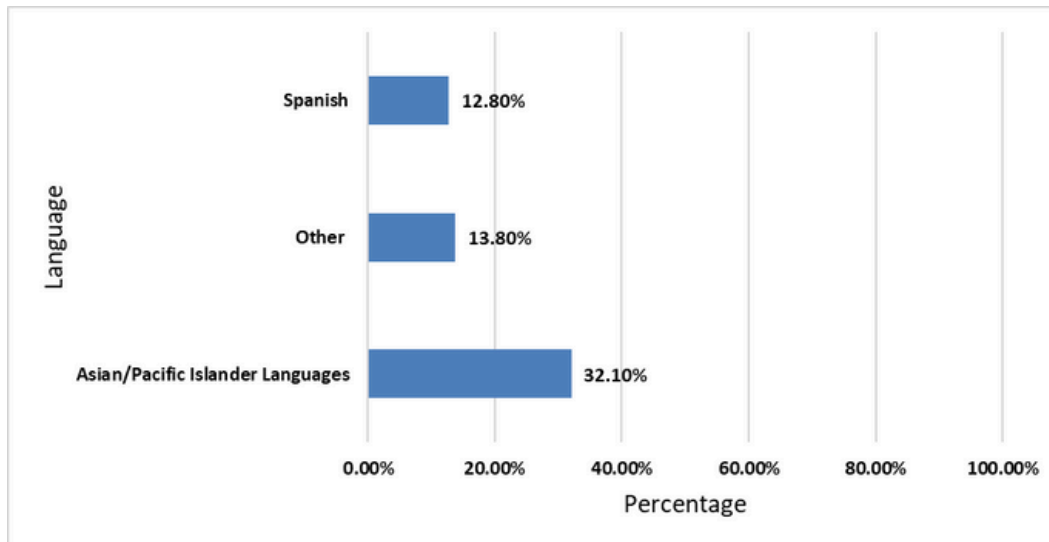*Note*: Languages spoken at home in Boone County according to 2017-2021 5-year American Community Survey Estimates Table DP02.

Socioeconomic Characteristics

Income

Median household income is the most widely used measure of income. Median income can define the ability of a household to have access to affordable housing, health care, higher education opportunities and food. The median household income (2017-2021 ACS) in Boone County is $62,653, which is an estimated $30.12 an hour.

Figure 12

Comparison of Median Household Income in past 12 months between Boone County, Missouri, and the United States

Boone County	Missouri	United States
$62,653	$61,043	$69,021

Note: Median household income in the last 12 months comparison of Boone County, Missouri, and the United States according to the 2017-2021 American Community Survey 5-year Estimates Table S1903

A combination of historical and systemic factors contributes to the income gap between races, primarily white and Black households. Among the many contributors are racism, education attainment, employment discrimination, criminal justice and access to capital.

In Boone County, the 2017-2021 median household income shows that for every dollar earned in a white household, a Black household earns 60 cents. This is a slight increase from the 2012-2016 ACS which showed that for every dollar earned by a white household, a Black household earned 56 cents.

Figure 13

Comparison of Median Household Income between White and Black
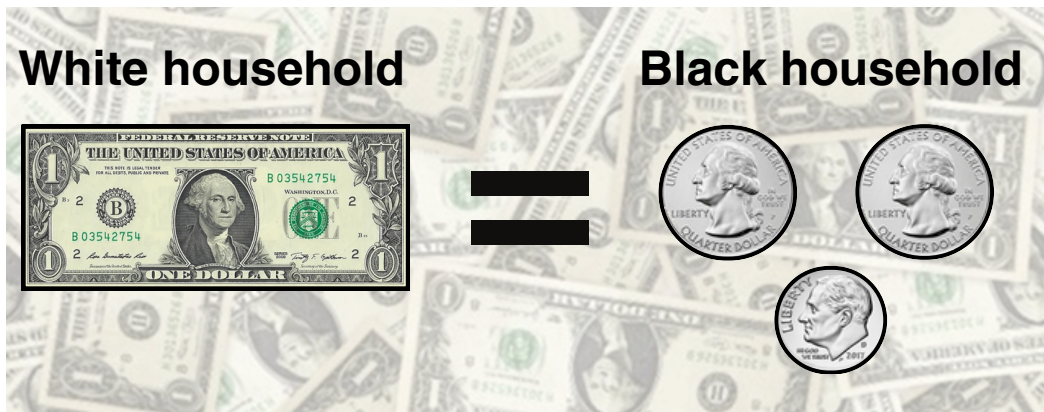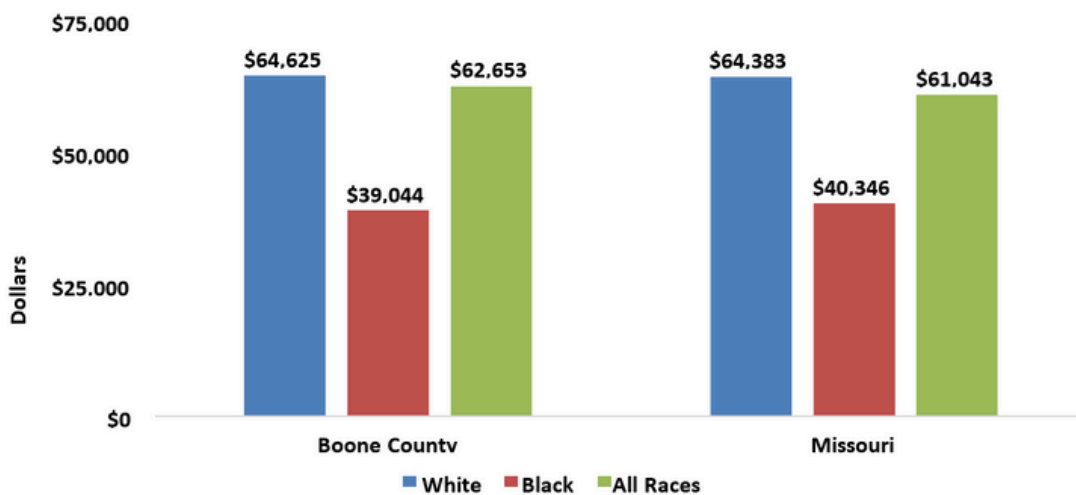Boone County Households

Figure 14

Median Household Income by Race in Boone County and Missouri

Note: Median household income by race comparison between Boone County and Missouri according to the 2017-2021 American Community Survey 5-year Estimates Table S1903

Figure 15

Community	Median Household Income	Number of Households
Boone County	$62,653	73,113
Ashland	$82,200	2,039
Centralia	$61,353	1,945
Columbia	$57,463	49,666
Hallsville	$57,500	786
Harrisburg	$44,500	152
Hartsburg	$29,491	83
McBaine	(Data not available)	(Data not available)
Pierpont	$67,250	40
Rocheport	$46,500	106
Sturgeon	$61,029	418

Note: Median household income of Boone County cities according to 2017-2021 American Community Survey 5- year Estimates Table S1903.

Missouri's current **minimum wage** is $12.30 per hour, approximately $25,584 per year working full time. About 16% of Boone County households earn less than $15,000 per year. **Living wage** is the hourly rate that an individual must earn to support their family if they are the sole provider and work full time (MIT Living Wage Calculator). Living wages are defined as wages that cover basic household expenses plus taxes. Among the basic needs are food, child care, insurance premiums, health care, transportation and other necessities. Figure 16 shows Boone County's living wage calculations for 2023.

Figure 16

Household	Living Wage
1 Adult no Children	$15.91
1 Adult 1 Child	$34.33
1 Adult 2 Children	$44.68
1 Adult 3 Children	$58.93
2 Adults (1 working) no children	$25.65
2 Adults (1 working) 1 child	$32.44
2 Adults (1 working 2 children)	$37.44
2 Adults (1 working 3 children)	$41.57
2 Adults (both working) no children	$12.78*
2 Adults (both working) 1 child	$19.10*
2 Adults (both working) 2 children	$24.52*
2 Adults (both working) 3 children	$29.52*

*per working adult
Note: 2023 Living wage calculation for Boone County from Massachusetts Institute of Technology (2023)

Employment

According to Missouri Local Area Unemployment Statistics (LAUS, 2023), the 2022 monthly unemployment rate in Boone County averaged 2.3%, one of the lowest in Missouri. During the same time period, Missouri's unemployment rate was 6.1%, and the overall U.S. unemployment rate was 5.8%.

Boone County traditionally has an unemployment rate well below the national and state levels and has been declining steadily since 2010. Due to the global COVID-19 pandemic, unemployment rose in all three geographies in 2020. Rates can be seen for Boone County, Missouri and the United States in Figure 17.

Figure 17
Unemployment Rates in Boone County, Missouri, and the United States
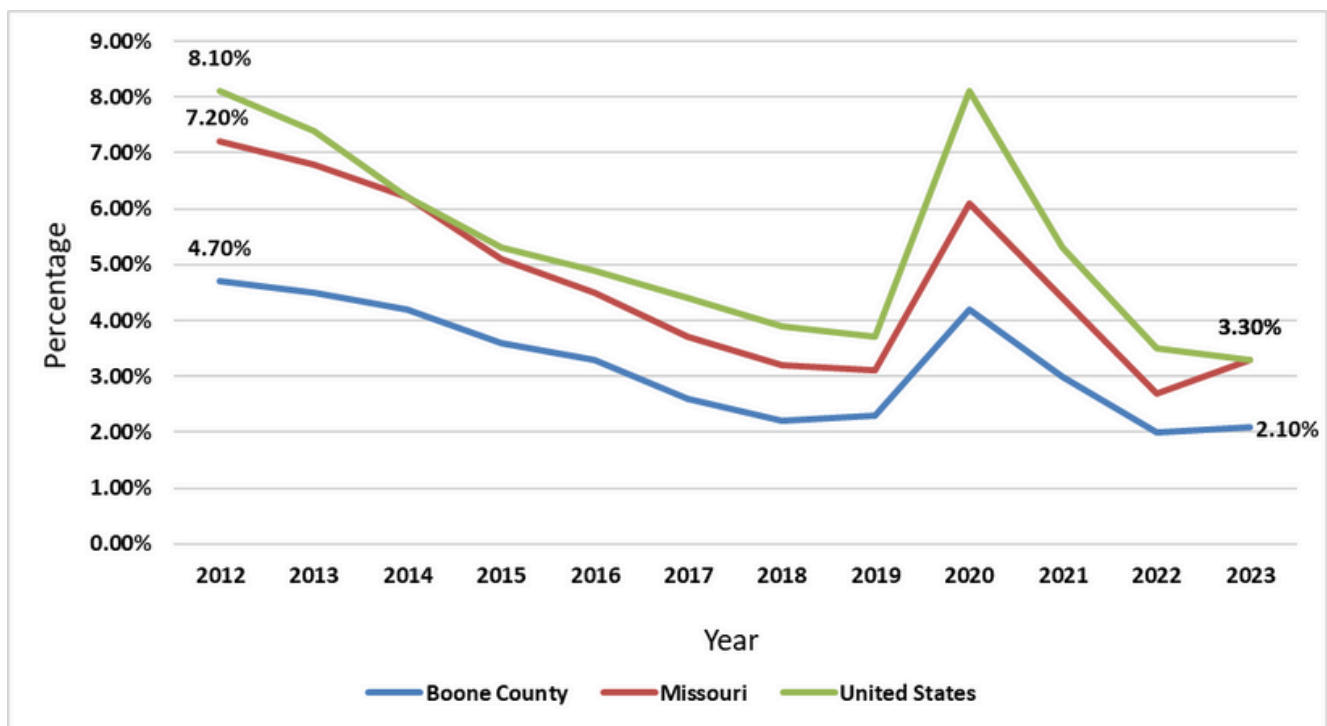
Note: Unemployment rates from Missouri Local Area Unemployment Statistics (LAUS) from 2012-October 2023 (2023)

Figure 18
Largest Employers in Boone County

Employer	Number Employed
University of Missouri	8,612
University Hospital and Clinics	5,217
Veterans United Home Loans	3,505
Columbia Public Schools	2,666
Harry S. Truman Memorial Veterans' Hospital	1,602
Boone Hospital Center	1,517
Shelter Insurance Companies	1,336
City of Columbia	1,299
Joe Machens Dealerships	777
Hubbell Power Systems Inc.	750

Note: Largest employers in Boone County in 2022 according to Regional Economic Development Inc. (2023)

The three largest employment sectors in Boone County according to the American Community Survey are:

- 35% education services, health care and social assistance
- 10.7% arts, entertainment, recreation and accommodation, and food services
- 9.8% retail trade

In 2021, Boone County had a gross domestic product of about $11.3 billion, the seventh-largest county in Missouri.

Figure 19

How Boone County Residents Commute to Work

Average travel time:
18.8 minutes
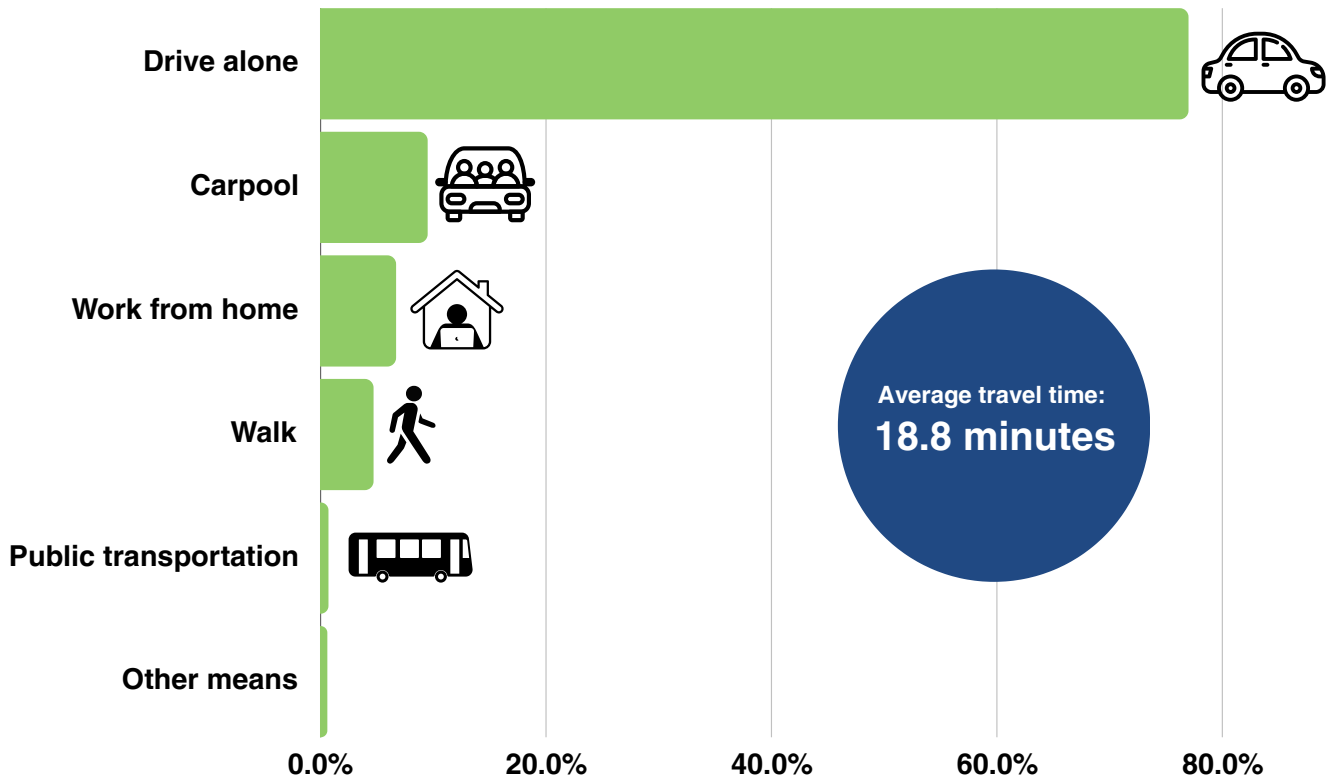
Note: Commuting to work in Boone County from the 2017-2021 American Community Survey 5-year Estimates Table S0801

Education

Education, race, unemployment and health outcomes are related. The higher an individual's level of education, the greater their chances of being healthier and living longer. Education makes it more likely an individual can access quality health care, find employment that pays a living wage and live in a safe environment. In Boone County, 93.7% of residents have high school diplomas or above, and 46.8% hold bachelor's degrees. Compared to Missouri, Boone County has a higher percentage of residents 25 years or older with a bachelor's degree or higher.
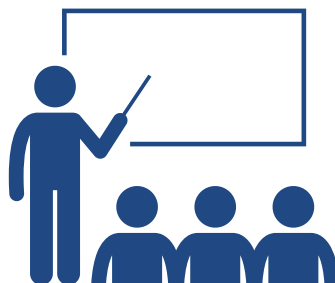
Figure 20

Educational Attainment Comparison between Boone County and Missouri
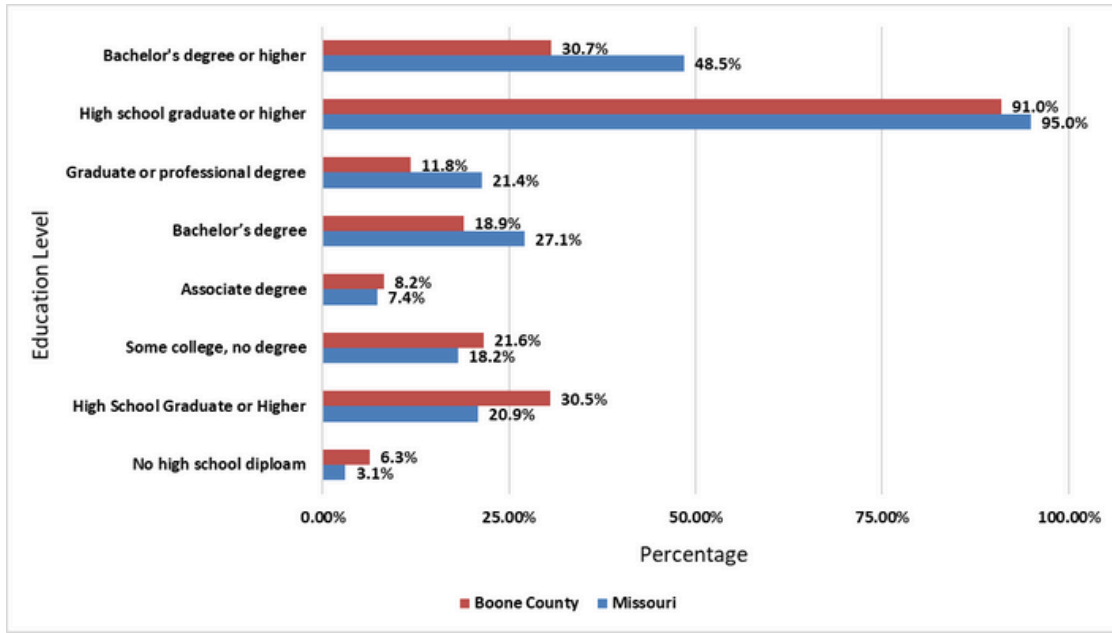
Note: Educational attainment comparison of population 25 years and over between Boone County and Missouri from the 2017-2021 American Community Survey 5-year Estimates Table DP02

Figure 21

Educational Attainment by Race and Ethnicity in Boone County
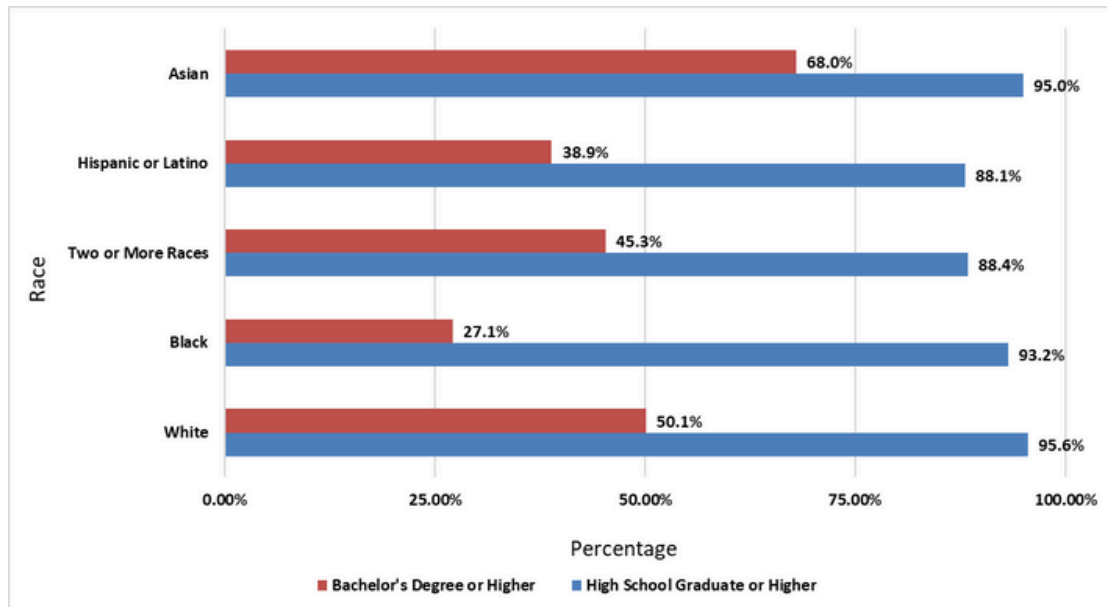
Note: Education attainment in Boone County by Race and Ethnicity from the 2017-2021 American Community Survey 5-year Estimates Table S1501

In addition to the University of Missouri's flagship system campus in Columbia, there are other higher education opportunities close by (Regional Economic Development Inc., 2021). Figure 22 highlights post-secondary education opportunities within 50 miles of Boone County.

Figure 22

Post-Secondary Education Opportunities within 50 Miles of Boone County

University of Missouri

Columbia College

Moberly Area Community College

Lincoln University

William Woods University

State Technical College of MO

Central Methodist University

Stephens College

Westminster College

Columbia Area Career Center

Note: Post-secondary education opportunities within 50 miles of Boone County in 2023 according to REDI

In Boone County, adults aged 25 and over with a high school diploma or less have a median income over one-third less than that of someone with an undergraduate degree.

Figure 23

Median Earnings by Educational Attainment in Boone County
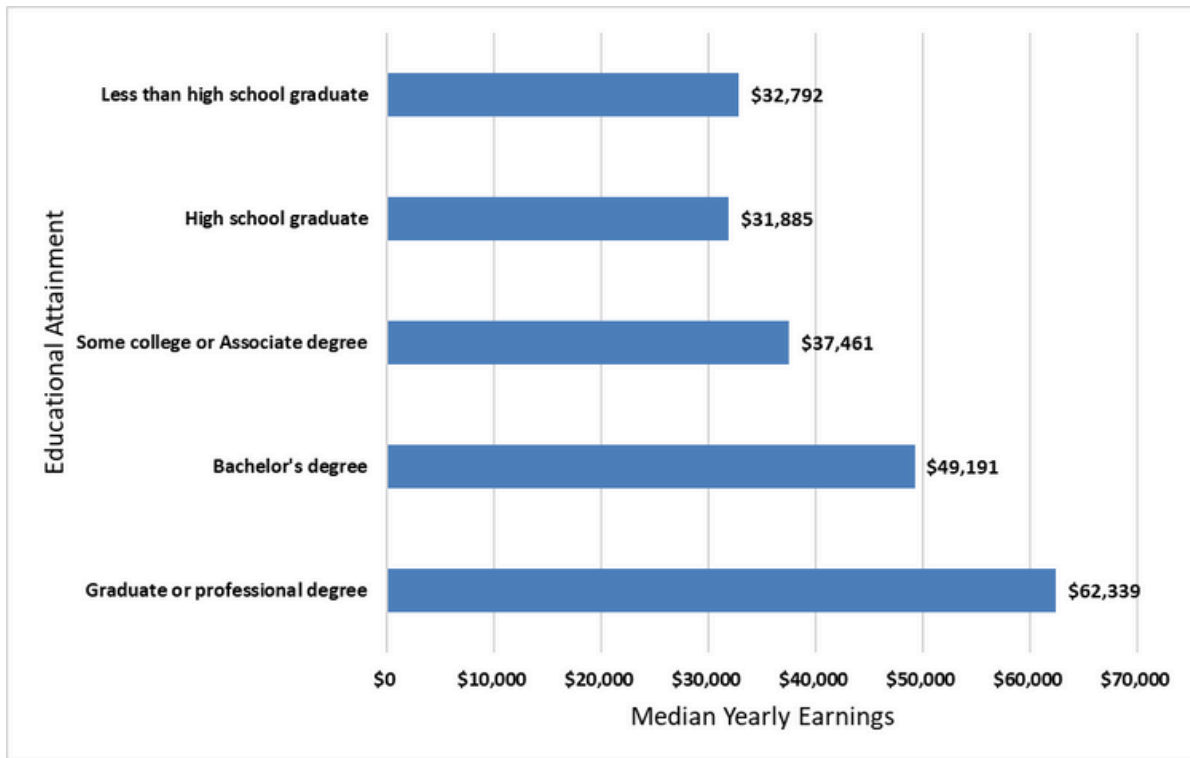
Note: Median earnings in the past 12 months (inflation-adjusted) of population 25 years and over in Boone County from the 2017-2021 American Community Survey 5-year Estimates Table S1501

College-educated adults are also less likely to live in poverty. In Boone County, the poverty rate for those who do not have a high school diploma is nearly five times greater than the poverty rate for someone with a bachelor's degree or higher.
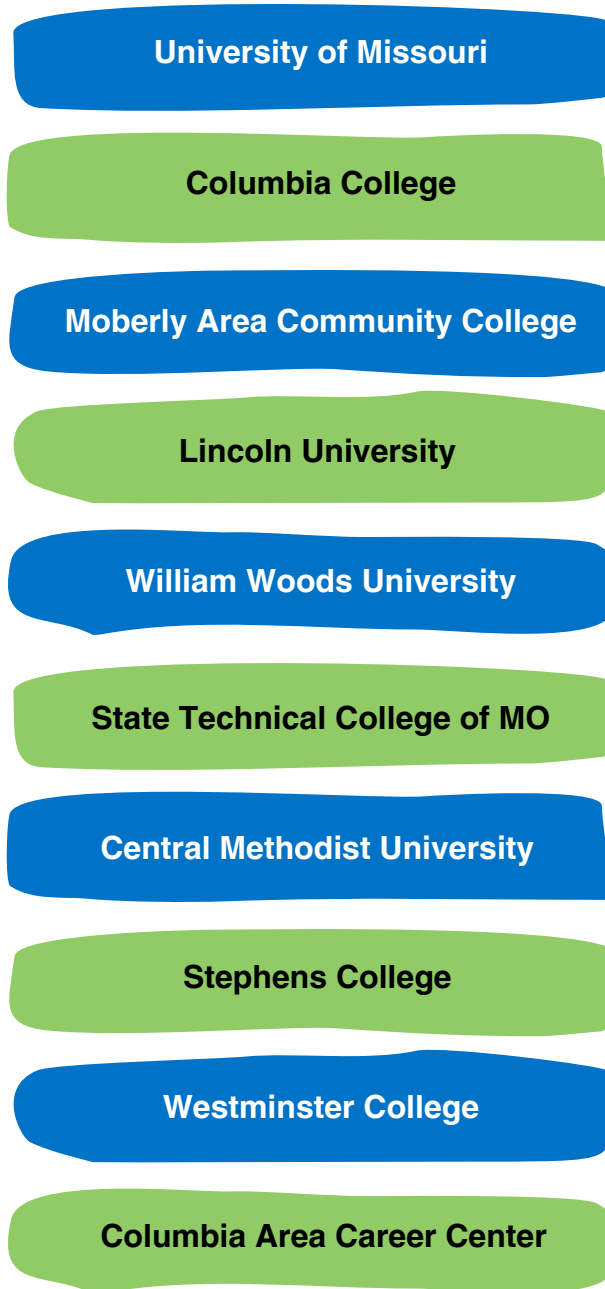
Figure 24

Poverty Rate Comparison by Educational Attainment in Boone County and Missouri
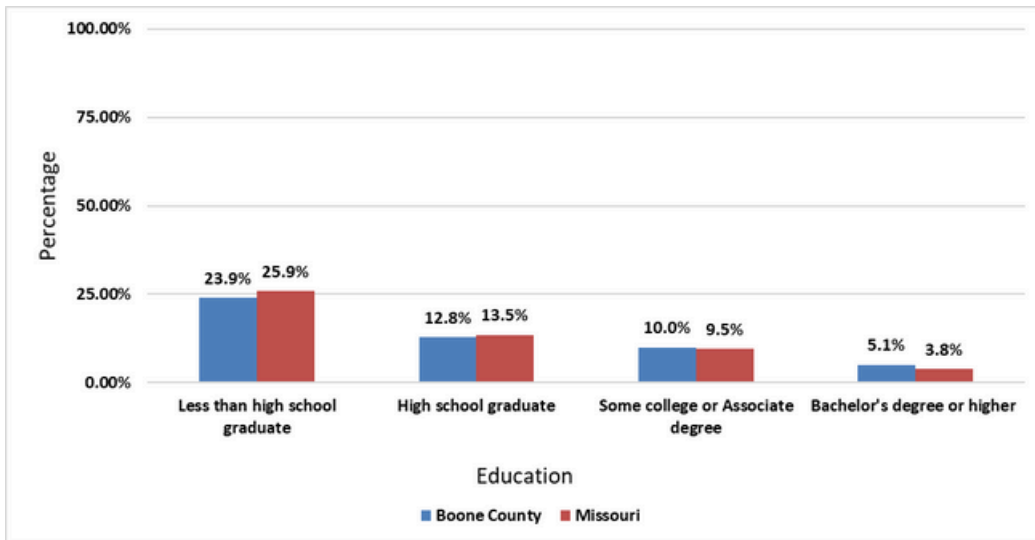
Note: Poverty rate by educational attainment comparison of Boone County and Missouri from the 2017-2021 American Community Survey 5-year Estimates Table S1501

There are six separate school districts in Boone County with enrollments varying from 442 students in the Sturgeon R-V School District to 18,801 students in the Columbia 93 School District (Columbia Public Schools).

Figure 25

Student Enrollment in Boone County School Districts

School District	Student Population	Student-Classroom Teacher Ratio
Columbia 93 School District (Columbia Public Schools)	18,801	13:1
Southern Boone County R-1 School District (Ashland)	1,948	13:1
Centralia R-VI School District	1,332	14:1
Hallsville R-IV School District	1,502	15:1
Harrisburg R-VIII School District	595	12:1
Sturgeon R-V School District	442	11:1

Note: 2023-24 student enrollment in Boone County school districts pre-kindergarten through 12th grade from U.S. News & World Report (2023)

Even without a college degree, high school education and graduation rates are important indicators of health and affect a person's economic performance. High school education and graduation rates can impact a person's ability to secure employment, earn a livable wage and access health care.

The four-year high school graduation rate is the percentage of first-year students who graduate from conventional high school after four years. These data make it possible to compare rates among counties.

The Missouri Department of Elementary and Secondary Education (DESE) has been collecting this data since 2011 (DESE, n.d.).

Figure 26 shows Columbia graduates a lower percentage of its students than the other districts in Boone County. It should be noted that the Columbia School District is significantly larger and more diverse than other school districts.

Figure 26
Four Year Graduation Rates of Boone County Schools 2022
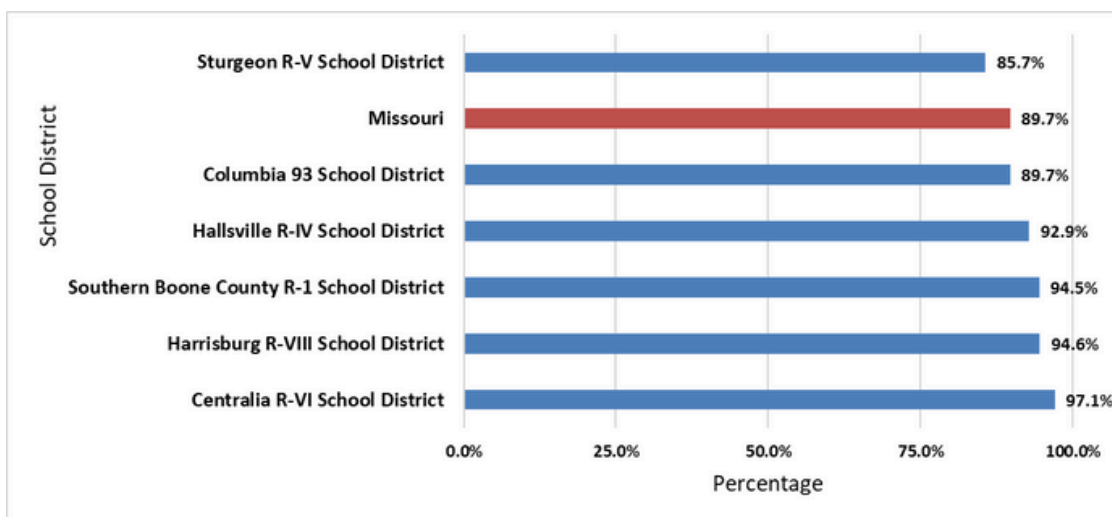
Note: Four-year graduation rates of Boone County school districts between 2018 and 2022 according to the Missouri Department of Elementary and Secondary Education (DESE)

Figure 27 breaks down the Columbia graduation rates by race, showing a disparity between Black students and other races.

Figure 27

Columbia Public Schools Four-Year Graduation Rates by Race and Ethnicity
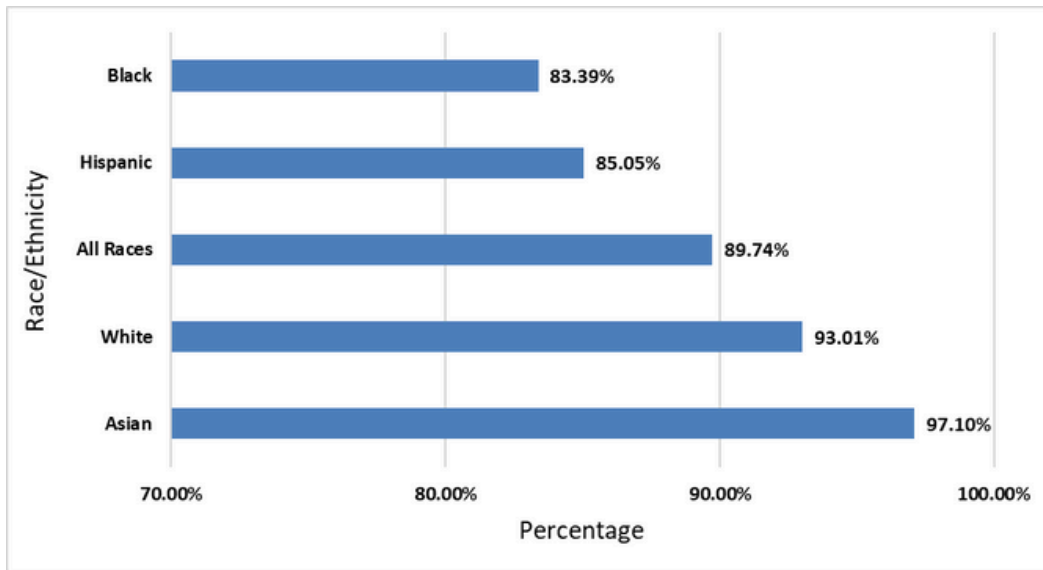
Note: Columbia Public Schools four-year graduation rates by race between 2018 and 2022 from the Missouri Department of Elementary and Secondary Education (DESE)

According to the 2017-2021 American Community Survey, 6.5% of Boone County's population is foreign-born. Figure 28 provides insight into the percentage of students enrolled in the English Language Learners (ELL) program in Columbia Public Schools.

It is worth noting that the only other school district in Boone County with available data is Hallsville R-IV. Between 2017 and 2021, the enrollment rate in the ELL program in Hallsville ranged from 0.3% to 1%.

However, the data available for Columbia Public Schools can help to understand the potential challenges foreign-born individuals in Boone County may face regarding education. In addition to education, language barriers can also impact employment and health care. Individuals who do not speak English well may have difficulty finding jobs or accessing health care services. This can lead to social and economic isolation, which can have negative consequences for both the individual and the community as a whole.

Figure 28

Percentages of English Language Learners (ELL) in Columbia Public Schools
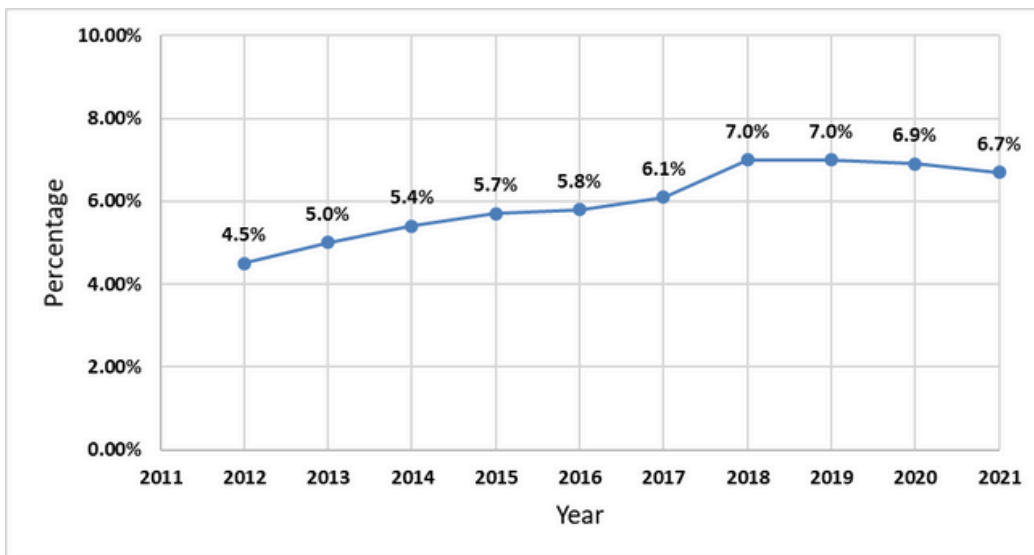
Note: Percentages of English Language Learners in Columbia Public Schools between 2012 and 2021 from the Missouri Department of Elementary and Secondary Education

Poverty

The U.S. Department of Health and Human Services (HHS) has established two versions of the federal poverty thresholds and poverty guidelines. Poverty thresholds, created by the U.S. Census Bureau, are statistical calculations that consider family size and age. These thresholds are used to determine the number of people living in poverty in the U.S.

The poverty guidelines, on the other hand, are used by HHS to determine eligibility for various public assistance programs, such as Medicaid and the Children's Health Insurance Program (CHIP). These guidelines are slightly different from the poverty thresholds, as they consider the current economic situation and are updated annually.

The poverty guidelines are calculated by taking the poverty thresholds and multiplying them by a certain percentage. The percentage used is based on the Consumer Price Index for All Urban Consumers (CPI-U), which measures the change in prices of goods and services over time. The calculation of the poverty guidelines also considers family size and the number of people in the household.

It is important to note that the poverty guidelines vary by state, as the cost of living can differ significantly from one state to another. In addition, eligibility for public assistance programs is also influenced by factors such as income, assets and citizenship status.

Overall, the federal poverty thresholds and poverty guidelines are important tools in determining the number of people living in poverty and in helping those most in need. By considering factors such as family size, age and economic conditions, these guidelines help to ensure that individuals and families receive the support they need to thrive.

Figure 29

2023 Missouri Metros Cost of Living Annual Average

Metro	Cost of Living Index
Joplin	84.1
Springfield	84.8
Missouri	88.5
St. Louis, MO-IL	88.9
Columbia	90.9
Kansas City, MO-KS	93.7
United States	100

Note: 2023 Cost of Living Indices Average for Participating Missouri Cities from the Missouri Economic Research and Information Center (2023)

Figure 30

2024 Federal Poverty Guidelines (FPL)

Persons in Family/Household	Poverty Guideline
1	$15,060
2	$20,440
3	$25,820
4	$31,200
5	$36,580
6	$41,960
7	$47,340
8	$52,720

Note: 2024 Federal Poverty Level guidelines from the United States Department of Health and Human Services (2024)

Figure 31

Federal Monthly Poverty Guidelines by Percent of Poverty Level

Size of Family Unit	100% of Poverty	185% of Poverty	200% of Poverty
1	$15,060	$27,861	$30,120
2	$20,440	$37,814	$40,880
3	$25,820	$47,767	$51,640
4	$31,200	$57,720	$62,400
5	$36,580	$67,673	$73,160
6	$41,960	$77,626	$83,920
7	$47,340	$87,579	$94,680
8	$52,720	$97,532	$105,440

*For families with more than 8 persons, add $5,380 for each additional person
Note: 2024 Federal Poverty Guidelines by Percent of Poverty Level from the United States Department of Health and Human Services (2024)

The 2017-2021 American Community Survey estimates that 16.8% of Boone County residents (about 30,000 people) lived in poverty during the last 12 months, compared to 12.8% of Missouri residents.

Figure 32

For the Estimated 173,050 Boone County Residents for Whom Poverty Status is Determined

36.0% of Black Boone County residents live in poverty
19.6% of Boone County residents 18 to 64 years live in poverty
17.8% of female Boone County residents live in poverty
16.8% of Boone County residents live in poverty
15.8% of male Boone County residents live in poverty
14.8% of Boone County children under 5 years live in poverty
14.6% of Boone County children under 18 years live in poverty
13.7% of white Boone County residents live in poverty
6.2% of Boone County residents 65 years and over live in poverty

Note: Poverty status in the last 12 months from the 2017-2021 American Community Survey 5-year Estimates Table S1701

The extent to which families live in poverty may vary depending on both race and type of household. The reasons for disparities are complex but often stem from systemic issues, such as discrimination in education, housing and employment.

Single-parent households are more likely to face financial difficulties than two-parent or married households. The effects of poverty on families include increased stress and anxiety, poor health outcomes, limited access to quality education, decreased social mobility, and higher rates of crime and violence (County Health Rankings, 2023). Figure 33 breaks down families in poverty by household type and race.

Figure 33
Percent of Boone County Families in Poverty by Race and Household Type
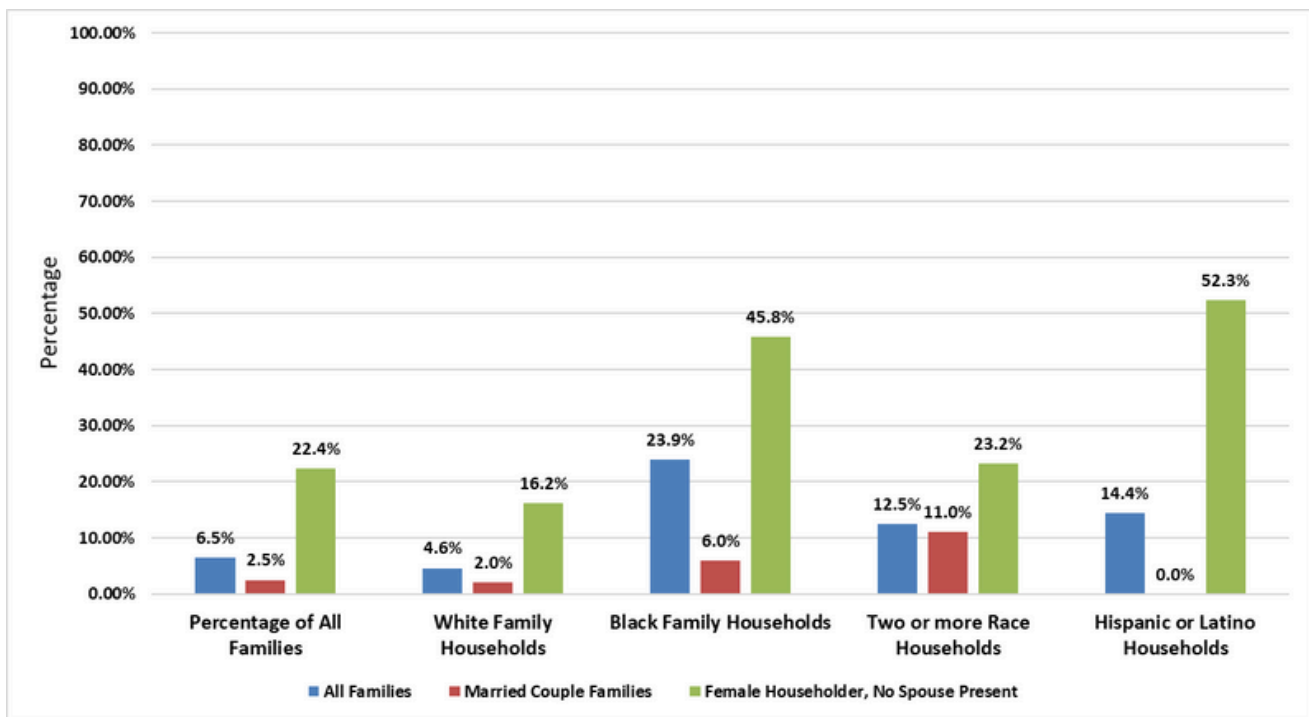
Note: Boone County families living in poverty in the last 12 months by household type and race from the 2017-21 American Community Survey 5-year Estimates Table 1702

Figure 34
Percent of Boone County Population Living in High-Poverty Neighborhoods by Race and Ethnicity
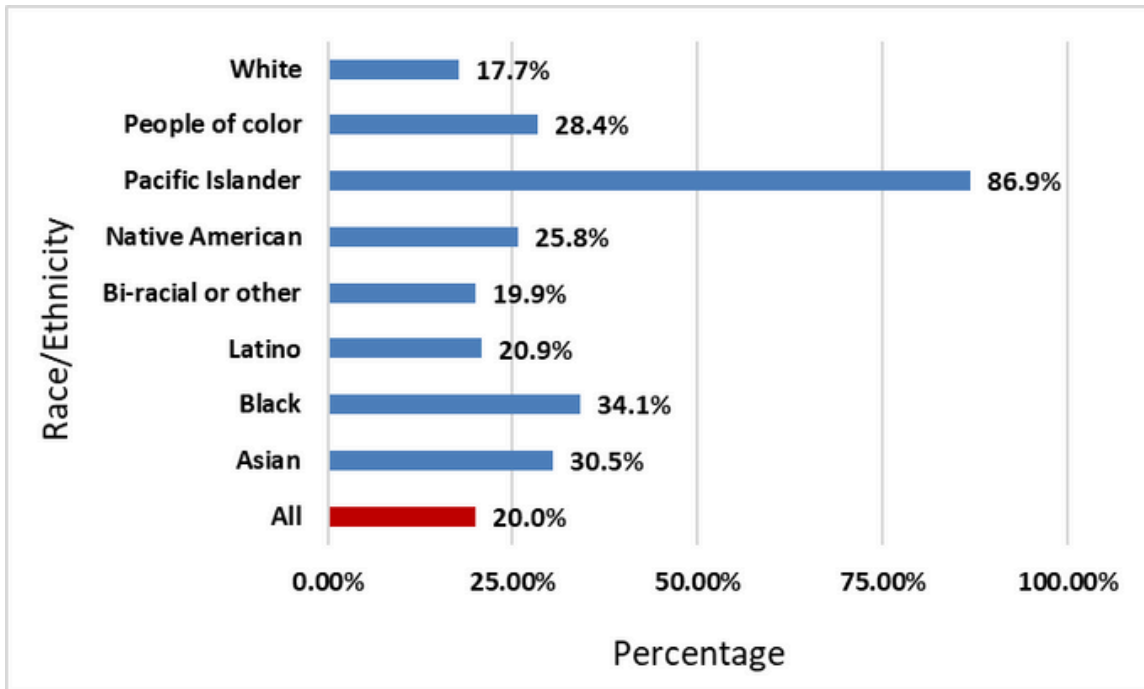
Note: Share of population by race and ethnicity in Boone County living in high-poverty neighborhoods from the National Equity Atlas (2020)

Food Insecurity

Food security is a critical issue that affects individuals and households across the globe. The United States Department of Agriculture defines food security as "access by all people at all times to enough food for an active, healthy life." Unfortunately, many households in the United States and around the world experience food insecurity due to insufficient resources for food purchases. This can lead to households relying on both private and public assistance programs to avoid hunger.

The 2019 Missouri Hunger Atlas highlights the strong connection between food insecurity and poverty. Poverty is the most significant single predictor of food insecurity. Hunger is strongly correlated with lower educational achievement, unemployment and impaired work performance. Additionally, food insecurity in children can be a predictor of chronic illness, low birth weight, low school performance and developmental problems.

Boone County is ranked a low-need/low-performance county in the 2019 Missouri Hunger Atlas. This means that Boone County has comparatively low percentages of the population with hunger needs but low performance in meeting the requirements of these populations. This is a change from the 2016 Missouri Hunger Atlas, which reported Boone County as having low need but high performance, with the county meeting the needs of those who were food insecure.

Among the resources available for Boone County residents to help with food insecurity is the Supplemental Nutrition Assistance Program (SNAP). This program offers nutrition assistance to eligible low-income individuals and families. The National School Lunch Program (NSLP) provides students enrolled in public and non-profit private schools who meet eligibility requirements with free or reduced-price lunches.

The Women, Infants and Children (WIC) program provides food and nutrition education for pregnant people, non-chestfeeding people up to six months postpartum, chestfeeding people up to one year postpartum, infants and children up to their fifth birthday.

All three of these resources are offered in Boone County, along with multiple food bank distribution sites located throughout the county. Figure 35 shows the Boone County needs indicator data and performance indicators in the 2019 Missouri Hunger Atlas.

Figure 35
Boone County Data from the Missouri Hunger Atlas

Need Indicator	Boone	Missouri
% of individuals that are food uncertain	15.5%*	14.2%*
% individuals < 18 years old that are food uncertain	15.2%*	17.5%*
% of individuals food uncertain with hunger	5.8%*	5.3%*
% of population eligible for SNAP	27.7%**	19.4%**
Number of monthly SNAP participants	15,327**	720,543**
% of total population participating in SNAP	8.6%**	11.8%**
% of population < 18 years old eligible for SNAP	19.3%**	26.1%**
Number of monthly SNAP participants < 18 years old	7,133**	325,938**
% of population < 18 years old participating in SNAP	19.7%**	23.6%**
Monthly number of children < 5 years participating in WIC	1,708*	89,338*
% of eligible children < 5 years participating in WIC	47.2%*	55.9%*

*Data from 2017
** Data from 2018
Note: 2019 Missouri Food Atlas Data for Boone County (2023)

2021 Feeding America Information for Boone County

2021 Food Insecurity In Boone County, Missouri

FOOD INSECURE POPULATION IN BOONE COUNTY, MISSOURI
20,080

FOOD INSECURITY RATE IN BOONE COUNTY, MISSOURI
11.0%

ESTIMATED PROGRAM ELIGIBILITY AMONG FOOD INSECURE PEOPLE IN BOONE COUNTY, MISSOURI
46% Above SNAP threshold of 130% poverty
54% Below SNAP threshold of 130% poverty

AVERAGE MEAL COST IN BOONE COUNTY, MISSOURI
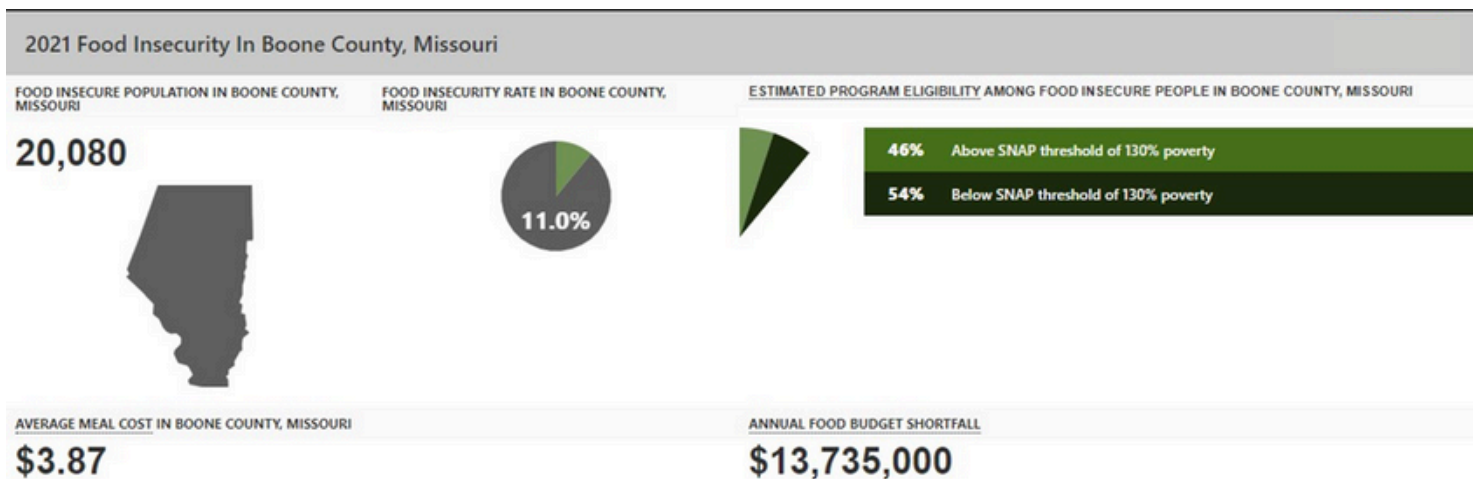**$3.87**

ANNUAL FOOD BUDGET SHORTFALL
$13,735,000

Figure 36

Percentage of Students Eligible for Free or Reduced-Price Lunch in Boone County School Districts

School District	2018	2019	2020	2021	2022
Columbia 93 School District (Columbia Public Schools)	46.40%	45.70%	45.30%	45.00%	44.10%
Southern Boone County R-1 School District (Ashland)	20.20%	20.60%	15.00%	15.60%	10.90%
Centralia R-VI School District	32.40%	29.50%	28.40%	20.90%	14.90%
Hallsville R-IV School District	34.60%	30.10%	30.80%	21.10%	14.50%
Harrisburg R-VIII School District	37.70%	36.30%	36.40%	34.90%	31.40%
Sturgeon R-V School District	42.00%	41.00%	40.10%	40.90%	34.70%
Missouri Schools	50.70%	50.10%	49.30%	45.90%	42.30%

Note: Percent of Students Eligible for Free or Reduced-Price Lunch in Boone County School Districts from 2018 to 2022 from the Missouri Department of Elementary and Secondary Education. There are multiple Food Bank partner agencies in Boone County, located at churches, businesses and housing areas.

Households and Housing

The availability of safe and affordable housing is a critical issue that affects individuals and families across the globe. In many cases, the availability of safe and affordable housing can serve as an indicator of the overall social, economic and demographic picture of a community. As mentioned previously, Boone County is home to multiple colleges, which impact the community in many ways, including housing.

In the 2010s, Columbia witnessed new apartment complexes built that primarily housed the student population. While this can be a positive development for students seeking housing, it can also have a negative impact on the availability of affordable housing for other members of the community. The cost of rent in these new complexes is generally higher than the median rent cost in Boone County.

This can make it difficult for individuals and families to find safe and affordable housing in the area. The lack of affordable housing can also impact other aspects of individuals' lives, such as their ability to access health care, education and job opportunities. It can also create economic inequality in the community, as those with lower incomes are often priced out of certain areas.

According to the 2017-2021 American Community Survey, there are 79,296 housing units in Boone County, with 92.2% occupied and 7.8% vacant. In Boone County, owner-occupied housing units account for 58% of all occupied housing units, while renter-occupied units make up the remaining 42%. This distribution of housing types is an important aspect of the overall housing landscape in the county.

Figure 37

Selected Housing Characteristics between Boone County and Missouri

Housing Characteristics	Boone County	Missouri
Median rent	$933	$886
Median mortgage cost	$1,421	$1,343
Median home value	$204,000	$171,800
Average household size of owner-occupied unit	2.54	2.57
Average household size of renter-occupied unit	2.13	2.21

Note: Selected Housing Characteristics between Boone County and Missouri from the 2017-2021 American Community Survey 5-year Estimates Table DP04

Figure 38

Median Rent in Boone County
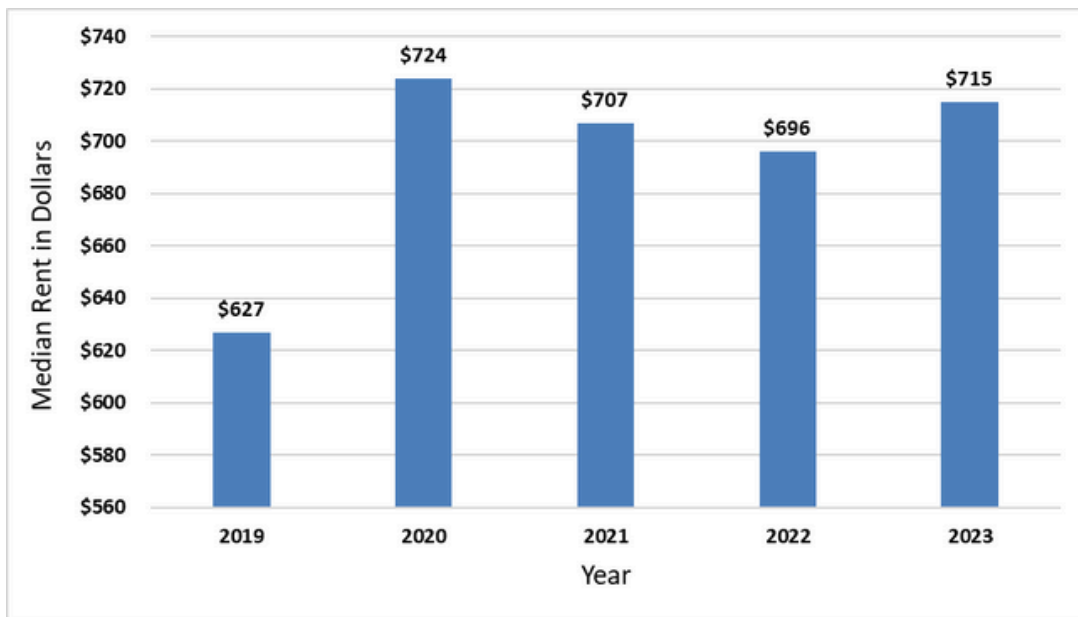
Note: Median rent in Boone County between 2019 and 2023 from the U.S. Department of Housing and Urban Development

It is important to look at the amount of income spent on housing by Boone County residents. Housing costs include rent or mortgage, utilities, taxes, insurance and condo or other fees. The U.S. Department of Housing and Urban Development (HUD) considers families who pay more than 30% of their income for housing as "cost burdened." Cost-burdened families "may have difficulty affording necessities such as food, clothing, transportation and medical care" (HUD, 2023). Half of Boone County renters spend 30% or more of their income on housing, with slightly over 44% spending 35% or more.

Figure 39

Percentage of Renters and Homeowners who are "Cost Burdened"
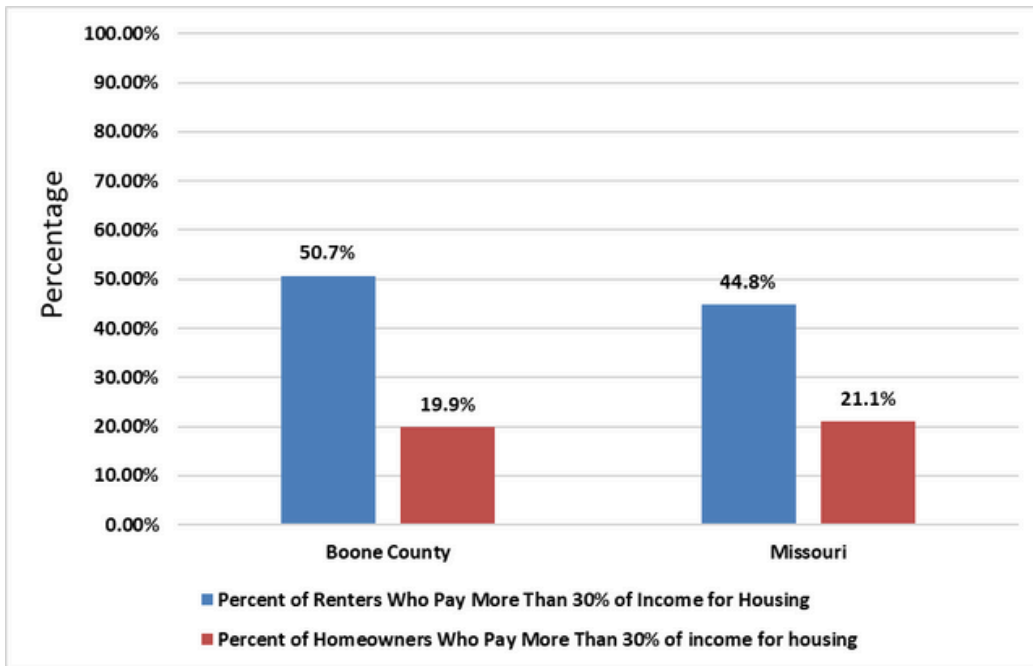
Note: Percentage of renters and homeowners in Boone County who are cost burdened from the 2017-2021 American Community Survey 5-year Estimates Table DP04

Figure 40

Rent Debt in Columbia and Boone County

Characteristics	Columbia	Boone County
Total Households Behind on Rent	2,180	2,650
Total Rent Debt	$3,360,000	$3,800,000
Rent Debt per Household	$1,500	$1,400
Children in Households Behind on Rent	1,300	1,600

Note: Estimated rent debt in Columbia and Boone County from the National Equity Atlas (2024)

Across the United States, on average, renters would have an additional $6,000 in disposable income if they were not rent burdened. This additional income could help families cover non-housing expenses.

Figure 41

Boone County Eviction Statistics

Eviction filings per day	3.7
Eviction filings rate/100	4
Eviction filings count	1,300
Unique households threatened rate/100	1,300
Unique households threatened count	3.8
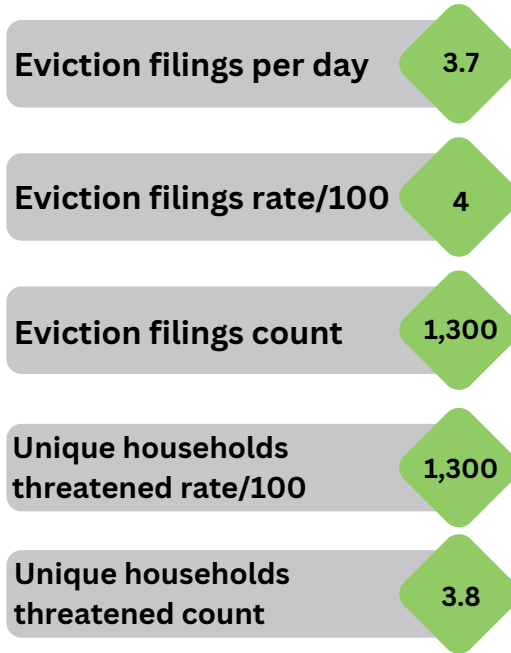
Note: 2018 Boone County eviction statistics
from Eviction Lab (2023)

Figure 42

Eviction Filing Rate in Boone County per 100 Renters
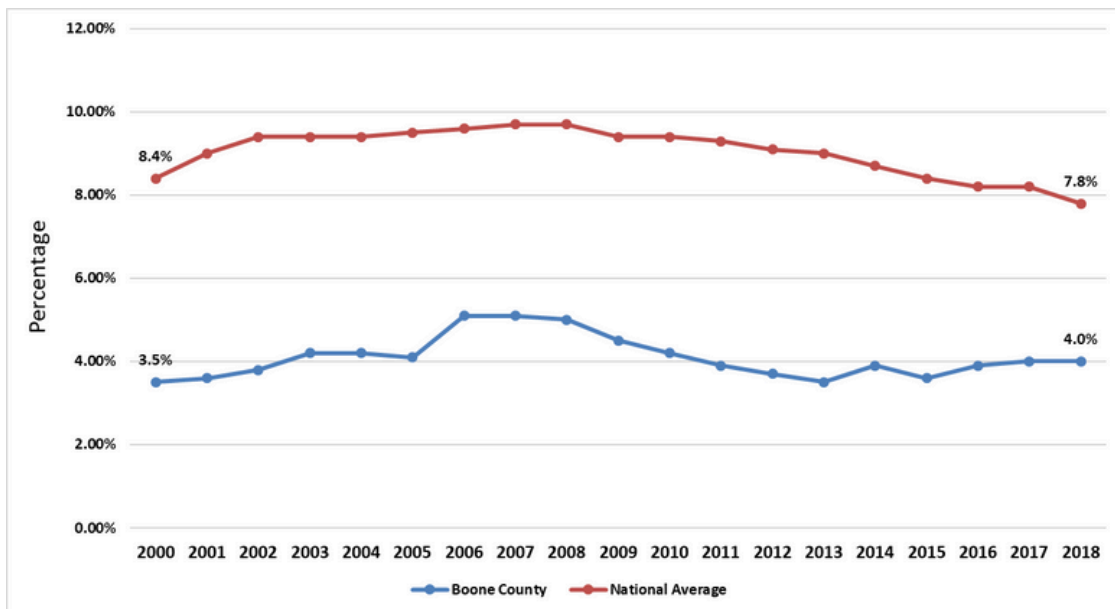
Note: Eviction filing rate per 100 renters between 2000 and 2018 in Boone County and the
United States from Eviction Lab (2023)

Homelessness

Boone County's primary indicator of homelessness is the number of individuals experiencing homelessness in the annual Point-In-Time Count (PITC). The PITC is conducted during a specified 24-hour period in January as a snapshot of the number of sheltered and unsheltered individuals as defined by the Department of Housing and Urban Development (HUD, n.d.).

In Boone County, the PITC is led by the Columbia/Boone County Public Health and Human Services Division of Human Services as part of the Missouri Balance of State Continuum of Care PITC.

Unsheltered - An individual or family who lacks a fixed, regular, and adequate nighttime residence, meaning: sleeping in a place not designed for or ordinarily used as a regular sleeping accommodation, including a car, park, abandoned building, bus or train station, airport, camping ground or other place not meant for human habitation.

Sheltered - An individual or family residing in an emergency shelter, safe haven, transitional housing or a hotel/motel paid for by a charitable organization.

As homeless individuals move from place to place, it is difficult to accurately count and assess their needs.

Locally, CoMo Mobile Aid Collective is a resource that provides direct aid and immediate assistance to the unsheltered in Columbia. In Columbia, there are two housing options specifically for veterans experiencing homelessness. Patriot Place Apartments contains 25 fully furnished one-bedroom apartments, and Welcome Home Inc., is a local shelter for homeless veterans. Welcome Home has 32 temporary shelter beds (Columbia Housing Authority, n.d.). The Salvation Army Harbor House in Columbia has rooms for families with small children as well as single men and women. St. Francis House (men) and Lois Bryant House (women) provide overnight shelter for those who are homeless. Room at the Inn, which used to operate only during the winter months, now provides shelter year-round. Project Homeless Connect is a bi-annual event which connects Columbia's homeless population to needed services.

Figure 43
Boone County Sheltered and Unsheltered Point-in-Time Counts
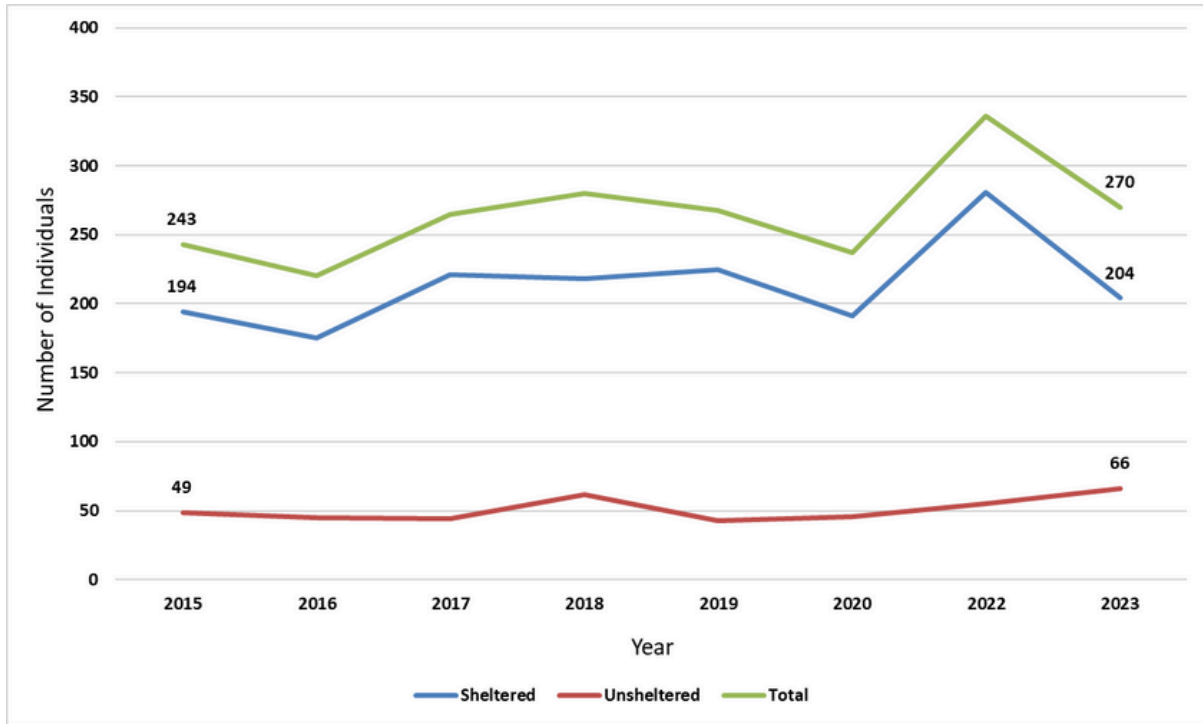
Note: Sheltered and unsheltered Point-in-Time Count of homelessness between 2015 and 2022 from Boone Indicators Dashboard (2023)

Health Behaviors and Outcomes

Life Expectancy at Birth

Life expectancy at birth is the average length of time a newborn can anticipate to live if current death rates do not change. Several factors influence life expectancy, such as demographics, gender, race, socioeconomic status, accessibility to health care, and the prevalence of risk factors and diseases. Therefore, life expectancy serves as a reliable indicator of the overall health of a particular region.

Boone County residents can expect to live an average of about 80 years based on life expectancy estimates. This places Boone County among the top 10 counties in Missouri for life expectancy. Figure 44 breaks down the life expectancy by gender and race for residents of Boone County, Missouri and the United States. The difference in life expectancy by race in Boone County is greater than both Missouri and the United States.

Figure 44
Life Expectancy at Birth Comparison by Gender and Race between Boone County, Missouri, and the United States.

Resident Characteristic	Boone County	Missouri	United States
All Residents	79.89 years	77.33 years	79.09 years
Female	81.82 years	80.12 years	81.62 years
Male	77.85 years	74.59 years	76.54 years
White	80.39 years	77.83 years	78.98 years
Black	72.92 years	72.16 years	75.32 years

Note: Life expectancy at birth by gender and race for Boone County, Missouri, and United States in 2019 from the Institute for Health Metrics and Evaluation (IHME)

Figure 45
Boone County Zip Code Health Rankings

Zip Code	Zip Name	Health Factors Combined Rate	Health Outcomes Combined Rate	Zip Code Health (rank out of 935)
65010	Ashland	72	86	75
65240	Centralia	234	248	227
65243	Clark	396	308	355
65201	Columbia	192	144	166
65202	Columbia	308	298	302
65203	Columbia	57	52	53
65255	Hallsville	163	163	162
65256	Harrisburg	128	180	153
65039	Hartsburg	27	20	23
65279	Rocheport	107	162	127
65284	Sturgeon	292	294	292

Note: 2022 Zip Code Health Rankings Report of Boone County Zip Codes from Missouri Zip Health Rankings (2023)

Health Risk Behaviors

Health risk behaviors are unhealthy behaviors that can be changed. Lack of exercise or physical activity, poor nutrition, tobacco use, and excessive drinking are some of the behaviors that cause chronic disease, sickness and early death (CDC National Center for Chronic Disease Prevention and Health Promotion, n.d.).

Research has found evidence that three health behaviors (tobacco use, poor diet, physical inactivity) contribute to four chronic diseases (cancer, cardiovascular disease, stroke, diabetes) that cause 50% or more of all deaths in the vast majority of communities.

This "3-4-50" framework applies to Boone County, where 51% of deaths are from these four chronic conditions.

The following are health behaviors of Boone County residents:

- 18% of adults smoke*
- 28% of adults are obese*
- 21% of residents are physically inactive*
- 16% of residents drink excessively*
- 1,579 sexually transmitted infections (chlamydia, gonorrhea, syphilis) were recorded in 2022*
- 32% of motor vehicle deaths involve alcohol*
- 18 drug poisoning deaths per 100,000 people*
- 32% of residents report fewer than 7 hours of sleep on average*
- An average of 80% of women ages 21-65 years were screened for cervical cancer in 2020**
- 71% of adults ages 50-75 years received a colon cancer screening in 2020**
- 71% of women ages 50-74 years had a mammogram in the past two years in 2020**
- 66% of adults aged 18 years and older had a dental care visit in the past year in 2020**
- 13% of adults ages 18-64 lacked health insurance in 2020**
- 6% of youth reported using tobacco in the last 30 days in 2022***
- 15% of youth reported using alcohol in the last 30 days in 2022***
- 4.6% of youth reported using marijuana in the last 30 days in 2022***
- 7.6% of youth reported using e-cigarettes in the last 30 days in 2022***

* 2023 County Health Rankings
** All Things Missouri
***2022 Missouri Student Survey for Boone County

Although Boone County residents' self-reported smoking rates have varied between 16% and 19% over the past five years and are consistently lower than Missouri's smoking rates (County Health Rankings and Roadmaps, n.d.). Smoking remains a contributor to chronic illnesses, diseases and deaths in the county. Boone County and Missouri residents die from lung cancer more than any other cancer form. Smoking remains the leading cause of lung cancer and contributes to cancers found throughout the body.

Looking at tobacco use by race in Boone County, the prevalence among Blacks/African Americans is 16.5%, compared with a prevalence of 9.4% among whites (Missouri Hospital Association, 2023). Figure 46 shows smoking-related deaths by race, highlighting the highest rates for smoking-related deaths in Black residents of Boone County.

Figure 46
Rate of Estimated Smoking-Attributable Causes of Death by Race in Boone County and Missouri
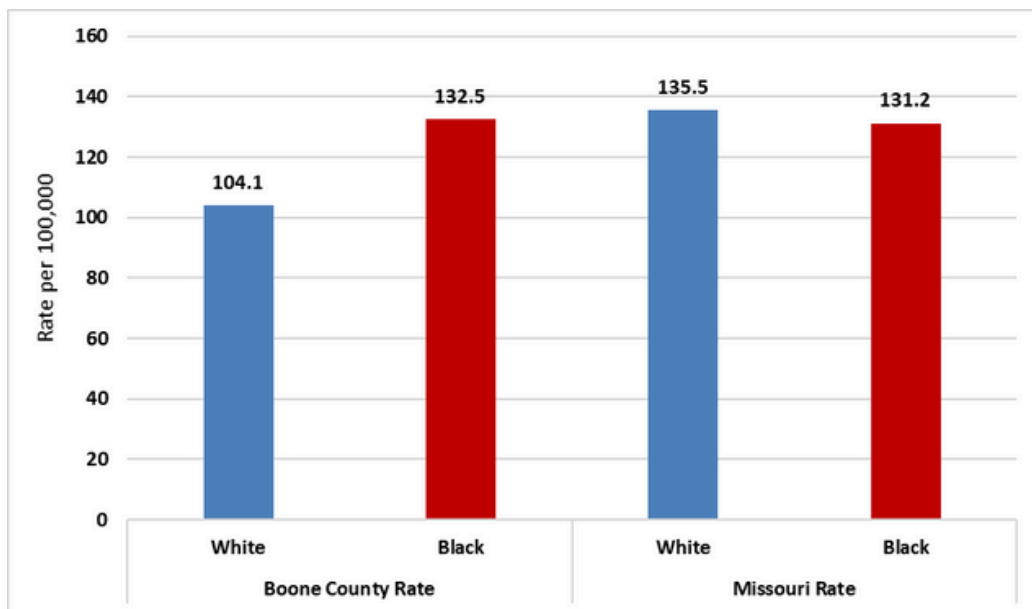
Note: Rate of estimated smoking-attributable causes of death between 2009 and 2019 per 100,000 residents of Boone County by race from the Missouri Department of Health and Senior Services (2023)

Sexually Transmitted Infections

Boone County has the eighth highest rate of sexually transmitted infections per 100,000 (935/100k) in the state from 2014-2023. There is a significant racial disparity in STI rates, with Black Boone County residents being seven times that of white Boone County residents between 2015-2022.
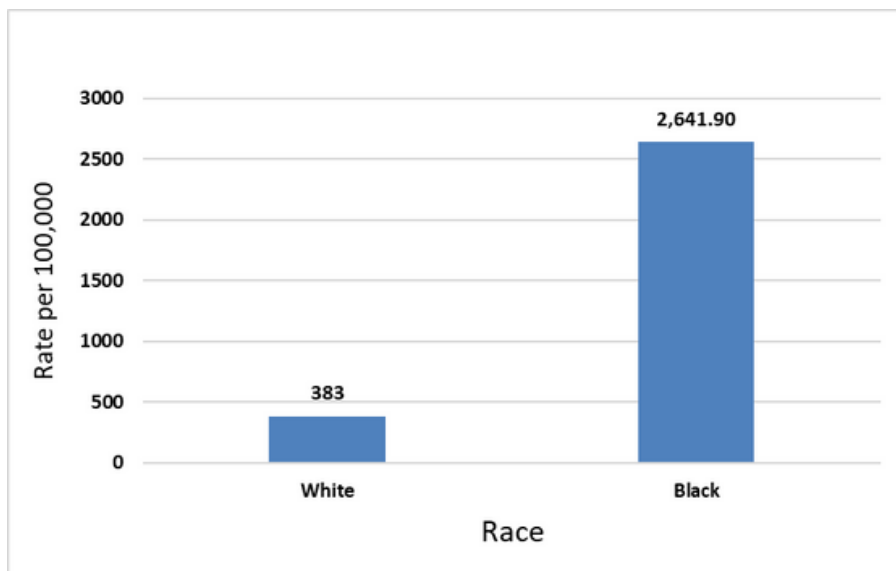
Figure 47

Number of Reported Sexually Transmitted Infections (STIs) in Boone County
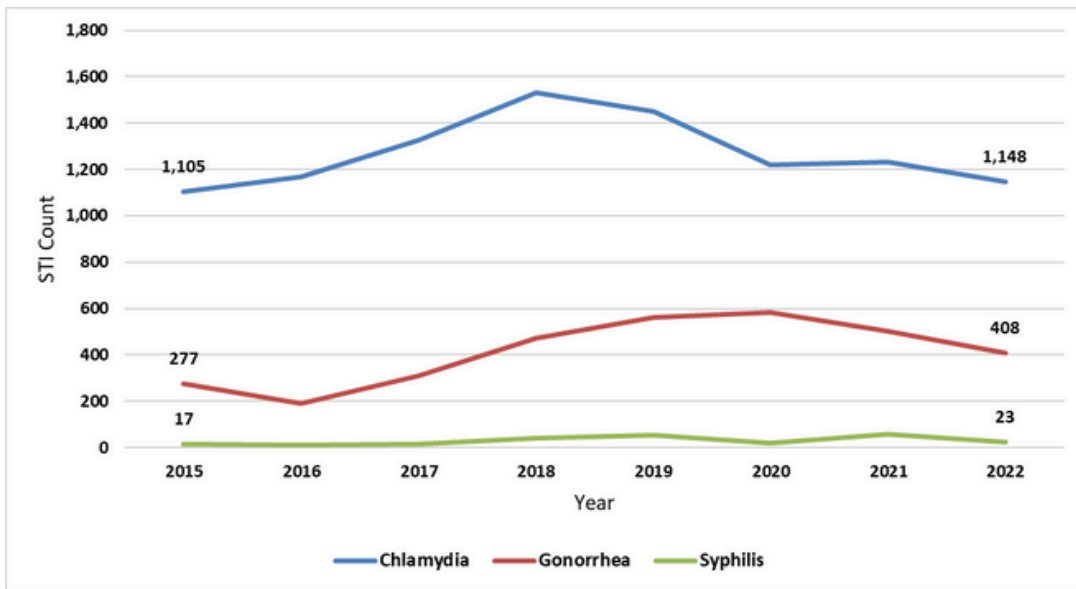
Note: Number of Reported STIs by type reported in Boone County between 2015 and 2022 from the Missouri Department of Health and Senior Services (2023)

Figure 48

Rate of Sexually Transmitted Infections (STIs) per 100,000 in Boone County by Race

Note: Rate of STIs per 100,000 people in Boone County by race between 2015 and 2022 from the Missouri Department of Health and Senior Services 2023

Pregnancy and Birth Characteristics

Figure 49 compares rates of birth characteristics for babies born to Boone County residents from 2017-18 to 2020-21.

Figure 49
Birth Characteristics Comparison between Boone County Mothers by Race

Race	White	Black or African-American
Indicator	**Rate**	**Rate**
Birth Weight: Very Low (less than 1500 g)	1.09	2.80
Birth Weight: Low (less than 2500 g)	7.25	15.45
Birth Weight: Normal (2500-4499 g)	91.65	84.02
Birth Weight: High (greater than 4499 g)	1.10	0.53
Education Status: Less Than 12 Years	4.76	17.31
Method of Delivery: C-Section	33.41	37.69
Number Born: Twin or Other Multiple Birth	3.96	4.32
Prenatal Care: Began First Trimester	84.53	70.48
Prenatal Care: None	0.47	1.40
Smoked During Pregnancy: Yes	9.97	13.42

Note: Birth characteristics comparison between Boone County mothers by race from 2017-18 to 2020-21 from the Missouri from the Missouri Department of Health and Senior Services (2023)

Infant Mortality

Infant mortality is the death of an infant before their first birthday. The infant mortality rate is infant deaths per 1,000 births. In 2020, the infant mortality rate in the United States was 5.4 deaths per 1,000 births (CDC National Center for Chronic Disease Prevention and Health Promotion, n.d.). Between 2011 and 2020, infant mortality in Boone County was 2.7 per 1,000 births, while infant mortality in Missouri was 5.2 per 1,000 during the same period. Figure 50 breaks down both the Boone County and Missouri infant mortality rate by race, showing a disparity between races.

Figure 50
Infant Mortality Rate per 1,000 by Race in Boone County and Missouri
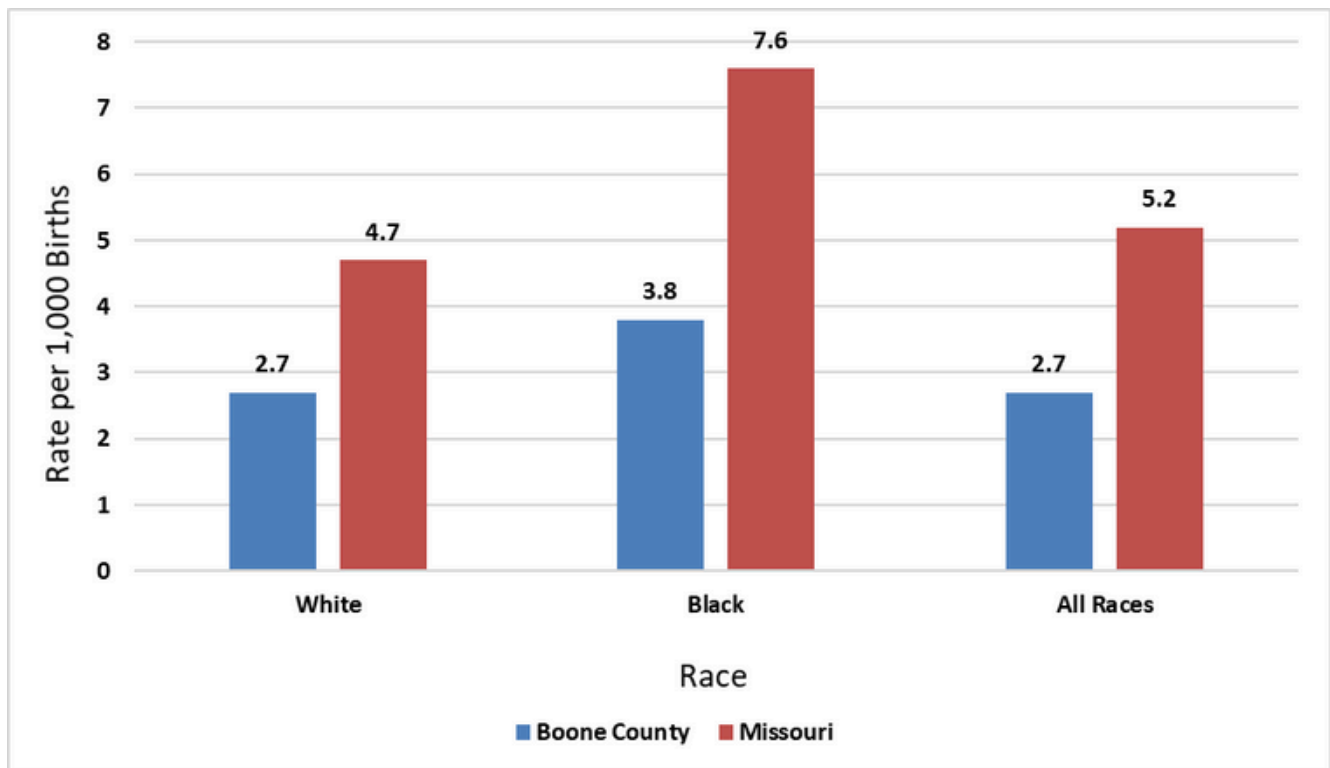
Note: Infant mortality rate per 1,000 by race in Boone County between 2016 and 2020 from the Missouri Department of Health and Senior Services (2023)

Mental Health

CDC estimates that one in five adults in the United States live with a mental illness. One in five youth between the ages of 13 and 18 have a serious debilitating mental illness or have suffered from one in the past.

Boone County has several community-based outpatient programs and residential treatment centers, but there is only one facility that offers inpatient hospitalization for psychiatric needs. County Health Rankings (2024) reports one mental health provider for every 230 Boone County residents.

This includes psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, mental health providers who treat alcohol and other drug abuse, and advanced practice nurses specializing in mental health care.

When Boone County residents were asked, "Thinking about your mental health, which includes stress, depression and problems with emotions, for how many days during the past 30 days was your mental health not good?" the average number of days adult respondents reported was 5.5 days (County Health Rankings and Roadmaps, 2024).

While data are available for those receiving treatment, there is very little information available on the mental health of the general population, especially in local areas. There is a higher risk of homicide, suicide and accidents among people suffering from serious mental illness. Additionally, they are at higher risk for chronic conditions such as diabetes, heart disease and stroke. Conversely, having chronic conditions can increase the risk for mental illness.

Figure 51

Mental Illness Disorder Categories in Boone County

Disorder Category	2022	2021	2020
Anxiety, Fear and Phobias	693	771	662
Attention Deficit	259	269	218
Bipolar Mood	299	352	366
Depressive Mood	713	887	863
Eating and Sleeping Disorders	11	12	17
Impulse Control and Conduct	190	220	215
Obsessive-Compulsive and Personality	121	159	141
Schizophrenia and Psychotic	245	304	320
Sexual Disorders	6	9	12
Trauma and Stress Related	749	877	784
Other and Unknown	22	37	36
Total Disorders	3,308	3,897	3,634

Note: Mental health disorder categories of Boone County individuals receiving assistance in Missouri Department of Mental Health treatment programs during Fiscal Years 2020 through 2022. The number of diagnoses is larger than the number served because some individuals had more than one type of disorder. Individuals are counted only once based on their first treatment episode of the fiscal year.
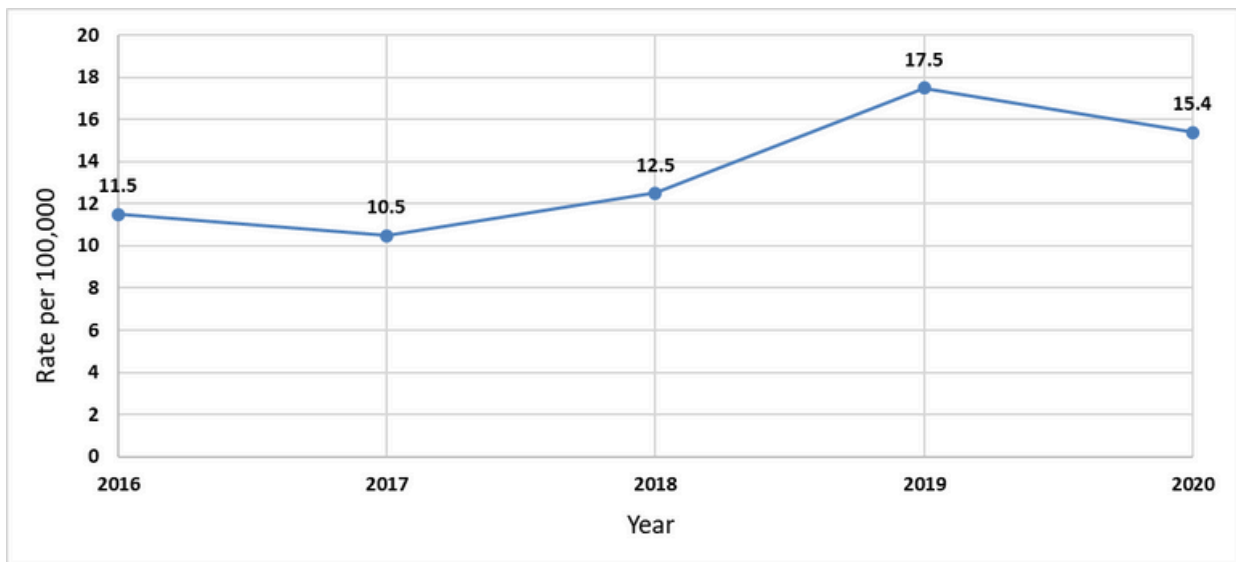
Suicide

Boone County recorded 119 suicide deaths between 2016 and 2020. Boone County's male suicide rate is over twice that of its female suicide rate, as shown in Figure 52. In Boone County, suicide rates are highest between ages 45 and 64, with 19.4 suicides per 100,000. In Figures 52 and 53, suicide rates are shown by gender and year.

Figure 52
### Suicide Rate by Gender in Boone County
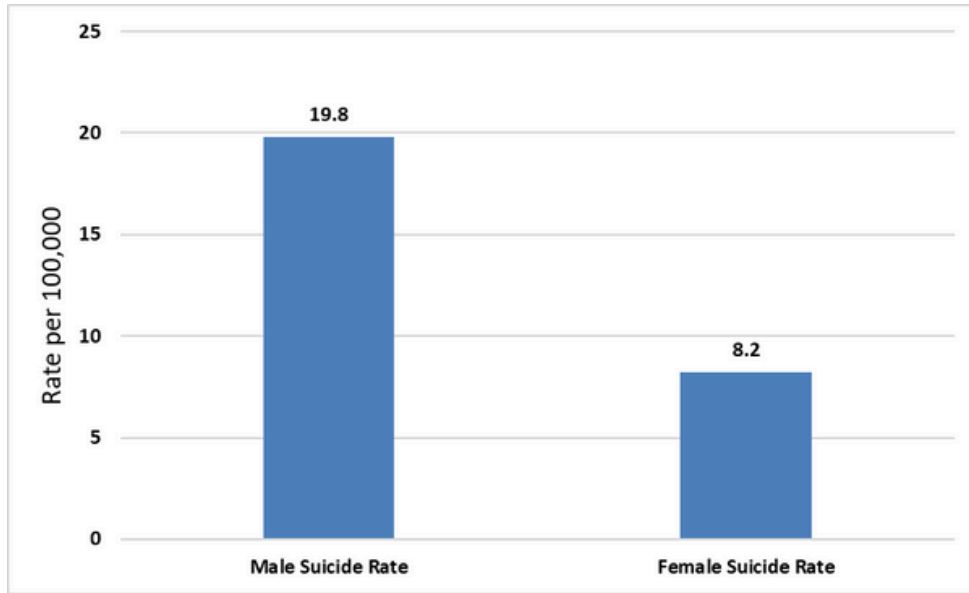
Note: Suicide rate per 100,000 people by gender in Boone County between 2016 and 2020 from the Missouri Department of Health and Senior Services (2023)

Figure 53
Suicide Rate by Year in Boone County

Note: Suicide rate per 100,000 people in Boone County between 2016 and 2020 from the Missouri Department of Health and Senior Services (2023)

Figure 54

Number and Means of Suicide
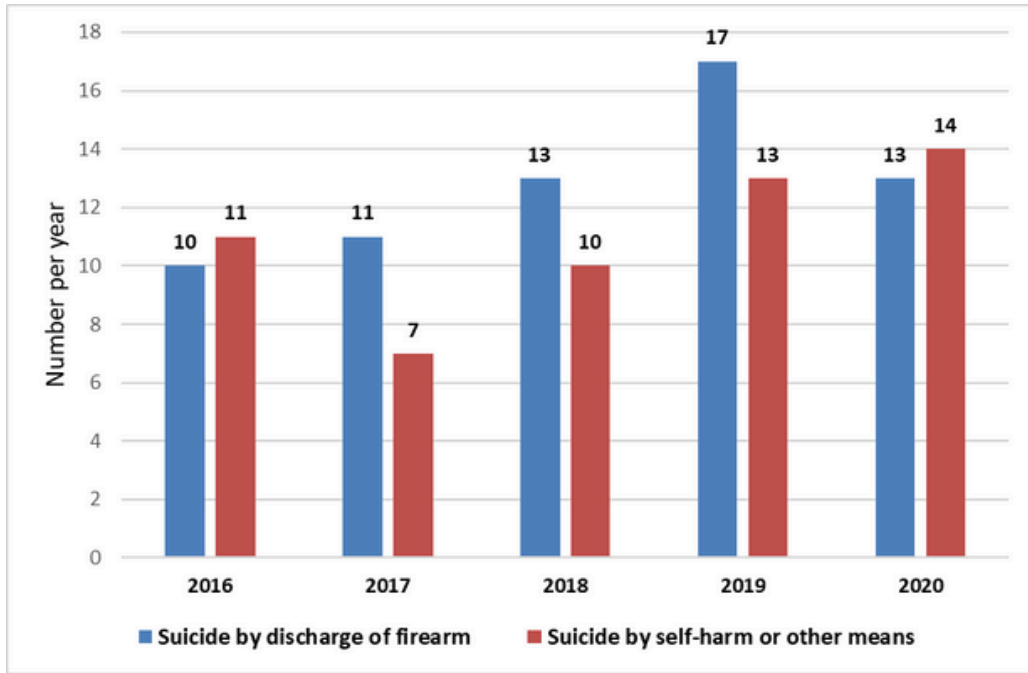
Note: Number and means of suicides per year of Boone County residents from 2016 to 2020 from the Missouri Department of Health and Senior Services (2023)

Figure 55

Youth Behavior and Depression Scale Responses from the 2022 Missouri Student Survey

Behavior: Last 12 months	Percentage
Seriously considered suicide	10.80%
Planned suicide	9.00%
Attempted suicide	7.30%

Depression Scale (replied often or always in the past month)	Percentage
Were very sad	25.20%
Were grouchy or irritable, or in a bad mood	29.30%
Felt hopeless about the future	7.10%

Note: Responses from Boone County youth to Behavior and Depressions Scale questions from the 2022 Missouri Student Survey (2023)

Substance Use and Abuse

In fiscal year 2022, there were 1,484 Boone County residents that were admitted to a Division of Behavioral Health substance use treatment program (Missouri Status Report on Substance Use and Mental Health).

Figure 56
Boone County Residents Primary Drug of Concern at Entry to a Treatment Program

Primary Drug Problem	2022	2021	2020
Alcohol	411	309	371
Marijuana	173	162	202
Cocaine	53	41	41
Methamphetamine	436	282	306
Heroin	162	156	177
Fentanyl	80	35	12
Prescription Opioid	128	108	93
Prescription Non-Opioid	25	19	24
Other Substances	16	9	9
Total Individuals Admitted	1,484	1,121	1,235
Total Males Admitted	859	634	760
Total Females Admitted	624	487	474

Note: Primary drug of concern at admittance to a treatment program in Boone County between fiscal years 2020 to 2022 from the 2023 Status Report on Missouri's Substance Use and Mental Health report (2023)

Among Missouri's youth, alcohol is the most commonly used substance according to the 2022 Missouri Student Survey. It is estimated that 42.8% of youth in Boone County think it is easy to obtain alcohol and 43.4% believe alcohol use presents only a "slight" or "no" risk. In Missouri, the average age of first use across six types of drugs/tobacco is 12 years old.

With Columbia being a college community, there are many bars and alcohol outlets, and use can be significant at times. In 2023, there were 273 on-premise liquor licenses issued. According to the 2024 County Health Rankings, 20% of Boone County residents reported binge or heavy drinking. There were 111 alcohol-induced deaths in Boone County between the years 2009 and 2019 (MOPHIMS).

Figure 57

Drug and Alcohol Involved Statistics in Boone County

Impaired Driving	2021	2020	2019
Alcohol Involved Crashes	108	93	107
Fatal Crashes	2	3	2
Injury Crashes	39	34	41
Crash Fatalities	2	3	2
Crash Injuries	58	46	53
Drug Involved Crashes	47	35	20
Fatal Crashes	3	2	3
Injury Crashes	11	15	10
Crash Fatalities	3	2	3
Crash Injuries	14	20	14

Police Reports	2021	2020	2019
DUI Arrests	660	541	817
Liquor Law Arrests	135	95	293
Drug Arrests	761	791	1,116
Violent Offenses	782	688	531
Domestic Violence Reports	1,423	2,010	1,360
Property Offenses	4,114	4,277	4,254

Note: Drug and alcohol involved statistics in Boone County between 2019 and 2021 from the 2022 Missouri Status Report on Substance Use and Mental Health (2023)

Figure 58

Dispatches Involving Suspected Drug Overdose

Year	Dispatches involving suspected overdose	Officer reports taken, designated probable overdose	Deaths indicated cause from drug overdose by medical examiner, suspected or confirmed
2020	402	193	18
2021	378	193	31
2022	388	197	30
Totals	**1,168**	**583**	**79**

Note: Columbia Police Department and Boone County Sheriff dispatches involving a suspected overdose in Boone County between 2020 and 2022 (2023)
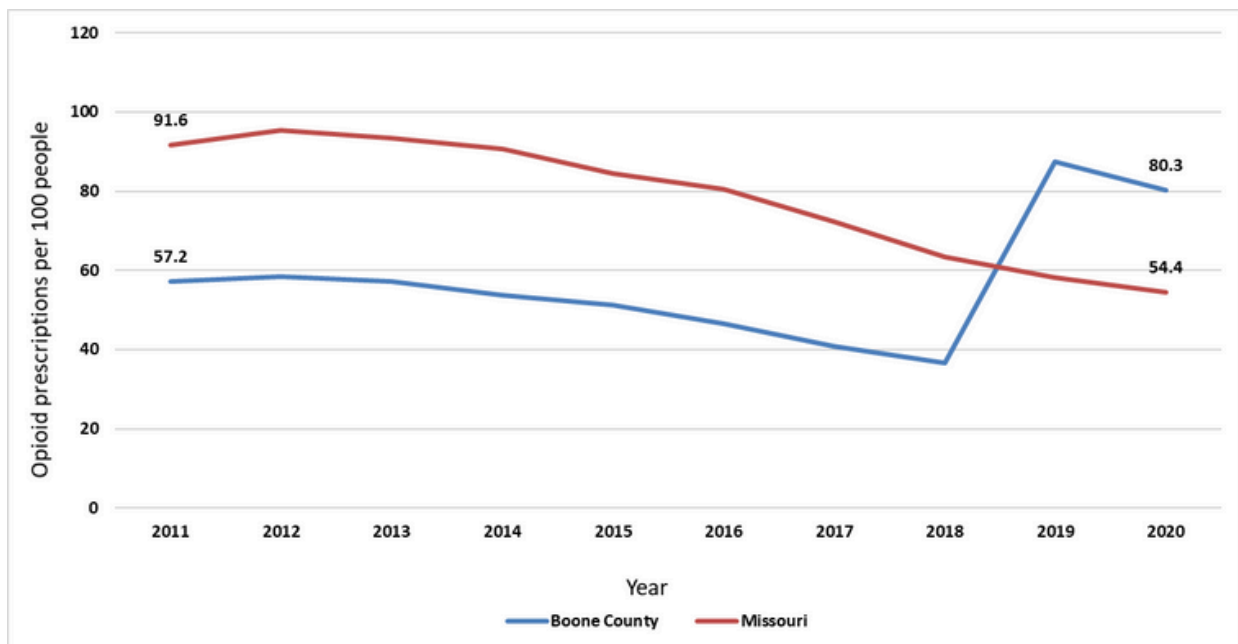
Opioids

Since 2001, the rate of opioid-related deaths has steadily increased in Missouri. By 2010, drug overdose deaths surpassed motor vehicle-related deaths in Missouri. Between 2014 and 2016, there were 29 counties with more drug overdose deaths than motor vehicle accident deaths.

In 2021, Missouri became the final state to implement a prescription drug monitoring program (PDMP). Before 2021, the St. Louis County Health Department administered a PDMP with 75 participating cities and counties in Missouri. This covered 85% of the state's population and 94% of health care providers. Both the City of Columbia and Boone County were participants in the St. Louis PDMP.
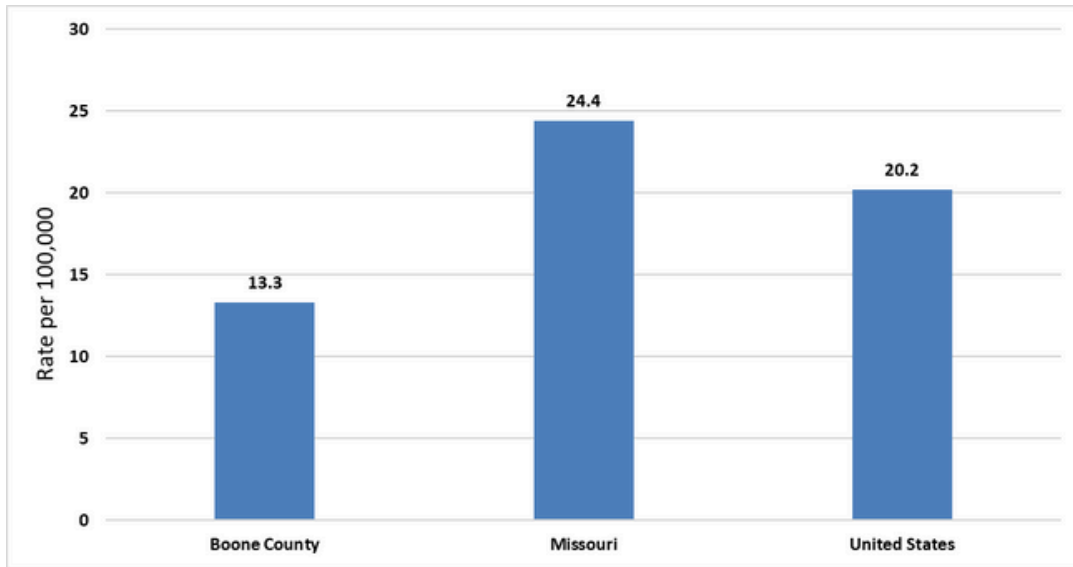
Figure 59
Opioid Dispensing Rate Comparison between Boone County and Missouri

Note: Opioid dispensing rate per 100 people in Boone County and Missouri between 2011 and 2020 from the Centers for Disease Control and Prevention (2023)
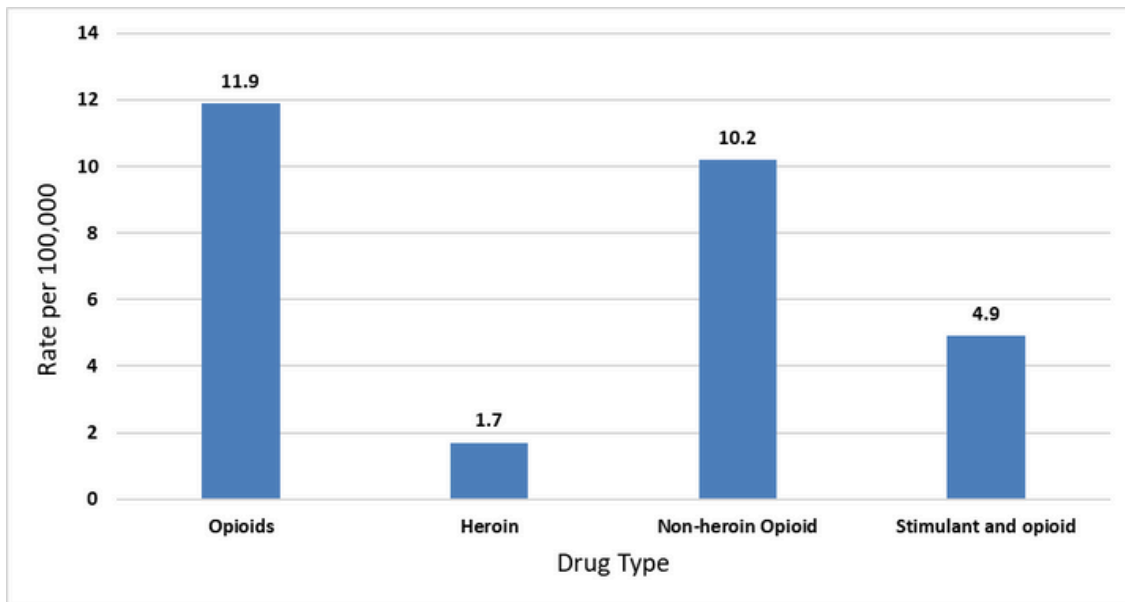
Figure 60

Opioid Overdose Mortality Rate Comparison between Boone County, Missouri and the United States

Note: Comparison of opioid overdose mortality rates per 100,000 ages 15 to 64 between 2015 and 2019 for Boone County, Missouri, and the United States from the NORC at the University of Chicago (2023)

Figure 61

Overdose Mortality Rate by Drug in Boone County

Note: Overdose mortality rate by drug per 100,000 in Boone County between 2016 and 2021 from the Missouri Department of Health and Senior Services (2023)

Figure 62
Boone County Fatal Overdoses

All Drug Overdose Mortality Rates in Boone County (2021)	
All drug overdoses	52
Rate (per 100k)	27.98

Missouri Resident All Drug Overdose Deaths (2021)	
All drug overdoses	2,163
Rate (per 100k)	35.07

*On the list of Top Missouri Counties with the Highest All Drug Overdose Mortality Rates (2021), Boone County rates #33
Note: Fatal overdoses in Boone County and Missouri in 2021 from the Missouri Department of Health and Senior Services (2023)

Figure 63
Boone County Non-fatal Overdoses

All Drug Overdose Inpatient Visits in Boone County (2018-2020)	
All drug visits	640
Rate (per 10k)	11.78

*On the list of Top Missouri Counties with the Highest Inpatient All Drug Visits (2018, 2019, 2020), Boone County ranks #57

All Drug Overdose ER Visits in Boone County (2018-2020)	
All drug visits	672
Rate (per 1k)	1.24

*On the list of Top Missouri Counties ER with the Highest ER All Drug Visits (2018, 2019, 2020), Boone County ranks #72
Note: Non-fatal overdoses in Boone County between 2018 and 2020 from the Missouri Department of Health and Senior Services (2023)
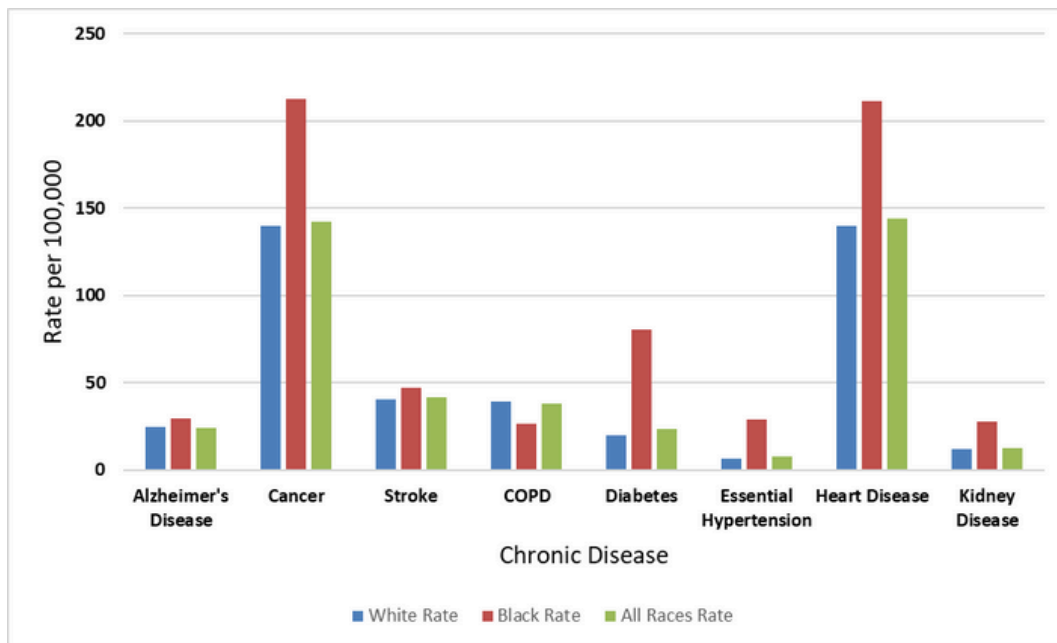
Chronic Disease

According to the CDC, chronic diseases are responsible for seven of 10 deaths each year, and treating people with chronic diseases accounts for most of the nation's health costs (CDC National Center for Chronic Disease Prevention and Health Promotion, n.d.). Heart disease, stroke, cancer, diabetes, obesity, and arthritis are among the most common, costly and preventable health problems. Over half of American adults have at least one chronic health condition. It is estimated that four out of 10 adults have two or more chronic diseases. The 2019 and 2020 Behavioral Risk Factor Surveillance Surveys (BRFSS) reported the following results for Boone County adults 18 years and older:

- 27% have been diagnosed with high blood pressure
- 28.6% have been diagnosed with high cholesterol
- 10% have been diagnosed with asthma
- 8.6% have been diagnosed with diabetes
- 5.6% have been diagnosed with cancer
- 23.9% have been diagnosed with arthritis

Figure 64
Rate of Chronic Disease Deaths by Race in Boone County
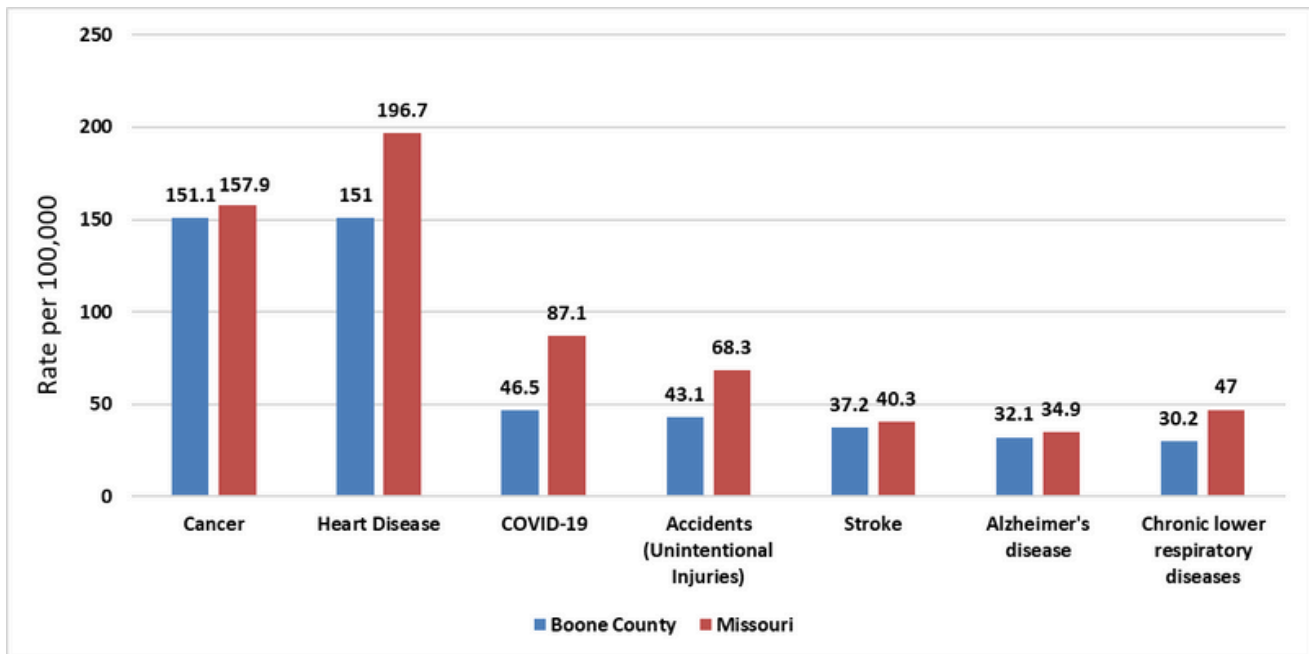

Note: Five-year average rates of Leading Chronic Disease deaths in Boone County per 100,000 by race between 2016 and 2020 from the Missouri Department of Health and Human Services (2023)

Leading Causes of Death

The Missouri Public Health Information Management System (MOPHIMS, n.d.) contains information about all Missouri residents' deaths, including leading causes based on age and race. In the years 2016 to 2020, there were 5,965 deaths in Boone County (706.8 deaths per 100,000). Among Boone County residents between 2016 and 2020, cancer, heart disease, stroke, unintentional accidents and diabetes were the most common causes of death.
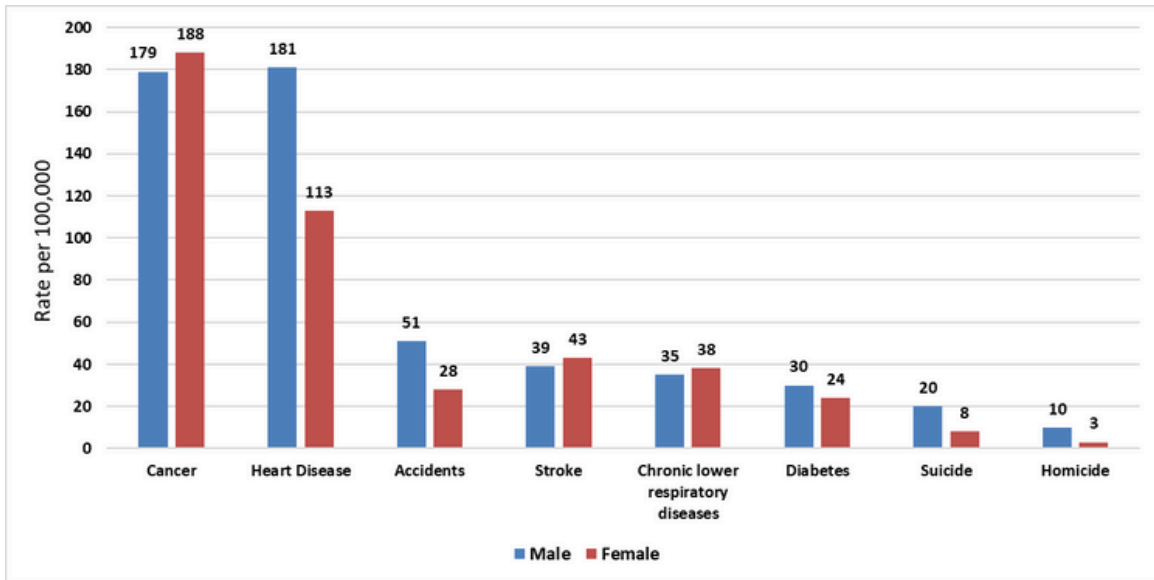
Figure 65

Leading Causes of Death in Boone County and Missouri in 2020

Note: Comparison of rates of leading causes of death in Boone County and Missouri in 2020 per 100,000 from the Missouri Department of Health and Senior Services (2023)

Figures 66 through 72 compare causes of death for Boone County residents by gender and by race, highlighting disparities between both males and females as well as Black and white residents.

Figure 66

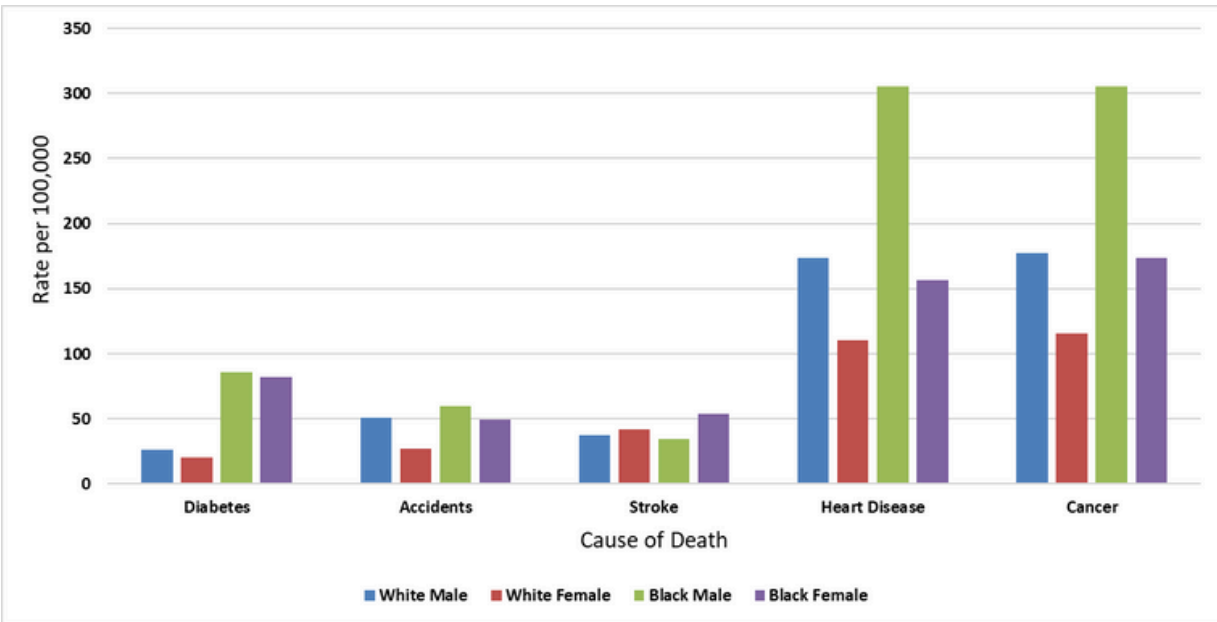Leading Causes of Death in Boone County by Gender

Note: Five-year average rates of leading causes of death in Boone County per 100,000 by gender from 2016-2020 from the Missouri Department of Health and Senior Services (2023). Rates are rounded to the nearest whole number

Figure 67

Leading Causes of Death in Boone County by Race
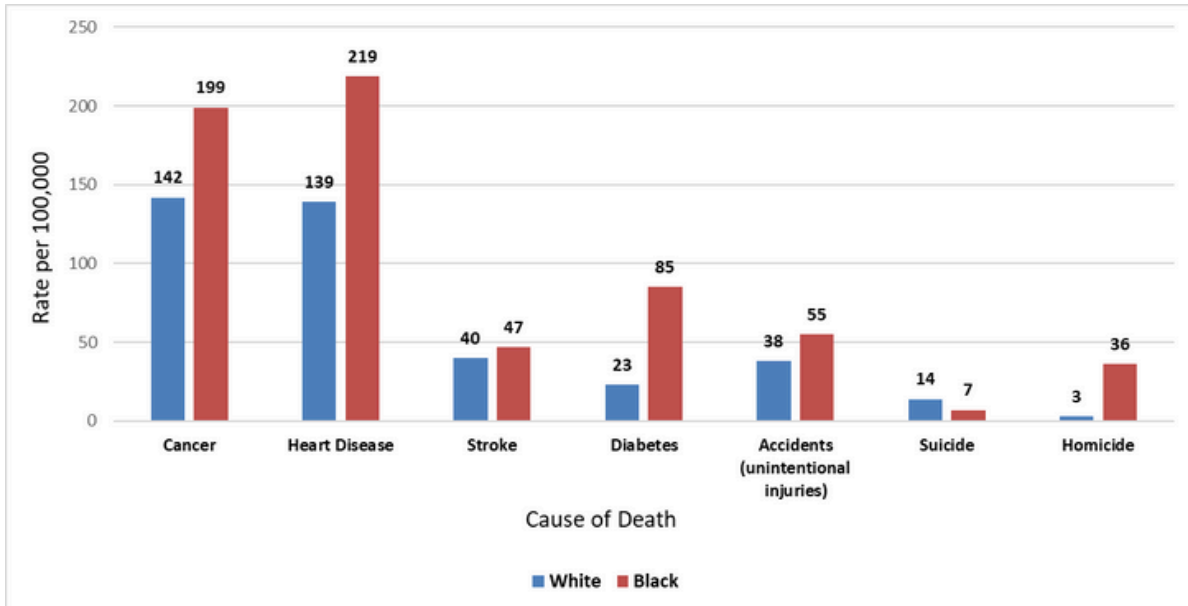
Note: Five-year average rates of leading causes of death in Boone County per 100,000 by race from 2016-2020 from the Missouri Department of Health and Senior Services (2023). Rates are rounded to the nearest whole number

Figure 68

Leading Causes of Death in Boone County by Race and Gender

Note: Comparison of rates of leading causes of death in Boone County per 100,000 by race and gender from 2016-2020 from the Missouri Department of Health and Senior Services (2023)

Figure 69
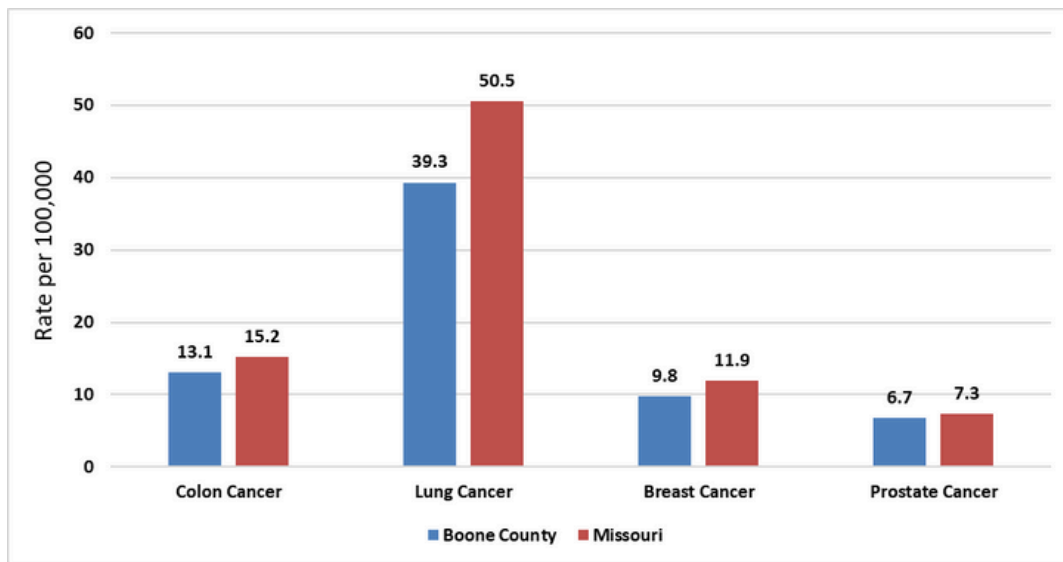
Cancer Death Rate in Boone County by Race
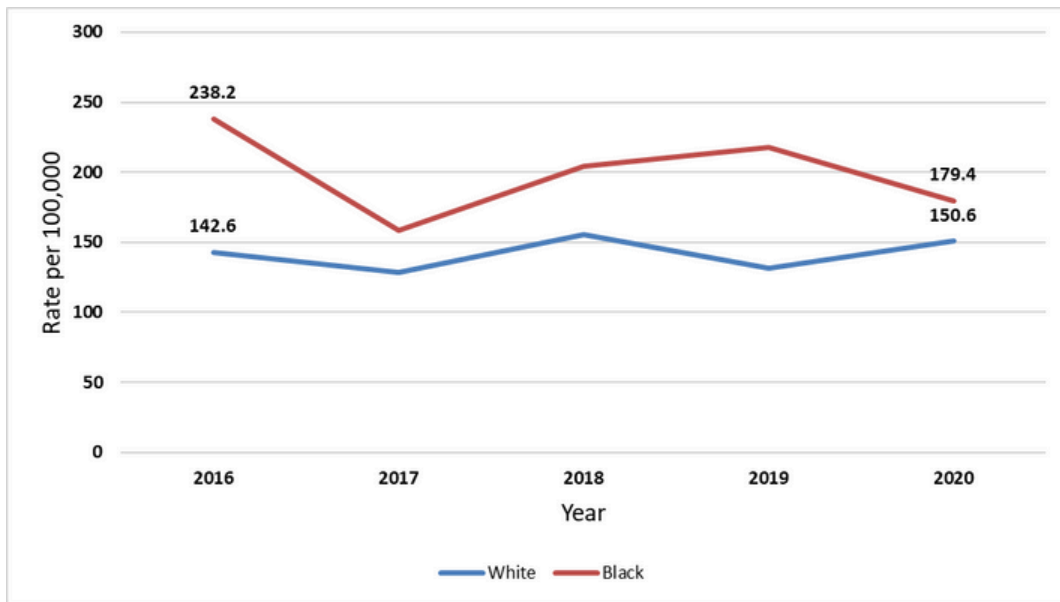
Note: Comparison of death rates due to cancer by race per 100,000 in Boone County between 2016 and 2020 from the Missouri Department of Health and Senior Services (2023)

Figure 70
Heart Disease Death Rate in Boone County by Race
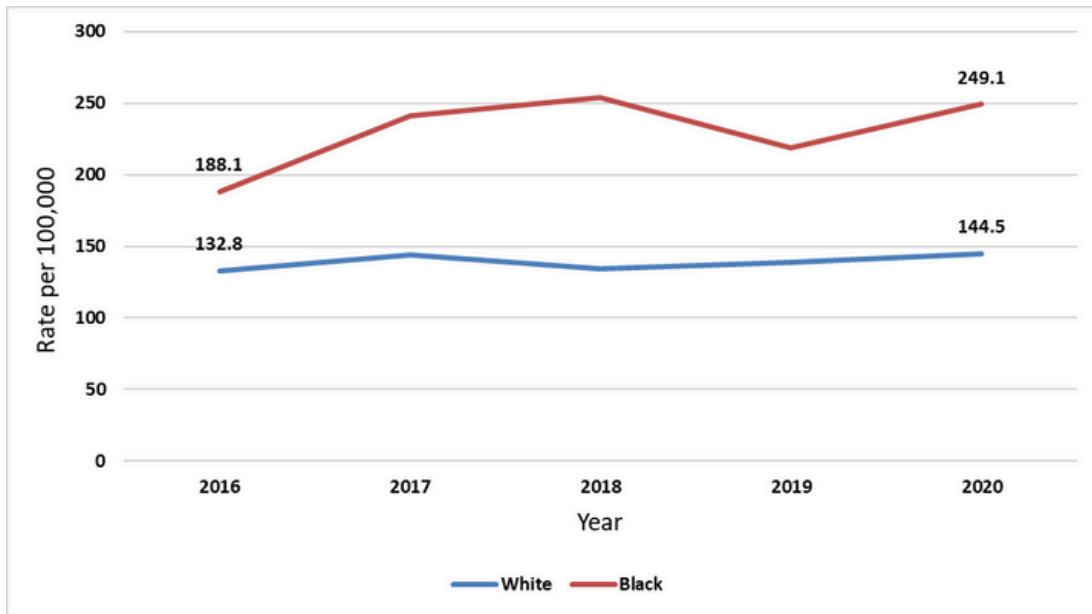
Note: Comparison of death rates due to heart disease by race per 100,000 in Boone County between 2016 and 2020 from the Missouri Department of Health and Senior Services (2023)

Figure 71
Death Rates per 100,000 due to Selected Cancers in Boone County and Missouri

Note: Death rates per 100,000 due to selected cancers from 2010-2019 in Boone County and Missouri from the Missouri Department of Health and Senior Services (2023)
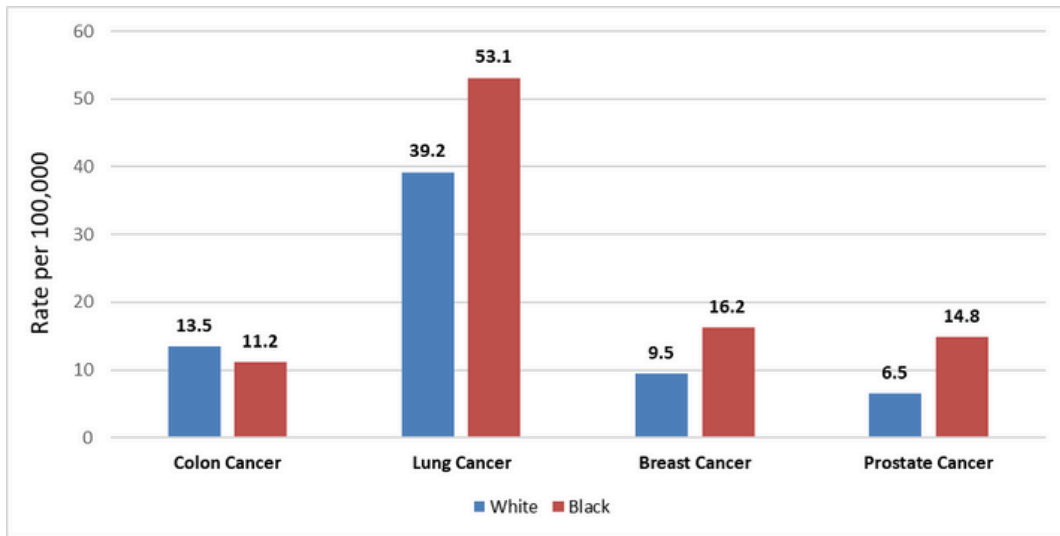
Figure 72
Death Rates per 100,000 due to Selected Cancers in Boone County by Race

Note: Death rates per 100,000 due to selected cancers from 2010-2019 in Boone County by race from the Missouri Department of Health and Senior Services (2023)

COVID-19

The first case of COVID-19 in Boone County was reported March 17, 2020. Unfortunately, this case also resulted in the first death in the county related to COVID-19. To limit the spread of the virus, the City of Columbia issued a declaration of emergency on March 16, 2020. This allowed the city to mobilize its resources as well as state and federal resources to respond to the situation. On March 25, 2020, a "stay-at-home" order was issued by the City of Columbia and Boone County. The purpose of this order was to slow down the spread of the virus and give local hospitals time to prepare and ensure there was enough capacity for testing.

During this time, there were additional cases reported in the area and community transmission started to occur. Columbia/Boone County Public Health and Human Services (PHHS) conducted case investigation and contact tracing with the help of various internal units and staff from other City of Columbia departments. These individuals were trained quickly and became a valuable resource for PHHS surge staff. PHHS relied on data and guidance from organizations such as the CDC and World Health Organization to develop guidance for different entities, including individuals, businesses, schools, event organizers and faith-based organizations. It was important for Boone County to consider data from surrounding communities and the strain on health care infrastructure in the overall response.

The PHHS director utilized the authority given by city and county ordinances to issue public health orders. These orders were implemented to slow the spread of COVID-19 and prevent local health care facilities from being overwhelmed. The governor of Missouri also used executive authority to address the outbreak at a statewide level, including implementing stay-at-home orders. However, when these state measures expired, many jurisdictions in Missouri implemented their measures based on local conditions and the political environment. This led to confusion and challenges among community entities regarding how the Boone County orders applied to them. A total of 22 public health orders were issued for Columbia and 20 for Boone County during the course of the pandemic.

Between March 2020 and May 2023, when the public health emergency declarations ended, Boone County reported a total of 56,106 cases and 299 COVID-related deaths. The total number of cases includes laboratory-confirmed cases as well as positive cases identified through home testing and reported to PHHS. Individuals who were re-infected are also included in the total.

The following figures provide information about COVID-19 cases by gender, race, age and zip code.

Figure 73

Reported COVID-19 cases by Month in Boone County
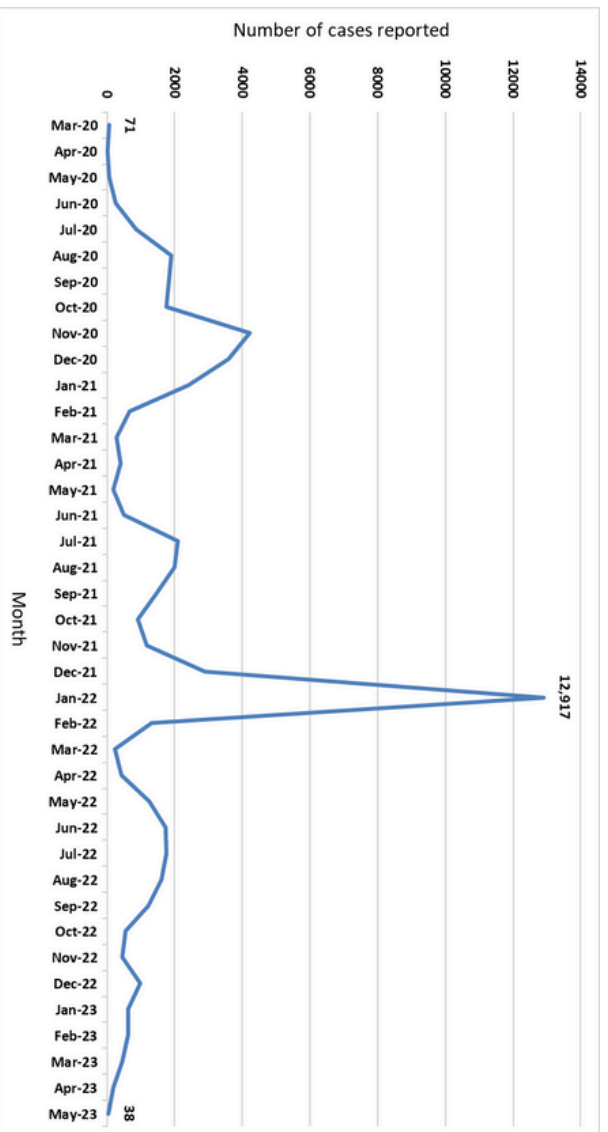
Note: The number of reported COVID-19 cases per month in Boone County between March 17, 2020, and May 17, 2023

Figure 74

Percentage of Reported COVID-19 cases in Boone County by Gender
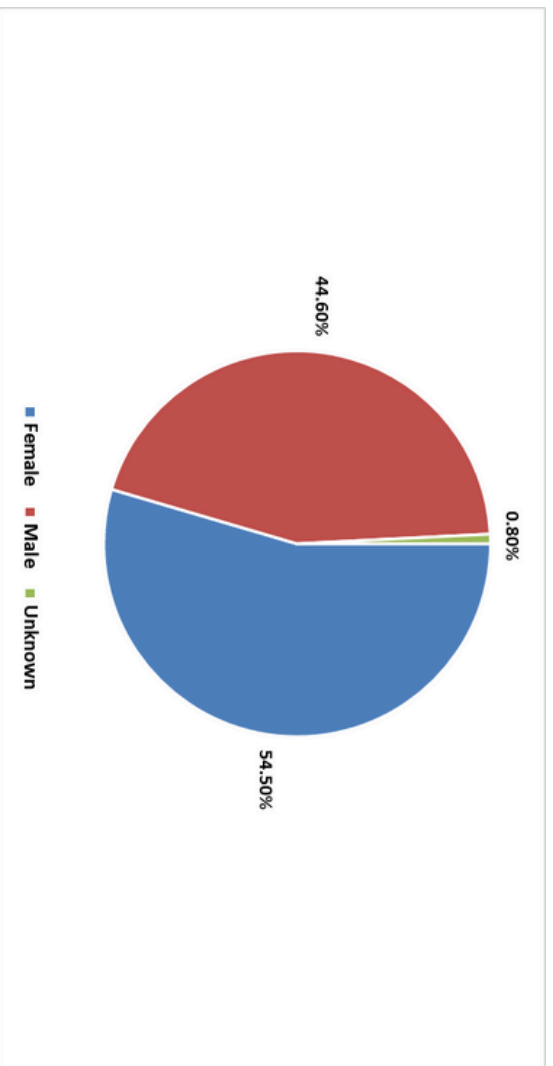
Note: The percentage of reported COVID-19 cases in Boone County by gender between March 17, 2020, and May 17, 2023

Figure 75

Percentage of Reported COVID-19 cases in Boone County by Race
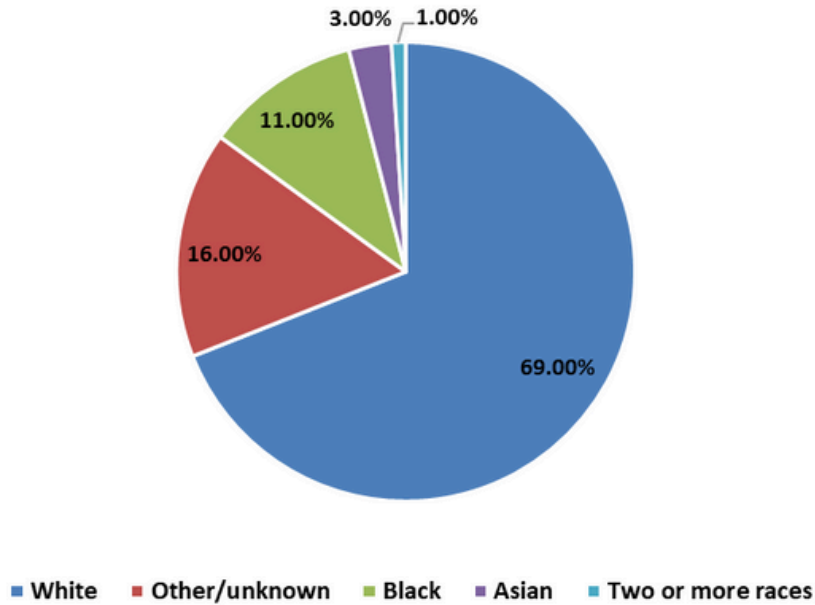
Note: The percentage of reported COVID-19 cases in Boone County by race between March 17, 2020, and May 17, 2023

Figure 76

Number of Reported COVID-19 cases in Boone County by Age Group
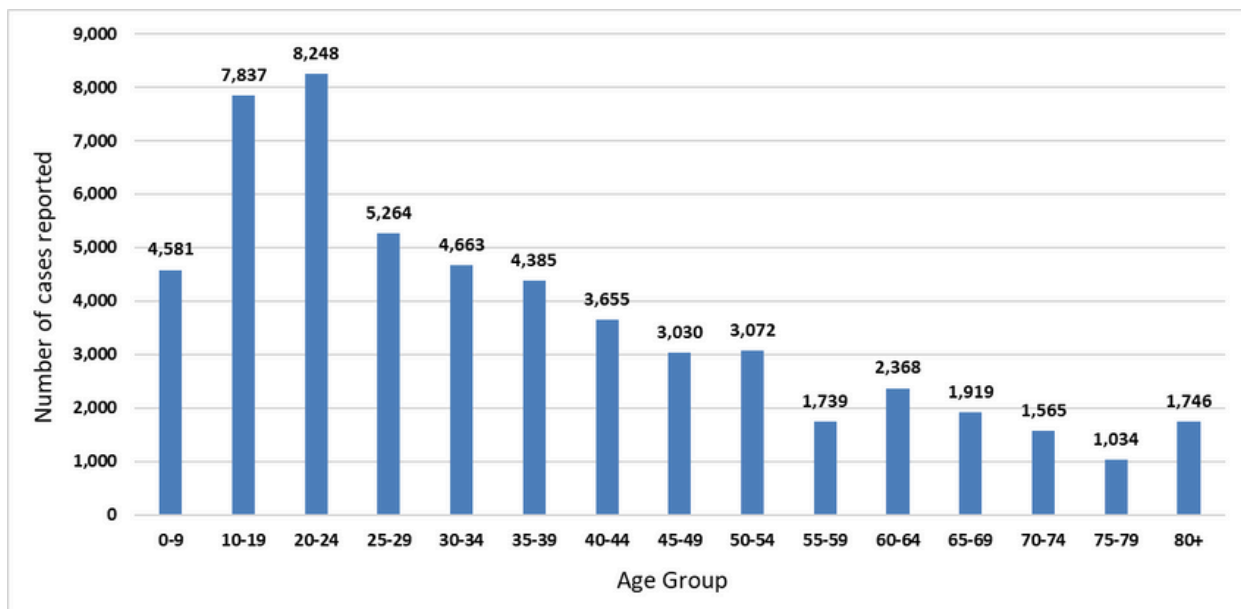
Note: The number of reported COVID-19 cases in Boone County by age group between March 17, 2020, and May 17, 2023

Figure 77

Number of Reported COVID-19 cases in Boone County by Zip Code

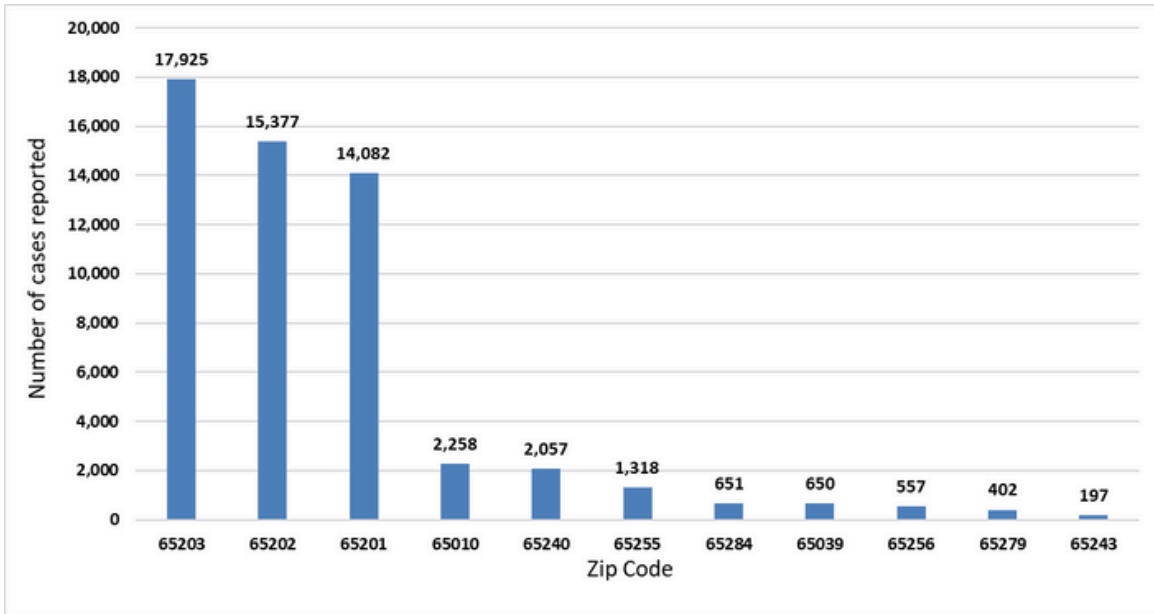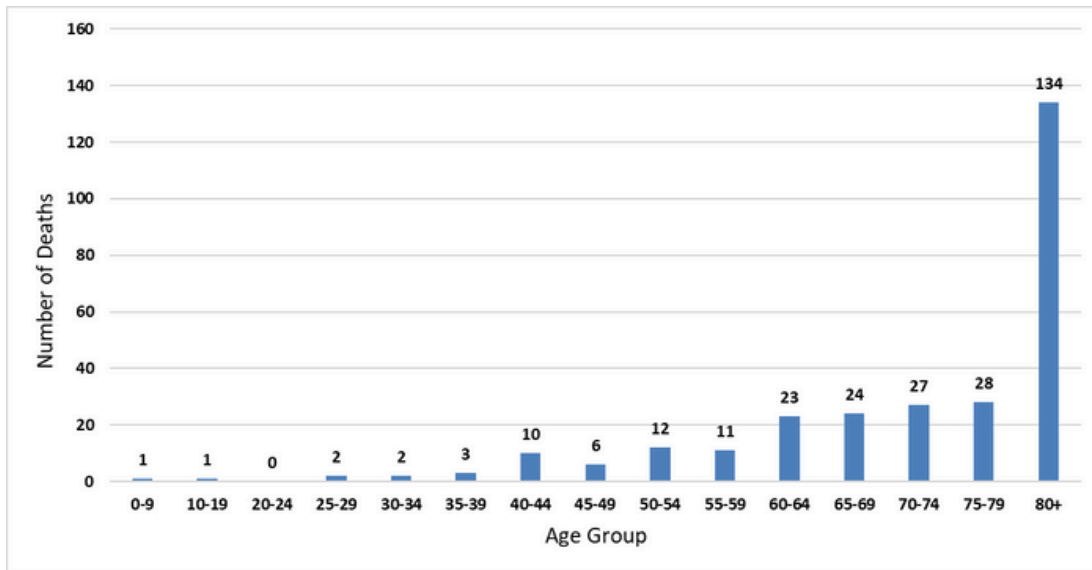*Note:* The number of reported COVID-19 cases in Boone County by zip code
between March 17, 2020, and May 17, 2023

Figure 78

Number of COVID-19-related Deaths in Boone County by Age Group

Note: The number of COVID-19-related deaths in Boone County by
age group between March 17, 2020 and May 17, 2023

Health Care Resources and Utilization

Health care plays a significant role in Boone County's health and economic well-being. A total of five hospital systems provide more than 1,000 beds, offering a wealth of health care resources. The University Hospital and Clinics, Boone Hospital and Harry S. Truman Veterans' Hospital create more than 8,000 jobs in Boone County.

Health Care Facilities

University of Missouri Health System

- Five MU Health Care hospitals offer a wide variety of services to Boone County and surrounding counties (University of Missouri Health Care, 2023). Research and training for future health professionals are provided by this academic health center. They include:
  - University Hospital offers the only Level I trauma center and helicopter service in central Missouri. The hospital specializes in treating the most severe illnesses and injuries, with physicians throughout the state referring cases to this location.
  - The University of Missouri Women's Hospital is the state's only hospital offering the most comprehensive women's health care. Located within the University Hospital, the Women's Health Center provides world-class care to the women of central Missouri in a compassionate and sensitive environment.
  - Missouri Orthopedic Institute is central Missouri's largest freestanding orthopedic center and comprehensive orthopedic surgery center.
  - Ellis Fischel Cancer Center is dedicated to providing the latest cancer treatments and improve quality of life for thousands of people each year. Named after Dr. Ellis Fischel, a physician who envisioned a statewide plan for controlling cancer, the hospital was dedicated April 26, 1940, as the first cancer center west of the Mississippi River.
  - Missouri Psychiatric Center offers short-term, intensive inpatient treatment services for adults, adolescents and children adjacent to University Hospital in Columbia. The 61 inpatient beds include a 17-bed unit for adolescents ages 5-12 and adolescents ages 13-17, and two units with a total of 44 beds to serve adults.

Boone Health

Boone Health is a full-service hospital located in Columbia and provides progressive health care programs, services and technology to people in 25 mid-Missouri counties. Boone Health excels in cardiology, neurology, oncology, surgical, obstetrical services and orthopedics among numerous other specialties (Boone Health, 2021).

Harry S. Truman Veterans' Hospital

Truman VA serves veterans from 43 counties in Missouri as well as Pike County, Illinois. While the University Hospital and Truman VA share medical staff, the VA does not have an emergency room or helicopter service. The hospital is a widely used resource for not only primary care, but also extended care and social support services for veterans (Harry S. Truman Memorial Veterans' Hospital, 2023).

Landmark Hospital of Columbia

Landmark Hospital of Columbia is a 39-bed premier critical-care hospital located less than two miles from the University of Missouri campus. Situated near two large acute care hospitals and the Truman VA hospital, it provides solutions for patients who require extended hospitalization for their medical care. The hospital provides its patients with exceptional medical care through innovative technologies and an experienced, caring medical team as patients' journey toward healing (Landmark Hospitals, 2023).

Rusk Rehabilitation Center

Rusk Rehab is a rehabilitation hospital that offers both inpatient and outpatient services. It is the only inpatient rehabilitation hospital in central Missouri and offers a wide variety of comprehensive services (Rusk Rehabilitation Center, 2018).

Figure 79
Hospital Bed Count of Providers in Boone County

Facility	Bed Count
University Hospital*	739
Boone Hospital Center	293
Harry S. Truman Memorial Veterans' Hospital	126
Rusk Rehabilitation Center	60
Landmark Hospital of Columbia	39
Total	**1,257**

*Data for this facility includes Women's Hospital, Children's Hospital and
Missouri Psychiatric Center
Note: Total number of hospital beds in Boone County from the American
Hospital Directory (2024)

Health Care Resources

Boone County is home to multiple physicians, health care clinics and urgent care clinics. According to the 2024 County Health Rankings and Roadmaps, there is one primary care provider for every 840 Boone County residents, which is well above the Missouri ratio of one primary care provider for every 1,420 Missouri residents (County Health Rankings and Roadmaps, 2024).

Even with this high ratio, Boone County has few resources for those who are uninsured. Compass Health Network is a nonprofit health care organization that provides a full continuum of behavioral health services as well as primary and dental health services across a 45-county area. MedZou Community Health Clinic, a faculty-sponsored medical clinic, provides free primary health care, education and prevention. Both clinics are limited on the number of patients without resources that can be served.

Figure 80

Licensed Providers in Boone County

Provider Type	Number of Boone County Providers	Boone Ratio of Population to Providers	Top U.S. Performers	Missouri Ratio of Population to Providers
Primary Care Providers	1,762	840:1	1,330:1	1,420:1
Dentists	133	1,340:1	1,360:1	1,600:1
Mental Health Providers	738	230:1	320:1	410:1

Note: The number of licensed providers in Boone County and ratio of population to providers comparison with Missouri and Top U.S. performers from the 2024 County Health Rankings

Figure 81

Comparison of Provider Type in Boone County

Provider Type	2014 Boone Ratio of Population to Providers	2019 Boone Ratio of Population to Providers	2024 Boone Ratio of Population to Providers
Primary Care Providers	941:1	920:1	840:1
Dentists	1,702:1	1,540:1	1,340:1
Mental Health Providers	430:1	300:1	230:1

Note: Comparison of population to provider ratios from the 2014, 2019 and 2024, County Health Rankings

Columbia/Boone County Public Health and Human Services

Boone County has a combined city/county public health department with a human services division. Columbia/Boone County Public Health and Human Services (PHHS) is a City of Columbia department with an appointed Board of Health that advises elected officials regarding the operations of PHHS and makes policy recommendations in the interest of public health. PHHS is nationally accredited through the Public Health Accreditation Board (PHAB). The 2023 operating budget of the department is $12,946,370. The department operates with 101 permanent staff.

Long-Term Care and Assisted Living Facilities

Boone County has 25 licensed long-term care facilities with 1,670 beds: 10 offer skilled nursing; nine are categorized as assisted living; two as intermediate care; and four as residential. A skilled nursing facility assumes responsibility for the resident, while an assisted living facility requires the resident to be able to evacuate with minimal assistance. An intermediate care facility usually offers 24 hours accommodation and care to those with a physical and/or mental disability. A residential facility requires the resident to be able to evacuate without assistance (Missouri Department of Health and Senior Services, n.d.). Of the 25 facilities, eight offer an Alzheimer's unit and 10 participate with Medicare/Medicaid.

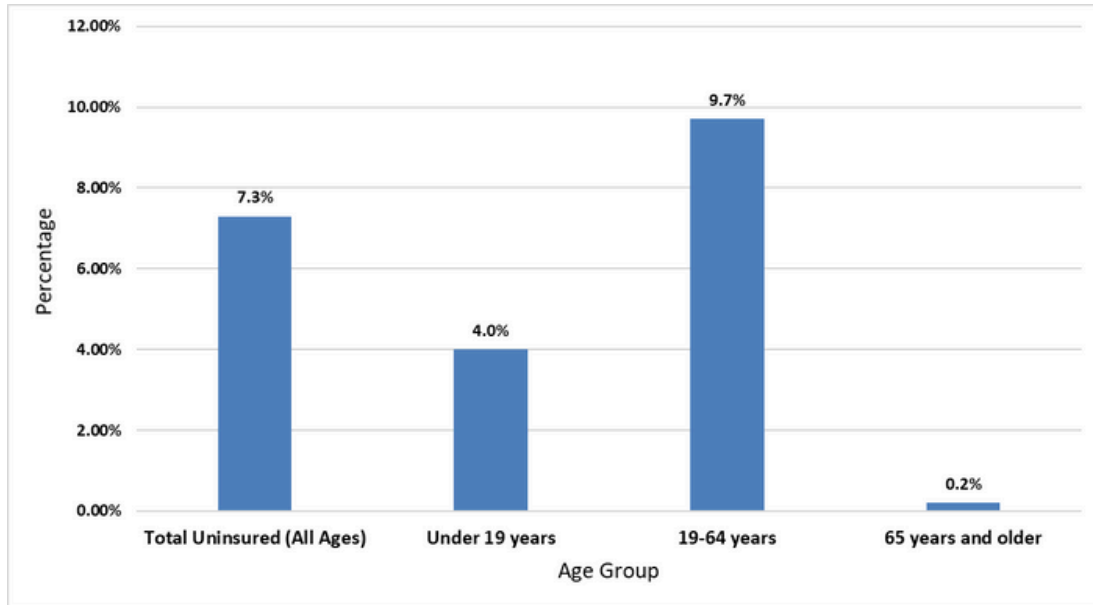**Figure 82**
Licensed Nursing Home Beds in Boone County

Facility Type	Number of Licensed Facilities	Number of Licensed Beds	Number of Facilities with an Alzheimer's unit	Medicare/Medicaid
Skilled Nursing Facility	10	911	2	10
Assisted Living Facility	9	557	6	0
Residential Nursing Facility	4	63	0	0
Intermediate Nursing Facility	2	139	0	0
Total	**25**	**1,670**	**8**	**10**

Note: Licensed long-term care facilities in Boone County according to the Missouri Department of Health and Human Services (2023)

Health Insurance

More than 7% of all Boone County residents do not have health insurance (American Community Survey, 2023). The percentage is 4% for those under 19 and 9.7% for those between 18 and 64. Uninsured residents aged 65 and over make up only 0.2% of Boone County residents.

Figure 83
Uninsured Rate for Boone County by Age Group

Note: Percentage uninsured in Boone County by age group from the 2017-2021 American Community Survey 5-year Estimates Table S2701

A comparison of the percentage of uninsured by gender, race and educational attainment can be seen in Figure 84, which highlights the characteristics with the highest uninsured rates. Please note that the y-axis only goes up to 20%.

Figure 84
Uninsured Status for Selected Characteristics in Boone County and Columbia
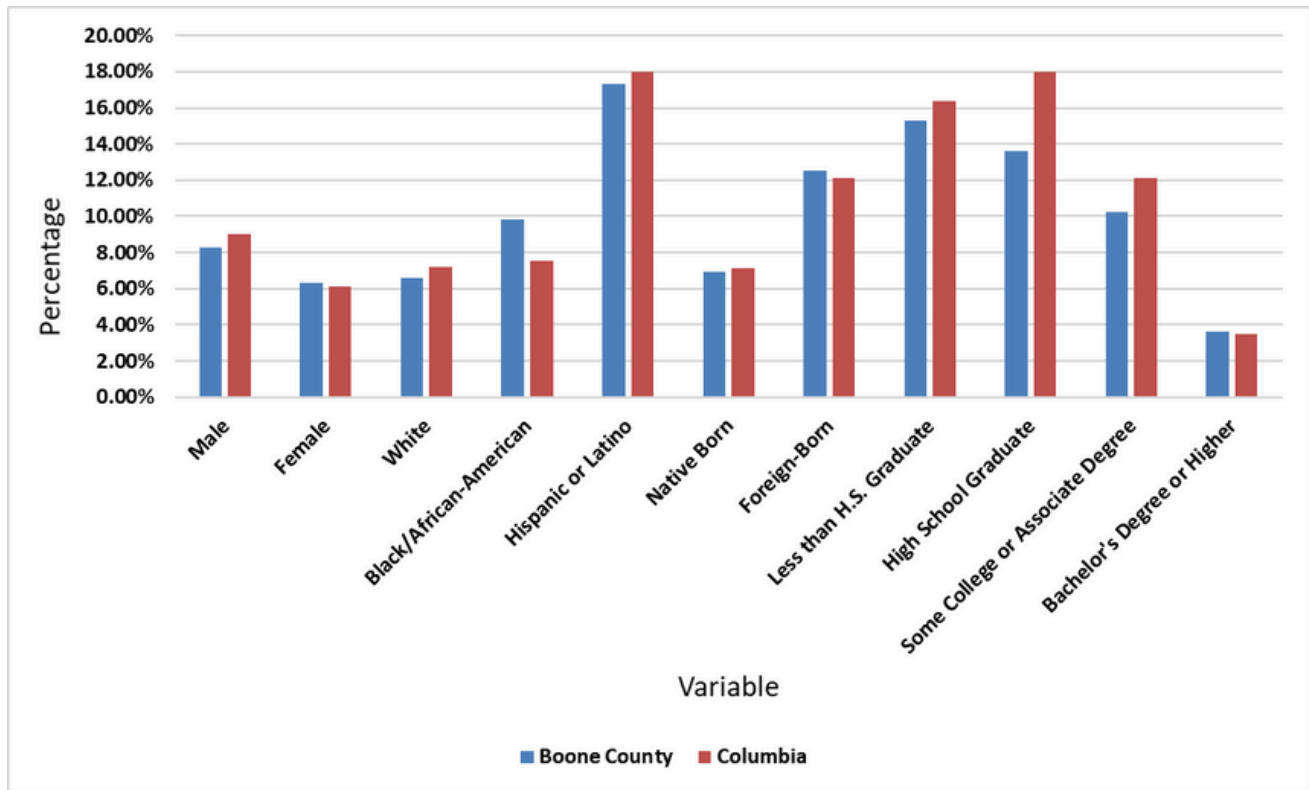
Note: Uninsured status for selected characteristics in Boone County and Columbia from the 2017-2021 American Community Survey 5-year Estimates Table S2702

Crime and Incarceration

Even if crime does not take place, the feeling of insecurity may affect the quality of life if a community feels the threat of physical safety or loss of property. The Missouri State Highway Patrol keeps crime statistics with the Uniform Crime Reporting Program. Crime data can be divided into two categories: violent crimes and property crimes. Violent crimes include homicide, rape, robbery and aggravated assault. Property crimes include burglary, larceny-theft, motor vehicle theft, robbery and arson (Uniform Crime Reporting, n.d.).

Figure 85
Violent Crimes Reported in Boone County

| Year	Criminal Homicide	Rape	Robbery	Aggravated Assault	Violent Crimes Totals
2011	3	48	259	484	794
2012	3	47	280	394	724
2013	5	83	227	357	672
2014	6	87	250	375	718
2015	6	97	269	496	868
2016	6	139	252	398	795
2017	10	130	221	468	829
2018	9	114	210	348	681
2019	14	103	150	321	588
2020	14	132	167	479	792
2021	12	172	151	524	859

Note: Reported violent crimes in Boone County between 2011 and 2021 from Unified Crime Reporting (2023)

Figure 86
Property Crimes Reported in Boone County

Year	Burglary	Larceny Theft	Motor Vehicle Theft	Arson	Property Crimes Totals
2011	1,018	4,282	197	26	5,523
2012	1,023	4,321	200	24	5,568
2013	889	4,497	227	20	5,633
2014	910	4,007	226	40	5,183
2015	1,021	3,389	295	17	4,722
2016	692	3,216	320	24	4,252
2017	641	3,673	358	23	4,695
2018	662	3,505	395	9	4,571
2019	628	3,104	415	20	4,167
2020	528	3,173	560	29	4,290
2021	493	3,088	501	21	4,103

Note: Reported property crimes in Boone County between 2011 and 2021 from Unified Crime Reporting (2023)

Figure 87
Comparison of Violent and Property Crimes
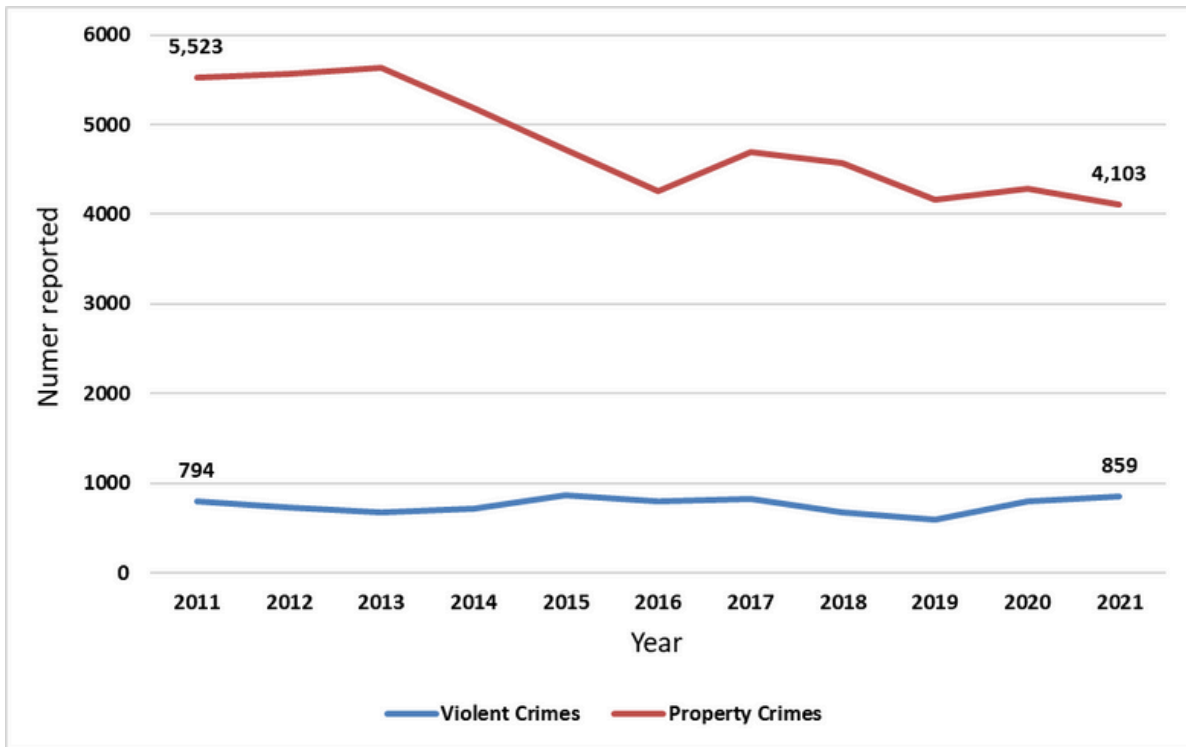
Note: Comparison of the number of violent and property crimes in Boone County between 2011 and 2021 from Unified Crime Reporting (2023)

Hate, Extremism, Antisemitism, Terrorism (H.E.A.T.) Incidents

According to the Unified Crime Reporting Program, two law enforcement departments in Boone County (Columbia and the University of Missouri) reported hate crimes between 2016 and 2020. Twelve hate crimes were committed during this period. There were nine crimes involving race, two crimes involving sexual orientation and one crime involving religion.

Boone County was the site of six H.E.A.T. (Hate, Extremism, Antisemitism, Terrorism) incidents during the five-year period from 2018 to 2022. There were five incidents that involved white supremacist propaganda and one terrorist plot/attack (Anti-Defamation League, 2023).

Figure 88
Boone County Population Compared with Jail Population
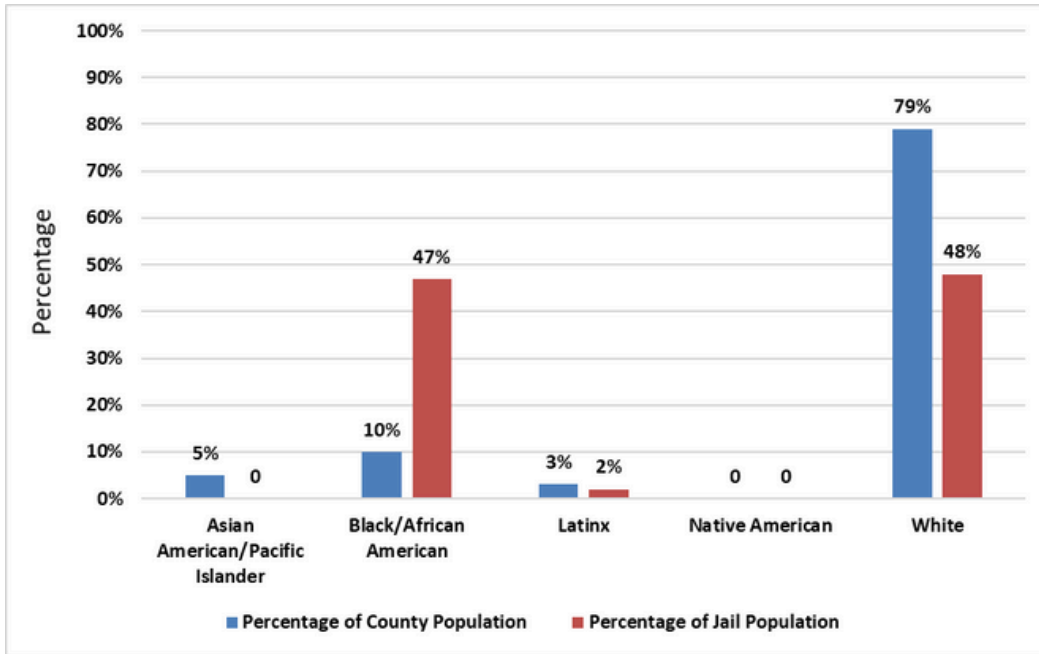
Note: Boone County population compared with jail population in 2020 by race from Vera (2023)

Figure 89
Jail Population Compared to Resident Population by Race in Boone County per 100,000
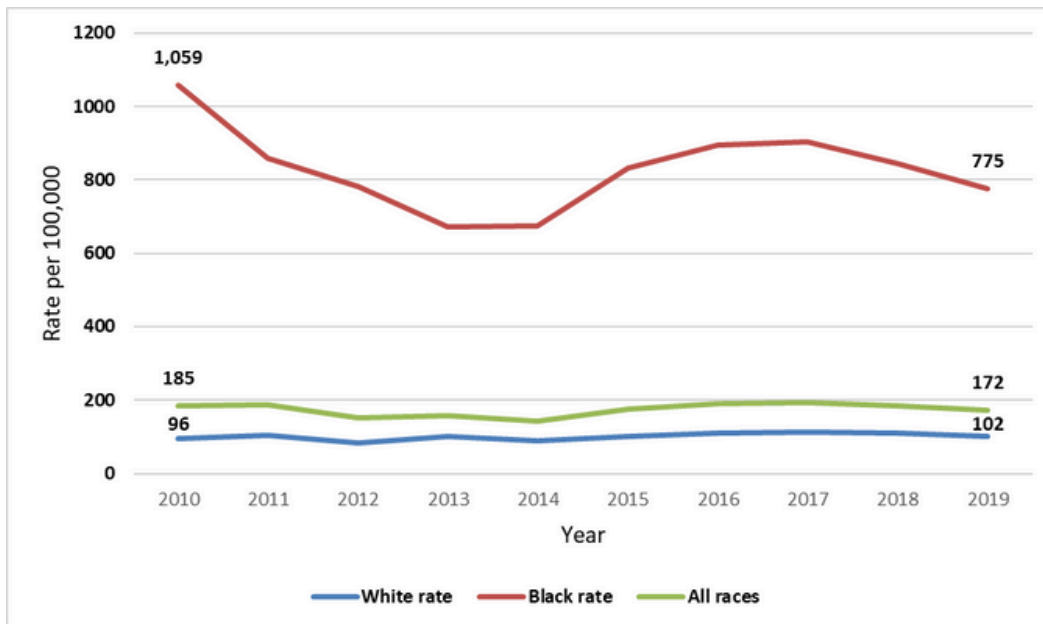
Note: Rate of jail population compared to resident population by race per 100,000 people in Boone County ages 15 to 64 between Q2 2010 and Q2 2019 from Vera (2023)

Parks and Recreation

It is important to the health of a community for residents to be able to access and participate in outdoor activities in a safe manner. In Boone County, there are many parks, walking trails and biking routes. In Columbia, there are 3,700 acres of parkland, 77 parks, more than 60 miles of trails and 12 indoor recreation facilities. Rock Bridge Memorial State Park and Finger Lakes State Park, along with several Conservation and Wildlife Management Acres, are also found in Boone County.

The Katy Trail, which extends nearly 250 miles through Missouri, runs through the county. The MKT Nature and Fitness Trail connects to the Katy Trail near McBaine and links to more than four miles of trails in Columbia (Columbia Parks and Recreation, n.d.). These widely used trails provide opportunities for runners, bikers and walkers.

The Centralia Park System maintains more than 30 acres and four parks, along with a municipal swimming pool. The Centralia Recreation Center was opened in 2009 and offers a fitness area, multipurpose gymnasium and walking track, and a children's play area (Centralia Parks and Recreation Department, n.d.).

In 2016, the Southern Boone Area YMCA opened in Ashland after a successful community campaign. It provides a workout area and classes, summer camp programs, youth sports, and youth and teen enrichment programs (Southern Boone YMCA, n.d.).

Transportation

Columbia Regional Airport (COU) is located south of Columbia and offers daily flights to Chicago (O'Hare, ORD) and Dallas/Ft. Worth (DFW). The airport is owned and operated by the City of Columbia and is a division of the Economic Development Department.

An Airport Advisory Board composed of nine voting members is appointed by the Columbia City Council. The board exists to make a continuous study of airport needs and aviation in the area and makes recommendations to the City Council and for the development and use of the airport. Private aviation services also originate from COU.
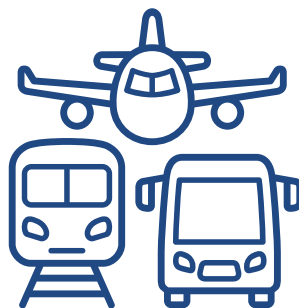
Columbia is the only community in Boone County with a public transportation system. The system, called Go COMO, has both fixed bus routes and para-transit, which offers scheduled rides to ADA-eligible residents who are unable to use the fixed-route traditional bus system.

OATS, a not-for-profit corporation, also offers specialized transportation for older adults, people with disabilities and the rural general population. The 2017-2021 ACS data shows that less than 1% of Boone County residents use public transportation to commute to work and 77% drove alone in cars.

Child Services and Child Care

Affordable and safe child care services are important in every community. The 2017-2021 American Community Survey reports that of Boone County households with children under 6 years of age, 75% have both parents in the labor force. Kids Count Data Center reports 5,953 spaces in licensed family child care homes in Boone County (Kids Count, 2021).

As the cost of each daycare varies, the average cost of daycare in Boone County is unknown. U.S. News & World Report (2023) estimates the annual cost of center-based child care in Missouri to be $7,000. Child Care Aware of America (2023) estimates the annual cost of child care in Columbia to be $12,972, making it the city with the highest child care costs in Missouri.

As a comparison, the University of Missouri charges $11,981 in tuition per year for in-state residents. In Boone County, the 2023 County Health Rankings estimate that the average household child care cost burden (two children) was 31%, which means 31% of the household's income was spent on child care. This makes Boone County the fourth-highest child care cost burden county in Missouri.

Climate Change

Heat-trapping gases in the atmosphere contribute to climate change. As a result of human activities, primarily burning fossil fuels and clearing forests, greenhouse gases have become more concentrated in the atmosphere. Carbon dioxide concentrations and global temperature increases contribute to climate change's cascading effects.

Among the health effects of climate change are increased respiratory and cardiovascular diseases, injuries and premature deaths resulting from extreme weather events, changes in the distribution and prevalence of infectious diseases, and mental health threats.

According to Headwaters Economics, Boone County has 10 census tracts with higher vulnerability to climate change than the county median. These 10 tracts are home to nearly 40,000 people.

 In addition:
- 60.6% of housing units are rentals
- 12.5% of households do not have a car
- 34.1% of the population are Black, Indigenous and people of color
- 75.4% of the area lacks tree canopy
- 24.8% of the area is impervious surface
- 9.6% of the area is in a 500-year floodplain

By 2048, Headwaters Economics projects Boone County will experience 20 more days with temperatures exceeding 90°F (from 62 days in 2023 to 82 days). The term "extremely hot days" refers to two or three consecutive days with temperatures above 90°F. Across the country, they account for the majority of weather-related fatalities.

Cross-Cutting Themes

The process for identifying strategic issues was initiated at the September 2023 Steering Committee meeting with a presentation of the results of each assessment. Criteria for identifying themes included input from community members, themes that appeared in multiple assessments, and themes that answered the assessment's guiding questions, such as, "What is the state of the community?" and "What is happening that affects the health of the community?"

Seven themes appeared in either all or a majority of the assessments.

Issues identified through the assessments:

- Mental health
- Distracted driving
- Affordable housing/homelessness
- Barriers to health care
- Health behaviors
- Community engagement
- Substance use

These themes and their data were summarized and provided to the Steering Committee for review prior to the meeting.

After time for discussion, the Steering Committee identified five additional issues affecting the community.

Additional issues identified by the Steering Committee:

- Affordable child care
- Sexually transmitted infections (STIs)
- Climate change
- Social isolation
- Community violence

At the same meeting, the Steering Committee was introduced to a **prioritization matrix**. The matrix allowed the committee to narrow down the 12 issues into more manageable strategic issues.

**Ten criteria for prioritization were identified:**

- Community priority
- Magnitude
- Long-term consequences
- Linked to other problems
- Health equity
- Quality of life
- Opportunity to apply upstream strategies
- Ability to have measurable impact
- Availability and feasibility of solutions and strategies
- Resources
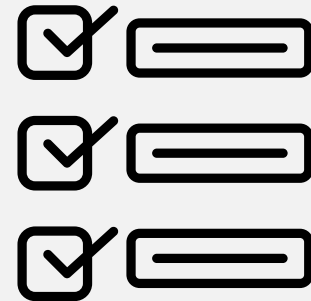
The Steering Committee used the matrix to prioritize issues at the October 2023 meeting. Each issue was ranked against the criteria and the results are shown below.

The results of the prioritization are:

1. Mental health
2. Affordable housing/homelessness
3. Barriers to health care
4. Health behaviors
5. Substance use
6. Community violence
7. Affordable child care
8. Sexually transmitted infections
9. Distracted driving
10. Climate change
11. Social isolation
12. Community engagement
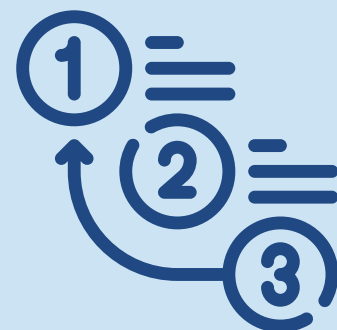
After reviewing the final prioritization scores at the November 2023 meeting, the Steering Committee finalized five strategic issues. They also discussed the possibility of using the other issues as strategies, goals or activities to help achieve the outcomes of the strategic issues.
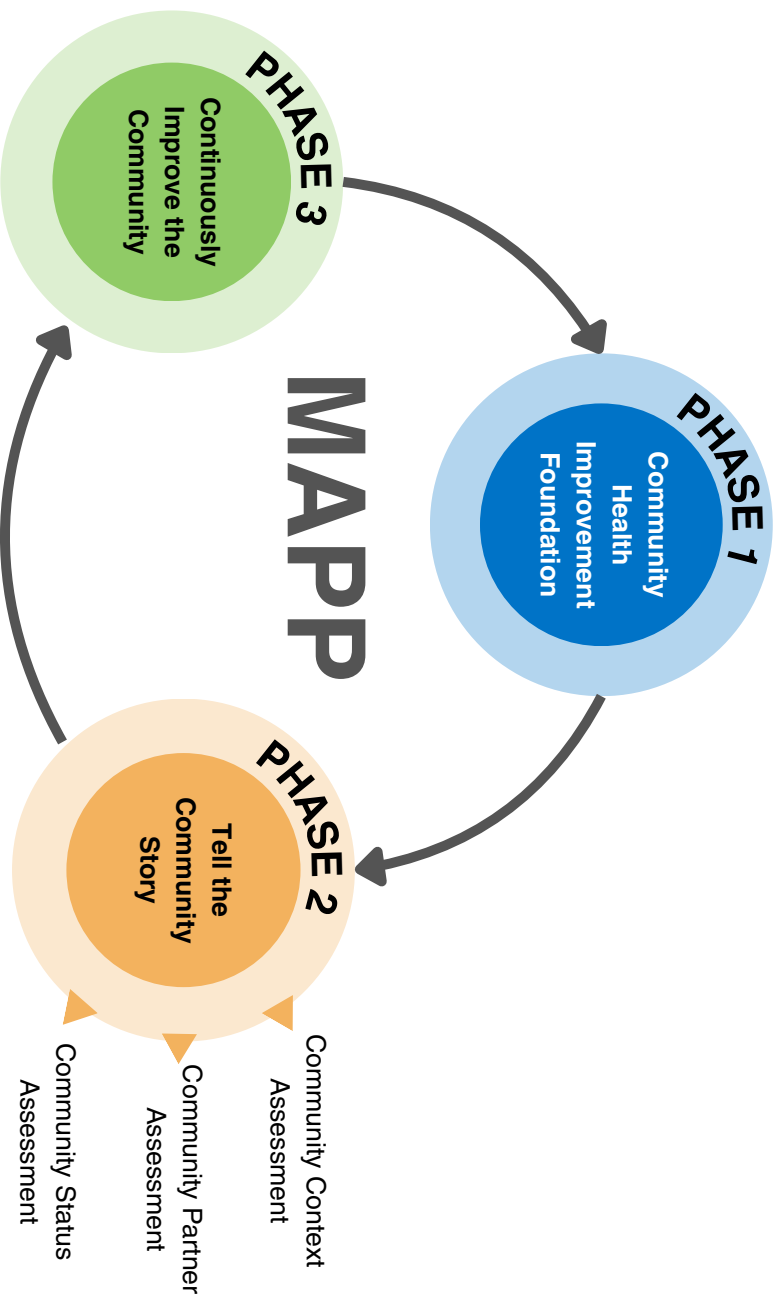
Five Strategic Issues

Mental Health

Healthy Behaviors

Affordable Housing/Homelessness

Barriers to Health Care

Substance Use

Next Steps

The next phase, Phase Three: Continuously Improve the Community, is the final phase of MAPP 2.0. This phase involves developing a Community Health Improvement Plan, which is a three to five-year effort to address the identified strategic issues.

Action teams will be created to form plans to address each of the strategic issues. These plans will be published in the 2024 Community Health Improvement Plan.

MAPP

PHASE 3
Continuously Improve the Community

PHASE 1
Community Health Improvement Foundation

PHASE 2
Tell the Community Story

Community Context Assessment

Community Partner Assessment

Community Status Assessment

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