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GRUNDY COUNTY

Community Health Assessment

Grundy County, Missouri

November 2025

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Table of Contents

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Administrator Statement

Dear Community Members,

The Grundy County Health Department is pleased to present the results from the 2025 Community Health Assessment (CHA). This report reflects our ongoing commitment to understanding and improving the health and well-being of all residents in Grundy County.

The purpose of a Community Health Assessment is to identify the most pressing health issues facing our community by collecting and analyzing data, gathering community input, and evaluating local resources. This process helps guide public health planning, prioritize areas for improvement, and ensure that programs and services are responsive to the unique needs of our residents.

Through collaboration with community partners, local organizations, and residents, we have identified key health challenges, strengths, and opportunities that influence the overall health of our community. The findings of this assessment will serve as a foundation for strategic planning and community action to build a healthier, stronger community for everyone who lives and works in Grundy County, Missouri.

The information gathered through this assessment will guide future programs, services, and initiatives aimed at addressing priority health needs and promoting a healthier, stronger Grundy County. We are grateful to everyone who contributed their time, insights, and perspectives to this important effort.

Elizabeth Gibson

Administrator
Grundy County Health Department

Vision

Strong, Healthy Futures in Grundy County

Mission

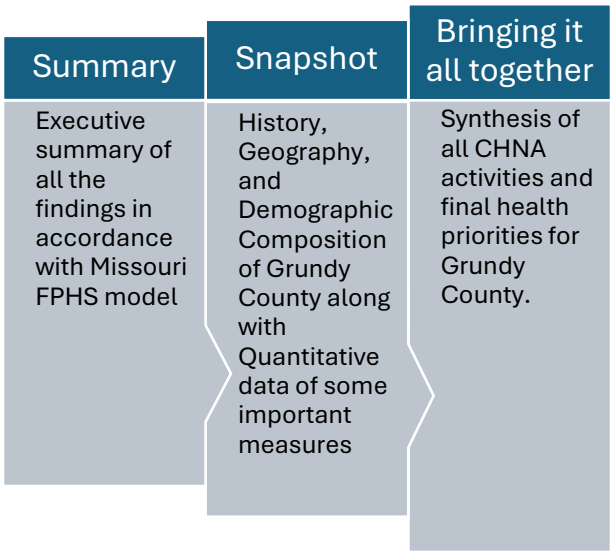
The mission of the Grundy County Health Department team of professionals is to prevent illness, promote healthy behaviors, and protect the health of the individuals and families in our community by delivering quality health education and wellness services and ensuring environmental compliance and public health preparedness.

Values

Honest, Respectful, Professional, Courteous Service to All

Executive Summary

How to read this Report



Summary of Findings:

Grundy County Health Department (GCHD) is a local public health agency (LPHA) established in 1977 to protect the health and safety of the public, prevent illness, and promote wellness among the residents of Grundy County, Missouri. GCHD provides comprehensive health services and programs to the community with limited staff and resources. Grundy County's Community Health Assessment (CHA) process began in March 2025 and involved collecting, analyzing, and presenting data on the health issues and needs of the county. The CHA and improvement planning process followed the MAPP 2.0 framework (Mobilizing for Action through Planning and Partnerships) developed by the National Association of County and City Health Officials (NACCHO)—one of the most widely used and reputable community health improvement frameworks in the field. The framework builds a foundation for the community's health improvement process using a planning process that helps communities assess their health needs and resources, prioritize health issues, and create strategies to improve the health and well-being of their population through a shared community health improvement plan (CHIP)—telling the community's story and working to continuously improve the health of the community.

We collected two types of data: primary and secondary. Primary data is first-hand information collected specifically for the CHA process. This information came from surveys and meetings with

community members and partners. Secondary data is pre-existing data that comes from other sources. Secondary data was thoughtfully selected from state and national databases to honestly portray the overall health status, social drivers of health, and quality of life of people in the community. Social drivers of health refer to community level factors—the conditions in the environments where people are born, live, work, play, worship, and age that affect health, functioning, and quality of life.

The CHA report begins with broad qualitative and quantitative descriptions and then narrows to identify more precise details of the county. In the subsequent chapters, the CHA describes the public health of Grundy County in alignment with the Missouri Foundational Public Health Services (MO FPHS) model created by #HealthierMO and adopted by LPHAs statewide. The MO FPHS model describes a minimum set of fundamental services/capabilities that are to be available in every community to ensure the public health system may deliver equitable opportunities for good health to all Missourians. Throughout the report, there are references to health equity and social drivers of health.

Communicable Disease

The GCHD monitors and helps prevent the spread of infectious diseases within the community. During the initial outbreak of COVID-19, GCHD actively worked to protect health of the community by sharing credible information in a timely manner and later offering testing and vaccination to the community as it became available. In the wake of the COVID-19 pandemic, average rates of childhood vaccination in schools have declined from 93.16% (2020-2021) to 90.5% (2024-2025). The number of unvaccinated kindergarteners in Grundy County schools increased from 1.6% to 2.8% (Missouri Department of Health & Senior Services, n.d.). Today, more children are receiving religious exemptions for vaccination when compared to previous years. The occurrence of sexually transmitted infections in Grundy County is much lower than state and national comparisons.

Chronic Disease

Chronic diseases are long-lasting and often debilitating. Chronic health conditions like heart disease, stroke, cancer, diabetes, and chronic respiratory diseases can significantly degrade a person's quality of life. Grundy County has higher rates of coronary heart disease (also known as coronary artery disease) mortality, diabetes, and hypertension prevalence in Medicare patients than the state and national average. Grundy County also has higher rates of cancer mortality (with the exception of prostate cancer) than the state's average. GCHD has been proactive in offering blood pressure checks and health screenings regularly to address most common chronic diseases. Occurrences of asthma and COPD (chronic obstructive pulmonary disease) are lower in Grundy County when compared to

Missouri. However, rising smoking rates are a concern as they are often associated with increased incidence of lung/bronchus cancer rates.

Environmental Health

Environmental health focuses on the relationship between people and the environment (e.g., air and water quality, exposure to toxic substances, and food safety). Although environmental health data are not regularly collected in Grundy County, water quality is consistently good, most days have good air quality, and the historically low air quality index is improving to meet state norms—particularly, average daily particulate matter is lower. Grundy County has two hazardous cleanup sites: Trenton Landfill and Modine Manufacturing Company. No environmental problems were noted at those sites.

Maternal, Child, and Family Health

Maternal, child, and family health focuses on the physical and mental well-being of women, children, and families. These groups are often the most vulnerable in society and have specific health needs that may require more attention. Improving the health of mothers, children, and families can have a ripple effect, leading to improved health and well-being for entire communities. Grundy County has higher rates of premature deaths than the state and national average. Deaths of children aged 1-17 in Grundy County decreased from 51.1 per 100,000 in the years 2013-2017 to 8.6 per 100,000 in the years 2018-2022.

Injury Prevention

The goal of injury prevention is to reduce the incidence, severity, and impact of unintentional and intentional injuries on individuals and communities. The rate of injury-related death in Grundy County is slightly below the Missouri average; and the community has very low rates of injury-related fatalities and violent crime. As in previous years of assessment, concern persists regarding the rates of alcohol and drug use/abuse and tobacco vaping, especially among teenagers.

Linkage to Medical, Behavioral, and Community Resources

The GCHD helps ensure that residents have access to the resources they need to maintain their health and well-being by providing linkages to medical, behavioral, and other community resources through client referrals and use of collaborative programs. Based on Missouri KIDS COUNT data for Grundy County, there has been a documented rate of 85.1 per 10,000 mental/behavioral hospitalizations (not including substance abuse) for children and youth ages 1-19, according to data covering the period of 2017-2021. In 2018-2022, the rate was 9.1.

Dental healthcare is limited in Grundy County due to a small number of dental health providers. The percentage of uninsured children increased from 8.0% (2018) to 9.5% (2022). Concerns about the cost of healthcare, the distance to travel to healthcare providers/health specialists, and a persisting shortage of healthcare professionals in Grundy County affect the health of the community. Grundy County is experiencing limited access to healthcare.

Locally Responsive Programs and Services

Missouri public health agencies have a rich history of creatively solving the challenge of increasing demand for services with shrinking resources. Local programs and services are important in meeting the unique healthcare gaps identified in communities. In addition to the foundational public health capabilities and areas of expertise, GCHD offers programs and services that meet community-specific needs.

Health Disparities and Social Drivers of Health

The CHA was designed to illustrate differences in health status, such as morbidity and mortality rates, among different groups in the community. This means that, in addition to providing all available data about Grundy County, special attention has been given to risk factors, health disparities, and the social drivers of health. This section provides an overview of what health disparities are, the difference between equity and equality, how the social drivers of health contribute to quality of life, and suggestions to address health disparities attributable to social drivers of health in Grundy County.

Directions for Change

This CHA used the Mapp 2.0 *Forces of Change* tool to facilitate group discussion among members of the Grundy County community. The assessment identified external forces that may affect public health in the future. The community identified an extensive list of focus areas including social, ethical, economic, legal, environmental, political, scientific, and technological forces of change, which may present either threats or opportunities to the public health system and the Grundy County community.

Community Health Assessment

Assessing the Needs for a Healthy Community

The purpose of a CHA is to identify, analyze, and prioritize the health needs, assets, and concerns of a community to enable the development of strategies to effectively address the identified needs. This CHA focuses on Grundy County, Missouri. The CHA process begins with gathering and analyzing information about the health of a specific community. The building process involves collecting and analyzing data on a variety of health indicators, such as rates of chronic diseases, access to healthcare, and environmental factors that contribute to community health. This report accomplished the data gathering process in collaboration with community members and other stakeholders, such as local organizations, healthcare providers, and government agencies.

The completed CHA will inform the development of a community health improvement plan (CHIP), which outlines specific actions that can be taken to address the identified health needs and improve the overall health of the community. The CHIP will offer recommendations for policy changes, new programs or services, or other interventions to address health needs identified in the CHA. Together, the CHA and CHIP help ensure resources and efforts are directed towards the areas of greatest need and work to achieve improved health outcomes for community members.

Community Perspectives

This CHA quantifies health through measurable quantitative data and the perspectives of the people who live in Grundy County (qualitative data). GCHD sponsored an online survey, answered by more than 200 Grundy County residents, asking about the quality of life in the county. The ***Community Themes and Strengths*** survey responses have been included in this report under the heading "Community Perspectives." A summary of the demographics for survey participants is included in Chapter 10.

Foundational Public Health Services (FPHS)

GCHD recognizes that health is not just about the absence of illness. *Health* includes all of us living our healthiest lives – physically, mentally, emotionally, and with connection to those we love. Just as a building relies upon a strong foundation for stability and strength, communities depend on foundational public health services to assure safe food and water, prevention of illness and injuries, improved health for our families, and the ability to connect us to local resources.

Source: HealthierMO at Ozarks Public Health Institute

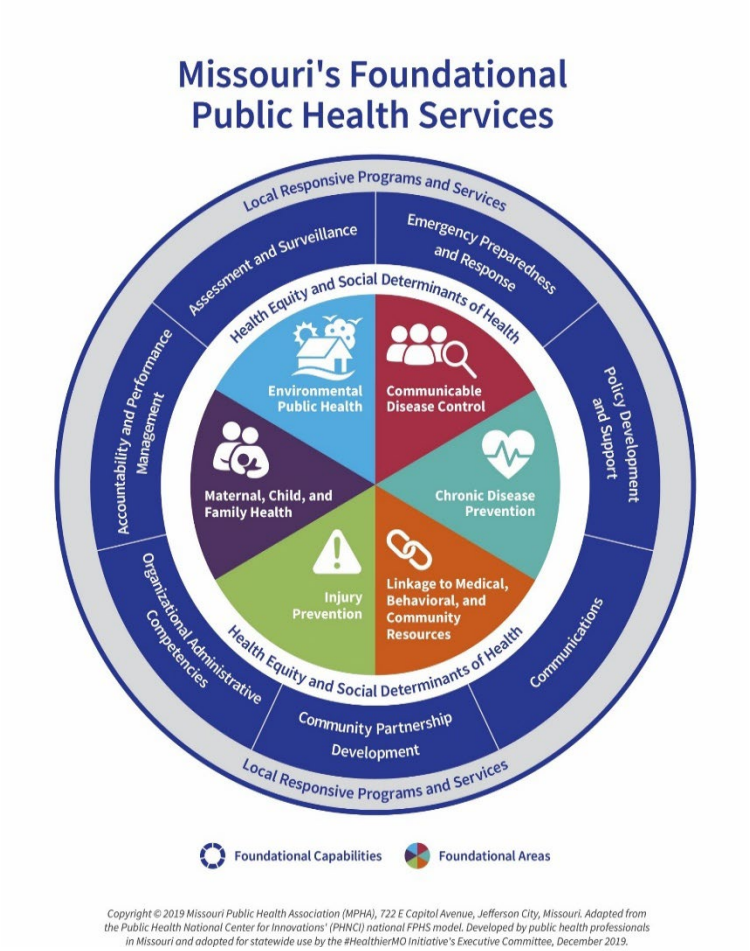


Figure 1: Missouri Foundational Public Health Services

This public health framework, together with quality education, safe and affordable housing, accessible healthcare, and employment opportunities, creates a healthier environment for all of us. Instead of waiting to treat people who become sick, public health brings everyone who has a role in community wellness together to develop strategies, policies, and programs to prevent injuries and disease. This early investment in building a strong foundation for community health begins with a CHA, based on the MO FPHS model. This framework defines a minimum set of fundamental public health services and capabilities that must be available in every community.

This Community Health Assessment measures the degree to which these fundamental programs and services are needed, effective, and available in our community.

Chapter 1: Demographics, Education, and Socioeconomic Indicators

Every family in Grundy County is also embedded within a region, a state, and a country. Because national and state conditions also reflect individual communities, the focused attention of this CHA on Grundy County can be understood in context of the larger trends. Throughout the report, the reader will notice comparisons to these state and national trends.

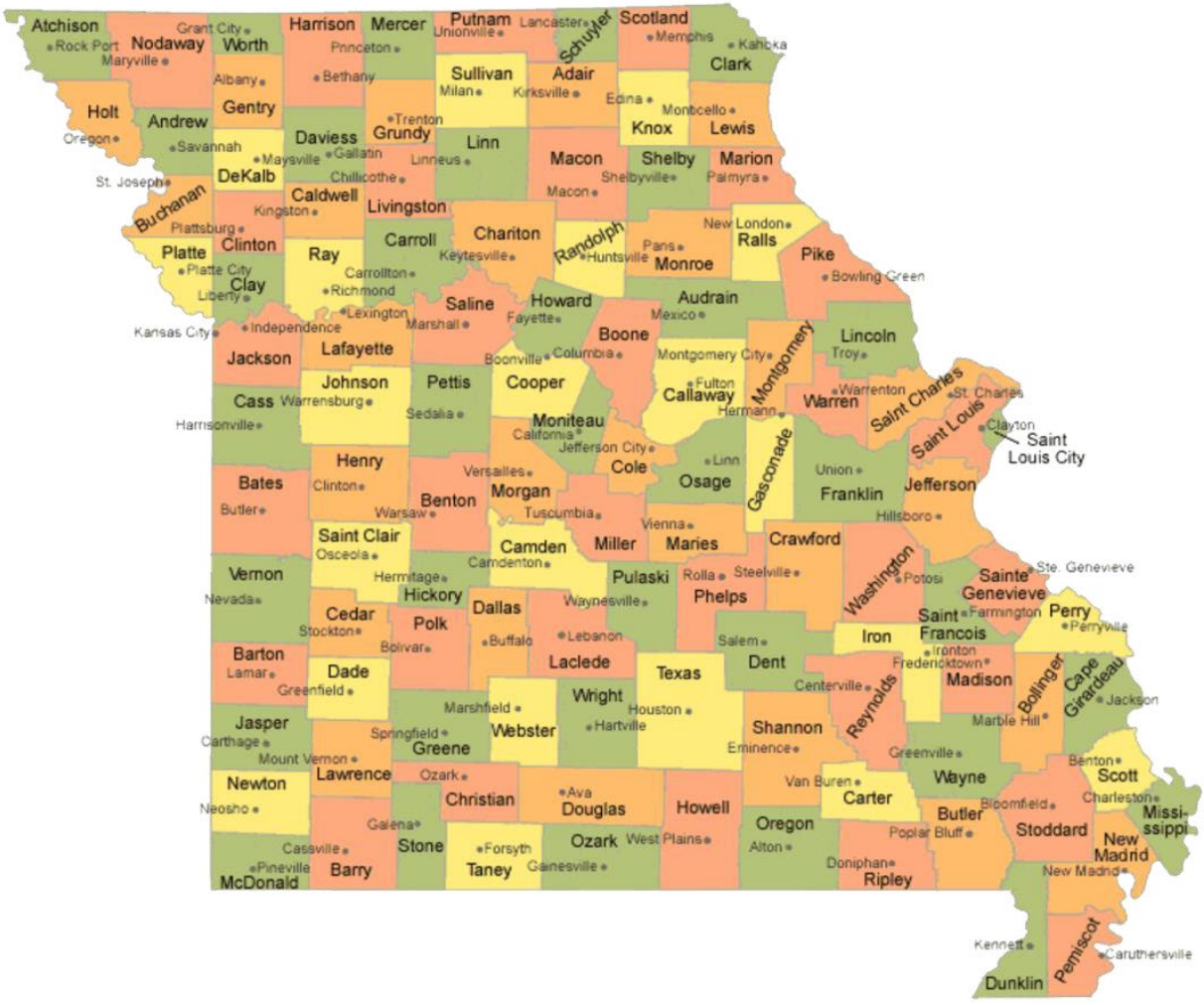


Figure 2: County Map of Missouri
Retrieved from: https://geology.com/county-map/missouri.shtml [1]

Demographics

Missouri

United States Census Bureau estimated Missouri's population at 6,137,428 on the 2020 census. Missouri's growth of 2.48% since 2010 included a natural increase (births minus deaths) of 137,564 and net migrations of 88,088 into Missouri (50,450 immigrants from outside of the U.S., and 37,638 migrations within the country). Over half of Missouri residents (55.0%) live in and around Kansas City and St. Louis. The state population density is 86.9 (U.S. average is 86.8).

Missouri has 114 counties, most with their own public health departments, and 1,268 subcounty general purpose governments, comprising 944 municipal (city, town, and village) governments and the 324 township governments. There are also 536 independent public-school districts and 1,809 special districts (e.g., ambulance, library, and economic development districts, county airport authorities, etc.)

Grundy County, Missouri

Grundy County, Missouri, was established on January 29, 1841, from land previously in Livingston County. Grundy County was named in honor of a former Tennessee Senator and United States Attorney General, Felix Grundy. Located in the north-central region of Missouri, the county seat and principal city is Trenton.

Figure 3: County Map of Missouri Highlighting Grundy County

The county is bordered by Mercer County to the north, Sullivan County to the east, Linn County to the southeast, Livingston County to the south, Daviess County to the southwest, and Harrison County to the northwest. Grundy County encompasses a diverse landscape, including the Thompson River North Loop, an 8.6-mile trail that traverses bottomland forests as well as restored tallgrass prairie reflective of the area's historic vegetation. The South Loop, connected by several shorter trails, features loess and glacial-till woodlands dominated by white oak and hickory, with sections passing through former agricultural fields. These trails provide opportunities for hiking, biking, backpacking, and horseback riding, highlighting the county's natural resources alongside its historical and geographical significance. Missouri Route 146 runs through north Missouri with its eastern end at Missouri Route 6 and western end at Route 36 near Bethany. Route 6 is a major east-west route running through Trenton and connecting with U.S. Highway 65 which runs north-south.

CHA- SUMMARY

Table 1: Summary Statistics for Grundy County (2020-2025 data)

Topic	Statistic
Population (2024)	9822
Population change (%) 2020-2023	decrease 0.4%
Population Density per sq. miles (2023)	23
Land area in sq. miles (2023)	435.29
% land area in sq. miles	99.51%
Water area in sq. miles	2.16 sq. miles
% water area in sq. miles	0.49%
% rural population	44.70%
Median household income (2023)	53,839$
Median House Price	107,000$
Time zone	UTC-(Central)
Area Codes	660

Retrieved from - https://www.census.gov/quickfacts/fact/table/grundycountymissouri

Governmental Structure of Grundy County

Grundy County, Missouri is located in the north/central region of Missouri. The county seat is Trenton. Grundy County, Missouri, is divided into 13 townships: Franklin, Harrison, Jackson, Jefferson, Liberty, Lincoln, Madison, Myers, Marion, Taylor, Trenton, Washington and Wilson. Both Democratic and Republican parties have local presence and organize in the County. At the state level, Grundy County is part of Missouri's District 2 in the Missouri House of Representatives, represented by Mazzie Christensen; and Senate District 12, represented by Rusty Black. Federally, Grundy County is in Missouri's 6th Congressional District and is currently represented by Sam Graves in the U.S. House of Representatives.

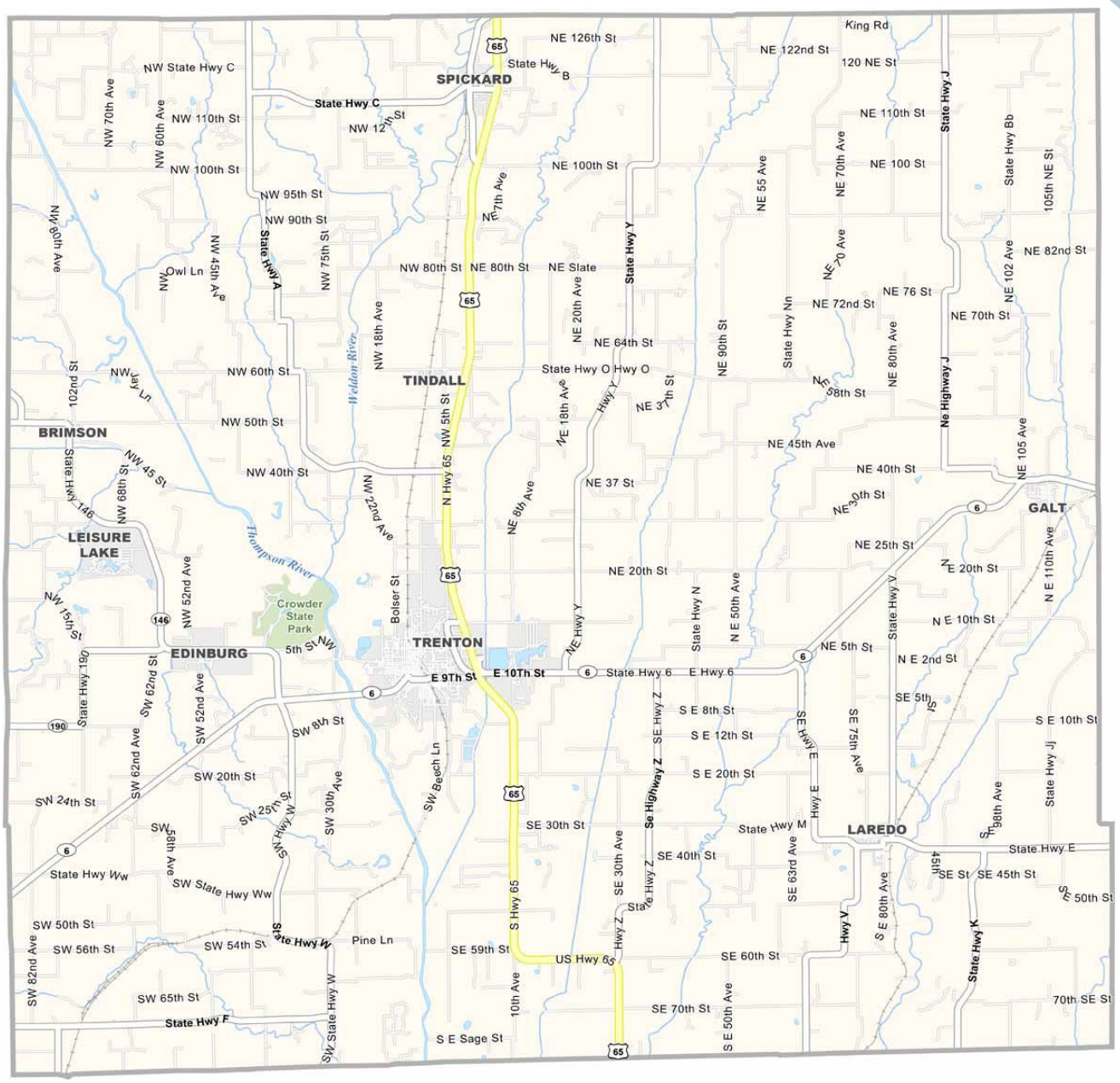


Figure 4: Grundy County Map
Retrieved from: https://uscountymaps.com/grundy-county-map-missouri/

There are six cities in Grundy County: Brimson, Galt, Laredo, Spickard, Tindall and Trenton (county seat). One village (Brimson) and six unincorporated communities (Alpha, Buttsville, Dunlap, Edinburg, Hickory Creek, Lindley). The county is bordered by Mercer County (north), Sullivan County (east), Linn County (southeast), Livingston County (south), Davies County (southwest), and Harrison County (northwest).

Table 2: Land Characteristics of Grundy County

Population	Grundy County	Missouri State	United states
Land area in sq. miles (2020)	435.29	68,745.5	3,533,298.58
Land area in sq. miles (2010)	435.28	68,741.52	3,531,905.43
Population per sq. mile (2020)	23	89.5	93.8
Population per sq. mile (2010)	24	87.10	87.4

Source: Census.gov

Population Characteristics of Grundy County

Population growth patterns affect the availability and accessibility of resources and services, such as healthcare and education. Grundy County is 44.7% rural. More than half of its residents (5000+) are clustered in Trenton, the county seat. The population density of the county is 23 per square mile, less than Missouri's average of 90 per square mile. Grundy County ranks 72nd out of all Missouri counties in terms of population density.

99.4% of the residents in Grundy County, Missouri, are U.S. citizens and 71.5% of residents were born in Missouri. Many families have a long history of residing in Grundy County (multi-generational). Grundy County has a higher percentage of residents younger than 18 years of age compared to Missouri. The County also has higher percentages of those over 65 years of age (Table 3).

Table 3: Demographic Characteristics, Grundy County (2024)

	Grundy County	Missouri
Below 18 Years of Age	25.40%	22.20%
65 and Older	22.40%	18.30%
Female	50.70%	50.70%
Disability: Functional Limitations	36%	31%
Children in Single-Parent Households	15%	24%
% Rural	44.70%	30.50%
Race and Ethnicity		
American Indian or Alaska Native	0.60%	0.60%
Asian	1.20%	2.30%
Hispanic	2.90%	5.30%
Native Hawaiian or Other Pacific Islander	0.30%	0.20%
Non-Hispanic Black	1.10%	11.40%
Non-Hispanic White	92.50%	77.90%

Source: Census.gov (2024)

Grundy County has a slightly larger percentage of residents who are veterans—many of those living in poverty (9.3%).

Table 4: Characteristics of Veterans in Grundy County, 2024

	Grundy County	Missouri
Veterans	7.2%	7.1%
Veterans' Median Income	$40,000	$61,339
Veterans' Unemployment Rate	7.3%	2.5%
Veterans' Poverty Rate	9.3%	8.7%

Source: Census.gov (2024)

Disability Status

Over 13% of Grundy County residents have disabilities (Table 5).

Table 5: Disability State, Grundy County (2024)

	Grundy County	Missouri
Disability	13.1%	15.0%
Hearing Difficulty	4.6%	4.2%
Vision Difficulty	2.7%	2.6%
Cognitive Difficulty	5.2%	6.4%
Ambulatory Difficulty	7.9%	7.4%
Selfcare Difficulty	2.5%	2.6%
Independent Living Difficulty	6.1%	6.50

Source: Census.gov (2024)

Population Decrease

Between the 2020 and 2023 US Census, the population of Grundy County decreased by 0.4%. Since 2000, the population has declined by 1.4%. Grundy County's population has continued to fall gradually from 10,300 in 2010 to 9,800 in 2024.

Housing Characteristics

Housing and household characteristics are presented in the following tables. This information is important as it highlights factors that are associated with healthcare access, poverty, environmental conditions, and other conditions that contribute to health outcomes.

Table 6: Household Characteristics, Grundy County (2024)

	Grundy County	Missouri
Number of Households	3,828	
Total Family Households	2,239	
Family Households with Children (%)	25.5%	27.2%
Median Household Income	$53,800	$68,920
Persons per Household	2.48	2.42
Households with Computer (%)	84.4%	94.0%
Households with Broadband Subscription (%)	76.30%	88.1%

Source: Census.gov (2024)

Table 7: Householder Characteristics, Grundy County (2024)

	Grundy County	Missouri
Married couple family household	48.7%	46.6%
Female householder, no spouse family household	27.4%	27.4%
Male householder, no spouse family household	16.7%	18.7%
Widowed male	6.8%	2.7%
Widowed female	15.1%	9.0%
Divorced male	11.2%	10.6%
Divorced female	14.6%	12.7%
Separated male	2.0%	1.30%
Separated female	3.3%	1.8%
Never married male	25.7%	34.6%
Never married female	18.3%	29%

Source: Census.gov, 2024

Table 8: Housing Characteristics, Grundy County (2024)

	Grundy County	Missouri
Housing Units	4,833	2,786,621
Median Gross Rent	$679	$996
Renter Occupied Units	17.4%	14.76%
Vacant Units	24.2%	
Homeowners with Mortgage	31.6%	21.06%
Severe Housing Problems	11.9%	12.90%
Households with No Motor Vehicle	11.6%	6.59%

Source: Census.gov, 2024

Health Status

Health status indicators are included to highlight important health characteristics of the population of Grundy County in comparison to Missouri.

Table 9: Life Expectancy and Mortality, Grundy County (2024)

	Grundy County	Missouri
Life Expectancy	74.1 years	75.2 Years
Premature Mortality (age-adjusted rate per 100,000)	530	480
Morality Rate (age-adjusted rate per 100,000)	909.9	897.8
Child Mortality*	--	60
Infant Mortality*	--	6

Source: Countyhealthrankings.org

The top four causes of death recorded in Grundy County are presented in Table 10. Cancer and heart disease are the top two causes of death from 2020 to 2024.

Table 10; Top Four Causes of Death, Grundy County (2024)*

	Deaths	Rate per 100,000
Malignant Neoplasms	43	165.5
Diseases of Heart	37	142.4
COVID-19	25	96.2
Accidents	12	Unreliable

*2020-2024 5-year timeframe used to aggregate data to stabilize rates.
Source: County Health Rankings 2024, CDC WONDER

Table 11: Self-Reported Poor Physical and Mental Health Days, Grundy County (2024)

	Grundy County	Missouri
Poor Physical Health Days	4.9	4.2
Poor Mental Health Days	5.8	5.5
Poor or Fair Health	21%	17%
Frequent Physical Distress	16%	13%
Frequent Mental Health Distress	21%	18%
Feelings of Loneliness	33%	32%

Source: Countyhealthrankings.org

Socioeconomic Characteristics

Socioeconomic conditions are key factors associated with health outcomes. Comparisons with Missouri are provided to highlight conditions in Grundy County that may be related to worse health outcomes.

Table 12: Graduation Rates and Education Attainment

Population 25 years and older (2023)	Grundy County	Missouri
High School Graduation Rate	95%	91.6%
High School Graduate or Higher	85.4%	92%
Some College, no degree	20.6%	21%
Associate degree	10.9%	8.3%
Bachelor's degree	10.6%	19.6%
Graduate or Professional Degree	5.3%	12.3%

Source: https: mcdc.missouri.edu

Table 13: School Free and Reduced Lunch, Grundy County (2023)

	Grundy County	Missouri
Children Eligible for Free/Reduced Price Lunch	47%	48%
Enrolled in Free or Reduced Lunch	41.8%	
Food Insecure Children	13.6%	14.1%
Food Insecure Population Ineligible for Assistance	28.0%	23.0%

Source: exploremohealth.org

Table 14: Poverty, Grundy County (2023)

Poverty	Grundy County	Missouri
Population below poverty (per capita in 2023)	16.8%	12.6%
% children in poverty	22%	37%
% Children in Poverty (AIAN)	nd	nd
% Children in Poverty (Asian)	nd	11%
% Children in Poverty (black)	nd	28%
% children in poverty (Hispanic)	63%	17%
% children in poverty(white)	15%	11%
Veterans' poverty rate	9.3%	8.7%
people who live below 100% federal poverty line	1.6k	720,210

Source: Missouri KIDS COUNT

Chapter 2: Communicable Disease Control

GCHD plays a vital role in addressing communicable disease control in Grundy County. They are responsible for monitoring and preventing the spread of disease and implementing strategies to reduce the risk of outbreaks.

Missouri's FPHS model specifies ways that LPHAs in Missouri address communicable disease control:

Surveillance: LPHAs conduct surveillance to monitor the spread of infectious diseases within their communities. This involves collecting, analyzing, and disseminating data on the incidence and prevalence of diseases.

Disease prevention: LPHAs work to prevent the spread of infectious diseases through a variety of measures, such as vaccination campaigns, public health education, and infection control practices.

Outbreak response: In the event of an outbreak, LPHAs play a key role in coordinating response efforts and implementing control measures to contain the spread of the disease.

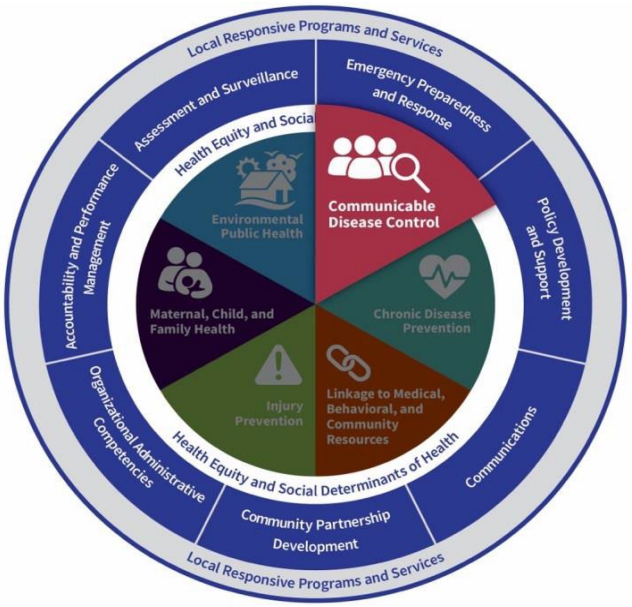


Figure 5: Foundational Public Health Services Model- Communicable Disease Control

Table 14: Select Communicable Diseases

Vector Borne Diseases	Grundy	Missouri	USA
Hepatitis A case rate per 100k population in 2023	ND	0.3	0.5
Hepatitis B case rate per 100k in 2024	*	15.6	0.7
Hepatitis C Chronic case rate per 100k in 2024	ND	43.25	36.2
Rate of deaths due to Hepatitis C per 100k in 2022	2.9	2.5	2.9
Meningococcal infections incidence in 2023	**	**	437
campylobacter cases in 2023		ND	1.5 million
salmonella infections rate per 100k in 2023	ND	ND	16
Tuberculosis cases per 100kpopulation in 2023	0	74	9633

*- unreliable as number of cases are less than 5
**- no reported cases
ND= No Data

Vaccine-Preventable Disease

Vaccines are one of the most effective tools available for preventing the spread of infectious diseases. When a large percentage of a population is vaccinated against a disease, the spread of that disease is greatly reduced, even among those who are not vaccinated. This is called *herd immunity*.

Missouri School Immunization Requirements

- DTaP: 4 or more doses of diphtheria, tetanus and pertussis vaccine
- Hep B: 3 or more doses of hepatitis B vaccine
- IPV / Polio: 3 or more doses of poliovirus vaccine
- MMR: 2 doses of measles, mumps and rubella vaccine
- Varicella (Var): 2 doses of varicella (chickenpox) vaccine
- MCV (Meningococcal Conjugate):
  - Grades 8-11: 1 dose after age 10.
  - Grade 12: 2 doses, unless 1st dose was administered to a student who was 16 years of age or older, in which case only 1 dose is required.
- Tdap: Grades 8-12: 1 dose, contains pertussis vaccine

Figure 6: Missouri School Immunization Requirements

Vaccination exposes the immune system to a weakened or inactivated virus that prompts the immune system to develop antibodies to fight off the disease when the body is exposed to it in the future. When large numbers of people in a community are vaccinated; virus transmission is slowed as it is unable to find new hosts in which to multiply.

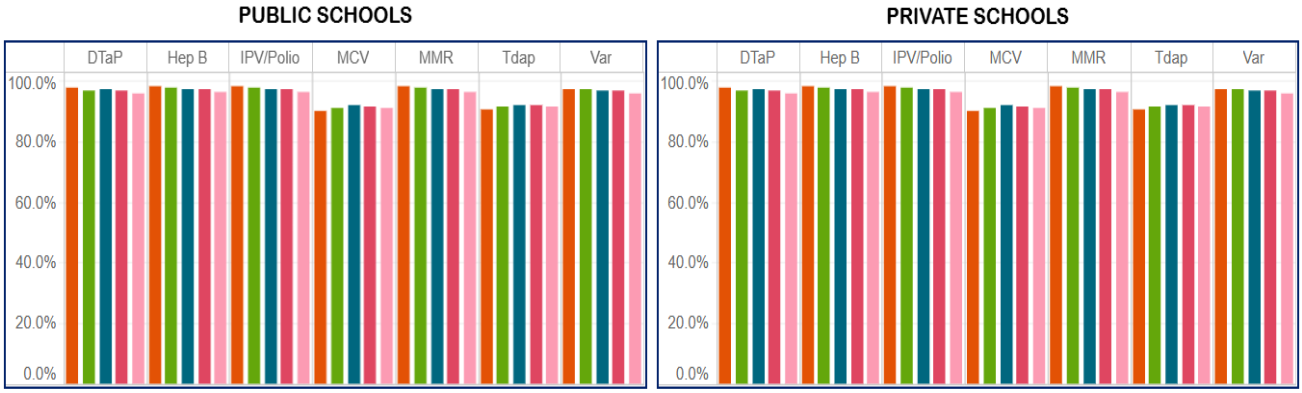
GCHD and other LPHAs in Missouri serve a critical role in promoting vaccinations to stop the spread of disease. GCHD provides vaccine education, administration, and tracking. GCHD provides information to the public about the importance of vaccinations, how they work, and the risks and benefits associated with them. GCHD works to make vaccine available to Grundy County residents through public vaccination clinics and partnerships with healthcare providers. GCHD maintains vaccination records and provides recommendations about which vaccinations are appropriate for clients based on factors such as age, occupation, travel, and health status.

Public schools in Grundy County also document the vaccination status of students. Although students must present documentation of up-to-date immunization status before attending school, there are medical conditions that preclude vaccination for a small number of children. Parents/guardians of students may also apply for a religious exemption indicating that their religious preference does not support immunizing against vaccine-preventable diseases.

Vaccination rates:

School Year	DTaP	Hep B	IPV/Polio	MMR	Var
2020-2021	92.6%	95.4%	93.0%	92.6%	92.2%
2021-2022	91.5%	94.0%	91.9%	91.6%	91.1%
2022-2023	91.1%	93.7%	91.5%	91.3%	90.7%
2023-2024	90.5%	93.3%	91.0%	90.4%	89.9%
2024-2025	90.0%	92.7%	90.7%	90.0%	89.4%

Figure 7: Vaccination Rate for Kindergarten Children
Retrieved from: https://health.mo.gov/living/families/schoolhealth/dashboard.php



School Year	DTaP	Hep B	IPV/Polio	MCV	MMR	Tdap	Var
2020-2021	97.8%	97.8%	97.9%	90.0%	97.9%	90.5%	97.1%
2021-2022	96.8%	97.4%	97.5%	90.8%	97.6%	91.3%	97.0%
2022-2023	97.1%	97.2%	97.1%	91.7%	97.3%	92.1%	96.7%
2023-2024	96.7%	97.2%	97.0%	91.5%	97.0%	91.8%	96.6%
2024-2025	95.7%	96.2%	95.9%	90.7%	96.1%	91.4%	95.5%

Figure 8: Vaccination Rates for Eighth Grade Children
Retrieved from: https://health.mo.gov/living/families/schoolhealth/dashboard.php

A gradually decreasing trend in the rate of completed vaccinations for both kindergarten and eighth grade Missouri students has been observed for the past five years while a gradually increasing trend in State level exemptions, both religious and medical, has been observed from 2020 to 2025. Because students may move into and out of school districts in the middle of a school year, some students may not have proper documentation of their vaccinations.

State Level Exemptions

KINDERGARTEN		
School Year	Religous	Medical
2020-2021	2.3%	0.1%
2021-2022	2.7%	0.1%
2022-2023	3.5%	0.1%
2023-2024	4.3%	0.2%
2024-2025	4.8%	0.2%

EIGHTH GRADE		
School Year	Religous	Medical
2020-2021	1.6%	0.1%
2021-2022	1.8%	0.1%
2022-2023	2.1%	0.1%
2023-2024	2.4%	0.1%
2024-2025	2.8%	0.1%

Figure 9: Vaccination Exempts in Missouri

The CDC-funded Vaccines for Children (VFC) program gives free vaccines to eligible kids under 19. Children qualify if they are on Medicaid, uninsured, American Indian/Alaska Native, or underinsured (meaning their insurance doesn't cover vaccines, only covers some vaccines, or caps vaccine costs). *Underinsured* children must get their vaccination at a Federally Qualified Health Center (FQHC) or Rural Health Clinic (RHC). These vaccines are free, but clinics may charge a small administration fee. Physicians who are not VFC providers may refer to the local health department, FQHC, or RHC. Grundy County has two locations where vaccines are available—Wright Memorial Hospital/Physicians' Group and GCHD.

COVID-19 Vaccination

On March 13, 2020, President Trump proclaimed the SARS-CoV-2/COVID-19 outbreak in the United States constituted a national emergency. By this time, public health agencies around the country, along with state and local governments, were already in high gear responding to the pandemic. The important role of public health agencies was emphasized again with the development of safe and effective vaccines for COVID-19 in the winter of 2021.

The delivery of those vaccines became a major focus of public health agencies, despite the trend of increased vaccine skepticism. Information about COVID-19 vaccination is contained in the tables below.

COVID-19 Vaccination

This indicator reports the percent of adults fully vaccinated for COVID-19. Data is updated daily from the CDC API. Vaccine hesitancy is the percent of the population estimated to be hesitant towards receiving a COVID-19 vaccine. The Vaccine Coverage Index is a score of how concerning vaccine rollout may be in some communities compared to others, with values ranging from 0 (least concerning) to 1 (most concerning).

Report Area	Percent of Adults Fully Vaccinated	Estimated Percent of Adults Hesitant About Receiving COVID-19 Vaccination	Vaccine Coverage Index	Last Update
Grundy County, MO	45.70%	14.82%	0.87	09/28/2022
Missouri	60.81%	13.41%	0.56	09/28/2022
United States	72.65%	10.34%	0.44	09/28/2022

Note: This indicator is compared to the state average.

Data Source: Centers for Disease Control and Prevention and the National Center for Health Statistics, CDC - GRASP. 2019-23. ➞ *Show more details*

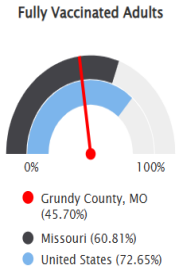


Figure 10: COVID-19 Vaccination

Sexually Transmitted Infections

GCHD works to prevent and control the spread of sexually transmitted infections (STIs) by providing testing and referral services and promoting healthy sexual behaviors. The occurrence of STIs in Grundy County is much lower than state and national comparisons.

Table 15: Sexually Transmitted Infections Report

Sexually Transmitted Infections	Grundy County	Missouri State
Number of reported Chlamydia infections	28	31,982
Chlamydia rate per 100,000	303.3	518.5
Gonorrhea rate per 100,000	50.9	201.9
Number of Syphilis cases	0	1,649
syphilis rate per 100,000	0	29.53
Number of HIV/AIDS cases	5	13,271
HIV/AIDS rate per 100,000 population	62	254.3

Retrieved from: https://allthingsmissouri.org/all-things-missouri-report/?REPORT

Vector-Borne Disease

Vector-borne diseases are illnesses that are transmitted to humans through the bites of infected insects or through exposure to viruses or bacteria in the environment. These environmental sources of transmission are called “vectors.” Some examples of vector-borne diseases include malaria and West Nile virus (mosquitos), Lyme disease (ticks), and Giardia (soil or water).

The GCHD helps reduce the incidence of dangerous and often deadly vector-borne diseases by implementing measures to control vectors, educating the public, monitoring disease incidence, and promoting vaccination. GCHD provides information to the public about how to reduce their risk of exposure to vectors and the diseases they carry (e.g., use of insect repellent, wearing protective clothing, and avoiding areas where vectors are common). When available, GCHD can link Grundy County residents to referrals for vaccination against vector-borne diseases, including vaccines for malaria or yellow fever. The incidence of vector-borne disease in Grundy County is very low.

Food Borne Disease

Hepatitis A is a highly contagious virus that is spread by consuming food or water contaminated with the feces of an infected person. The most common vector for Hepatitis A in rural communities, such as Grundy County, is food service workers. Hepatitis A can be prevented through vaccination and by washing hands with soap and water after using the toilet, and before preparing or eating food.

Most foodborne illnesses in the County are caused by Campylobacter, Salmonella, Shigella, Shiga toxin-producing E. coli (STEC), Cryptosporidium, Cyclospora, Vibrio, and Listeria. Among these, Campylobacter and Salmonella are by far the most frequently reported. While many pathogens can

cause foodborne illness, not all are included in national surveillance databases. The Nationally Notifiable Disease Surveillance System (NNDSS) tracks only a subset of foodborne diseases that are federally notifiable, laboratory-confirmable, and consistently reported by states. As a result, several of the most widespread causes of foodborne illness in the U.S., including norovirus, Clostridium perfringens, and Bacillus cereus, are not captured by the NNDSS.

Chapter 3: Chronic Disease Prevention

Chronic diseases are long-lasting and often debilitating health conditions that can significantly degrade a person's quality of life. Chronic disease control is the prevention and management of chronic diseases. Common chronic diseases include heart disease, stroke, cancer, diabetes, and chronic respiratory diseases.

Local public health agencies like the GCHD are vital to tackling chronic diseases. In aligning with Missouri's FPHS model, GCHD engages in:

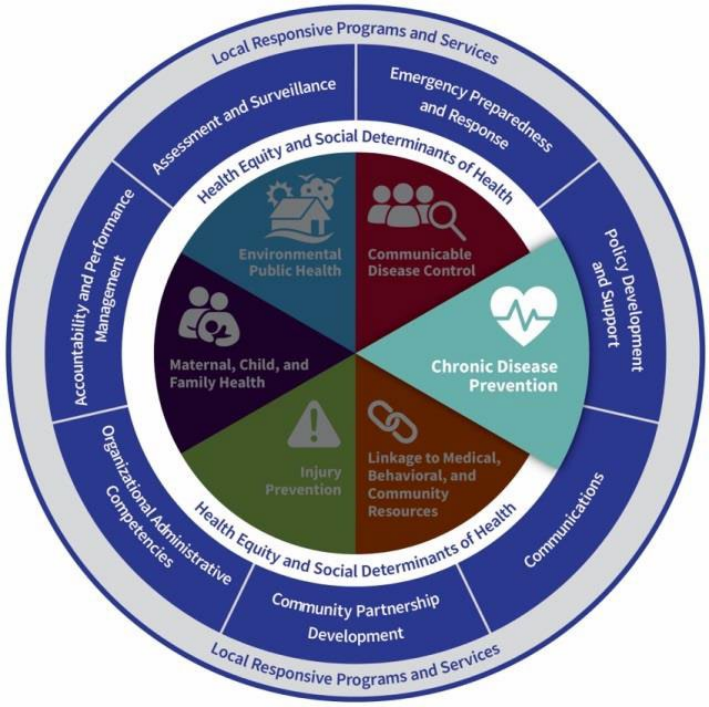


Figure 11: Missouri Foundational Model-Chronic Disease Prevention

Surveillance: Local public health agencies conduct surveillance for rapid detection of emerging threats and to monitor the occurrence and prevalence of chronic diseases within a community. This involves collecting data on the incidence and prevalence of conditions, such as those listed in the tables below.

Prevention: Local public health agencies work to prevent the onset of chronic diseases through promoting healthy lifestyles, providing education and resources on disease prevention, and promoting policies to reduce risk factors for chronic diseases.

Treatment and management: Public health agencies may provide screening to detect diseases, and resources and support for individuals with chronic diseases, including access to medical care and support services.

Cancer

Cancer is a complex and multifaceted disease that can affect any part of the body. In the United States, the most common forms of cancer are breast, lung, prostate, and colorectal cancer. These same cancer trends hold true for Missouri, as well. Although cancers can significantly affect health, premature death, and healthcare costs, early detection of cancers provides the best possible

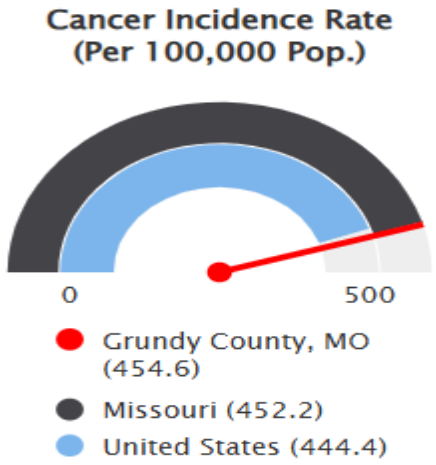
outcomes. Some cancers, like prostate cancer, have survival rates above 90% when detected early. The cancer rate in Grundy County is higher than the state and national averages.

Report Area	Estimated Total Population	New Cases (Annual Average)	Cancer Incidence Rate (Per 100,000 Population)
Grundy County, MO	13,858	63	454.6
Missouri	7,712,295	34,875	452.2
United States	392,542,529	1,744,459	444.4

Note: This indicator is compared to the state average.
Data Source: State Cancer Profiles. 2017-21. ➞ Show more details

Figure 12: Cancer Incidence, Grundy County

Figure 13: Cancer Incidence Rate Comparison, Grundy County and Missouri



Breast cancer is the most common form of cancer in women and can be deadly if not detected early. Breast cancer can spread to other parts of the body and can require extensive and expensive treatment. ***Prostate cancer*** is the most common form of cancer in men. It may be slow-growing and non-life-threatening or aggressive and deadly.

Lung cancer is the leading cause of cancer-related death in both men and women in the U.S. It is often caused by smoking or exposure to secondhand smoke, and it can be difficult to treat. ***Colorectal cancer*** affects the colon and rectum and is often diagnosed in people over the age of 50. It can be deadly if not detected and treated early.

Table 16: Age-Adjusted Cancer Mortality Rates, Grundy County and Missouri

Age adjusted rate per 100,000 (2019-2023)	Grundy	Missouri	USA
Total cancer deaths	176.2	161.2	141.5
Female breast cancer deaths	ND	20.1	18.6
Prostate Cancer deaths	ND	20.4	18.6
Colon and Rectum cancer deaths	ND	14	12.7
Lung and Bronchus Cancer deaths	45.6	41.3	29.3

ND = No Data
Retrieved from: CDC United States Cancer Statistics, Data Visualizations

Preventive Screenings

Mammogram and PAP

Preventive screenings such as mammogram and Pap screening can help detect cancer or pre-cancerous conditions at an early stage, allowing for earlier treatment and a better chance of a positive health outcome. Missouri implemented the Show Me Health Women program in 1992. SMHW is a statewide program funded by the Missouri Department of Health & Senior Services and the Centers for Disease Control and Prevention (CDC) and supported by various national, regional, and local partner organizations, which provides free breast and cervical screening, re-screening, and diagnostic tests for women who meet specific age, income, and insurance guidelines. There are no SMHW providers in Grundy County.

Mammogram screenings are used to detect breast cancer in women. Early detection of breast cancer through mammography can increase the chances of successful treatment and survival. In addition, mammography can also detect non-cancerous breast conditions that may require further evaluation or treatment. The American Cancer Society recommends that women with an average risk of breast cancer begin annual mammograms from age 45 to 54 and may transition to biennial mammograms at age 55 or continue annually. Uninsured or underinsured residents may qualify for free mammogram screenings through a grant.

Table 17: Mammography Screening, Grundy County (2024)

Mammography Screening	Grundy County	Missouri state	USA
Percent of women with annual mammogram 2025	47%	72.10%	79.80%

Retrieved from: https://www.countyhealthrankings.org/health-data/missouri/data-and-resources

Show Me Healthy Women: Free Breast and Cervical Cancer Screenings

The Show Me Healthy Women (SMHW) program has a broad reach in Missouri. Based on U.S. Census Bureau estimates in 2021, approximately 97,786 Missouri women aged 35-64, which accounts for 6.5 percent of the population, are eligible for SMHW services. Annually, the program serves around 5,500 to 6,500 women statewide.

The Show Me Healthy Women program offers free breast and cervical cancer screenings for Missouri women who meet certain eligibility requirements. Oats Transport is the transportation provider in Grundy County. Women who have an income at or below 200 percent of the federal poverty level for

household income; are aged 35 to 64 or older; do not receive Medicare Part B; and do not have insurance to cover program services qualify for Show Me Healthy Women program benefits. The program offers a range of services to eligible women. Testing includes clinical breast exams (CBE), screening mammograms for women aged 50-64, and screening mammograms for women aged 40-49 using donated funds, if available. The main goal of SMHW is to detect breast and cervical cancer at early stages, when treatment options are more effective. Early detection of cancers has the potential to save lives with timely interventions. Through screenings, SMHW identifies and refers approximately 100 cases of breast cancer (about 2 a year in Grundy County) and 40 to 60 cases of cervical cancer (about 2/year in Grundy County) for treatment each year. Currently, Harrison county is the closest location with a Show-Me Healthy Women provider.

Pap screening is used to detect cervical cancer or pre-cancerous conditions by collecting cells from the cervix to look for abnormal cells. Early detection through pap screening can lead to more effective treatment and a lower risk of complications or death. The American Cancer Society recommends average risk individuals start screening at age 25 years and continue until at least age 65.

SMHW also provides pap tests, HPV tests, and pelvic exams as part of the screening process. In addition to screenings, SMHW offers diagnostic services, including specialist consultations for breast and cervical concerns, diagnostic mammograms, ultrasound, fine needle aspiration, cold knife conization (for diagnostic purposes), breast biopsies, loop electrode biopsy (LEEP), and colposcopy (with or without biopsy).

Tracking for mammogram referrals began in 2021. Tracking for pap tests and cervical exams separately began in 2022 (an individual can have a cervical exam without requiring a pap).

Table 18: Age-Adjusted Prevalence of Cancer Screenings, Grundy County, 2022

% Age-adjusted Prevalence in 2022	Grundy County	Missouri State	USA
Colorectal Cancer Screening	55.6%	71.6%	72.2%
Breast Cancer Screening	70.6%	73.9%	76.5%
Cervical Cancer Screening (2020)	80.1%	78.8%	78.0%
Lung Cancer Screening	ND	19.2%	18.4%

Cancer incidence, prevalence

Table 19: Select Cancer Incidence and Mortality, Grundy County (2017-2021)

	Grundy County (age-adjusted rate per 100,000)	Missouri (age-adjusted rate per 100,000)
Total Cancer deaths	176.2	161.2
Cancer Incidence	492.7	467.2
Female Breast Cancer Incidence	167.6	136.6
Female Breast Cancer Deaths	--	19.8
Prostate Cancer Incidence	86.9	98.3
Prostate Cancer Deaths	--	20.4
Lung and Bronchus Cancer Incidence	74.7	67.9
Lung and Bronchus Cancer Deaths	45.6	41.3
Colon and Rectum Cancer Incidence	49.7	40.2
Colon and Rectum Cancer Deaths	--	14.0

Source: CDC United States Cancer Statistics, Data Visualizations (2017-2021)

Cardiovascular and Cerebrovascular Disease

Cardiovascular disease refers to a range of conditions that affect the heart and blood vessels, including coronary artery disease, heart failure, and arrhythmia that can cause symptoms such as chest pain, shortness of breath, and weakness, and can significantly reduce the ability to perform daily activities. ***Cerebrovascular disease*** refers to a group of conditions that affect blood vessels in the brain, such as stroke, transient ischemic attack (TIA), and vascular dementia.

Cardiovascular and cerebrovascular disease are leading causes of death and disability worldwide. In the United States, heart disease is the leading cause of death for both men and women. ***Stroke*** is the fifth leading cause of death and a leading cause of disability. Cardiovascular and cerebrovascular disease can lead to disability, reduced quality of life, and premature death.

Table 20: Age-Adjusted Cerebrovascular and Heart Disease Mortality Rates

Mortality Rates	Grundy County	Missouri State	USA
age adjusted death rate Cerebrovascular disease per 100,000	31.4	39.8	38.9
age adjusted death rate due to heart disease per 100,000	177.9	196.6	167.5

Source: https://hdpulse.nimhd.nih.gov/data-portal/home

Diabetes

Diabetes Mellitus is a chronic disease characterized by high levels of glucose in the blood due to the body's inability to produce or properly use insulin. There are two main types of diabetes: Type 1, which is caused by the body's inability to produce insulin, and Type 2, which is caused by the body's inability to use insulin effectively. Diabetes can lead to a range of health problems, including heart disease, stroke, kidney disease, nerve damage, and blindness. It can also increase the risk of complications during pregnancy and lead to lower limb amputations.

Table 21: Diabetes Incidence, Prevalence, and Mortality

Diabetes	Grundy	Missouri	USA
% Adults with Diabetes Diagnosed	10.20%	12.30%	11.60%
Mortality Rates for Diabetes	nd	23.3	23.9
Diabetes prevalence for Medicare Fee for Service Beneficiaries	27%	25%	26%

Source: Explore MO Health

Asthma and COPD

Asthma is a chronic respiratory disease that can cause breathing difficulties, wheezing, coughing, and chest tightness. It affects people of all ages, and it is one of the most common chronic diseases globally, although the rates in Grundy County are normal. Left untreated, asthma can also result in hospitalizations and emergency room visits, and it is a significant economic burden due to the costs associated with medical care and lost productivity. Studies have shown that asthma rates are higher among certain racial and ethnic groups, including Black and Hispanic populations. This may be due to other factors such as poverty, inadequate housing, and exposure to environmental pollutants.

Table 22: Asthma and COPH Prevalence and Mortality

Respiratory Disease	Grundy	Missouri	USA
Medicare beneficiaries with Asthma	4.50%	4.50%	5.00%
Asthma Prevalence	nd	14.20%	13.40%
Mortality rates of COPD	43.6	46.8	35.9
COPD Prevalence	14%	14%	12%

Source: Sparkmap.org

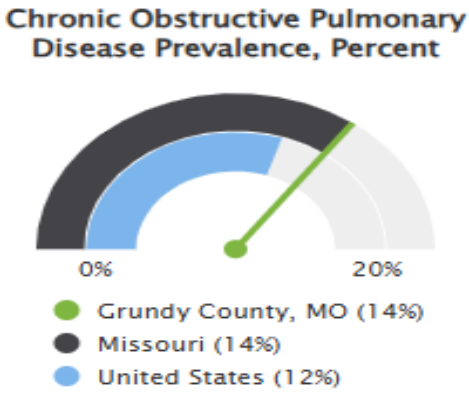


Figure 14: COPH Prevalence

Lung Disease Mortality

This indicator reports the 2019-2023 five-year average rate of death due to chronic lower respiratory disease per 100,000 population. Figures are reported as crude rates. Rates are resummarized for report areas from county level data, only where data is available. This indicator is relevant because lung disease is a leading cause of death in the United States.

Within the report area, there are a total of 37 deaths due to lung disease. This represents a crude death rate of 75.8 per every 100,000 total population.
Note: Data are suppressed for counties with fewer than 20 deaths in the time frame.

Report Area	Total Population, 2019-2023 Average	Five Year Total Deaths, 2019-2023 Total	Crude Death Rate (Per 100,000 Population)
Grundy County, MO	9,764	37	**75.8**
Missouri	6,166,255	18,813	61.0
United States	331,563,969	744,717	44.9

Note: This indicator is compared to the state average.
Data Source: Centers for Disease Control and Prevention, CDC - National Vital Statistics System. Accessed via CDC WONDER. 2019-2023. ➞ *Show more details*

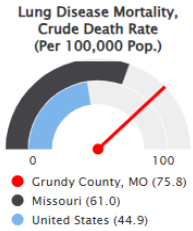


Figure 15: Lung Disease Mortality

Behavioral Risk Factors

Self-reported behavioral risk factors provide important information related to personal behaviors that are associated with chronic health conditions such as diabetes, heart disease, and cancer. In Grundy County, there are more adults who reported smoking and being physically inactive compared to the Missouri average. However, fewer adults reported excessive drinking than the average in Missouri (Table 23).

Table 23: Behavioral Risk Factors, Grundy County (2024)

	Grundy County	Missouri
Insufficient Sleep	39%	38%
Excessive Drinking	21%	28%
Adult Smoking	22.7%	18%
Physical Inactivity	28%	24%
Adults with Obesity	37.1%	37%

Source: Countyhealthrankings.org (2024)

Chapter 4: Environmental Public Health

Environmental health focuses on the relationship between people and the environment (e.g., air and water quality, exposure to toxic substances, and food safety), promotes health and well-being, and fosters safe and healthy communities. Missouri's FPHS model specifies ways public health agencies in Missouri should address environmental health, at a minimal level:

Figure 16: Missouri Foundational Public Health Services Model- Environmental Public Health

Prevention: LPHAs work to prevent environmental health problems through promoting policies to regulate and reduce pollution, promoting sustainable practices, and providing education and resources on environmental health.

Surveillance: LPHAs monitor the occurrence and consequences of environmental health issues within a community.

Response: In the event of an environmental health crisis, such as a train derailment or toxic chemical release, LPHAs help coordinate response efforts and implement measures to protect the health of the community.

Water Quality

Annually, 5,463,491 Missourians receive their water from community water systems. GCHD improves water quality in the county by assisting in monitoring the quality of drinking water,

recreational water, and wastewater. GCHD has access to statewide systems for assessing health risks associated with exposure to specific contaminants in water. GCHD can educate the public about the value of safe water and work with government agencies and community organizations to develop and enforce regulations and standards for safe water quality.

Table 24 highlights the issues with data encountered in Grundy County. Many data sources were not available for Grundy County when exploring environmental health concerns.

Table 24: Annual Mean Concentration of Contaminants in Grundy Community Water System

	2023	2022	2021	2020
Nitrate (mg/l)	No Data	No Data	No Data	No Data
Radium (pCi/L)	No Data	No Data	No Data	No Data
Tetrachloroethylene (PCE) (Âµg/L)	No Data	No Data	No Data	No Data
Trichloroethylene (TCE) (Âµg/L)	No Data	No Data	No Data	No Data
Arsenic (Âµg/L)	No Data	No Data	No Data	No Data

Source: https://ephtn.dhss.mo.gov/EPHTN_Data_Portal/

Lead Poisoning

Lead poisoning is concerning for many counties in Missouri and the United States. Childhood testing for blood lead levels is routinely completed and monitored.

Table 25: Test for Childhood Lead Poisoning

Tests for Childhood Lead Poisoning		Grundy		Missouri	
		Count	Percent	Count	Percent
0-5 years	Tested	165	20.97	73545	17.26
	Confirmed	21	2.67	23854	5.6
6-18 years	Tested	17	0.19	16732	0.29
	Confirmed	16	0.18	15832	0.27

Source: https://ephtn.dhss.mo.gov/EPHTN_Data_Portal/

Indoor and Outdoor Air Quality

Poor air quality can damage health with symptoms ranging from difficulty or discomfort in breathing, to respiratory and cardiovascular diseases, to cancer and premature death. To monitor and improve indoor air quality, Missouri LPHAs may provide education on best practices for reducing indoor air pollution sources, such as tobacco smoke, household cleaning products, and building materials. They may also provide educational resources to help people identify and mitigate sources of indoor air pollution in their homes and workplaces, such as mold and mildew, radon gas, and carbon monoxide.

Air Quality Index

Air quality indices (AQI) are used by government agencies to describe the air quality at a given location. As the AQI increases, an increasingly large percentage of the population is likely to

experience increasingly severe adverse health effects. Air quality index values are divided into ranges such as good, moderate, and unhealthy for sensitive groups. Standardized public health advisories are associated with each AQI range.

Poor Air Quality (Ozone)

This indicator reports the percentage of days per year with Ozone (O3) levels above the National Ambient Air Quality Standard of 75 parts per billion (ppb). Figures are calculated using data collected by monitoring stations and modeled to include census tracts where no monitoring stations exist. This indicator is relevant because poor air quality contributes to respiratory issues and overall poor health.

Report Area	Total Population	Number of Days Exceeding NAAQS Standards	Percentage of Days Exceeding Standards, Crude Average	Percentage of Days Exceeding Standards, Pop. Adjusted Average
Grundy County, MO	10,261	0.00	0.00%	0.00%
Missouri	5,988,927	1.00	0.26%	0.27%
United States	307,647,627	7.00	1.84%	1.97%

Note: This indicator is compared to the state average.
Data Source: Centers for Disease Control and Prevention, CDC - National Environmental Public Health Tracking Network. 2019. ➞ *Show more details*

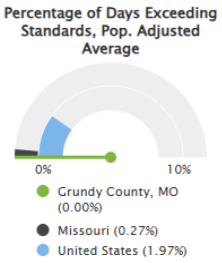


Figure 17: Poor Air Quality (Ozone)

Particulate Matter

Particulate Matter 2.5 (PM2.5), also known as fine particles, refers to minuscule particles or droplets present in the air that are two and a half microns or less in width. To put it in perspective, these particles are roughly thirty times smaller than the width of a human hair. When outdoor PM2.5 levels are elevated, the air appears hazy, reducing visibility. This information is based on the air quality database from the U.S. Environmental Protection Agency (EPA).

Elevated outdoor PM2.5 levels are typically observed on days with calm or stagnant winds. The primary sources of outdoor fine particles include exhaust emissions from cars, trucks, buses, and off-road vehicles (along with Nitrogen Dioxide and Sulfur Dioxide). Additionally, the burning of fuels like wood, heating oil, coal, as well as natural occurrences such as forest and grass fires contribute to the presence of PM2.5 in the air. Indoors, fine particles can stem from tobacco smoke, cooking activities involving frying, sautéing, and broiling, burning candles or oil lamps, as well as the use of fireplaces and fuel-burning space heaters like kerosene heaters.

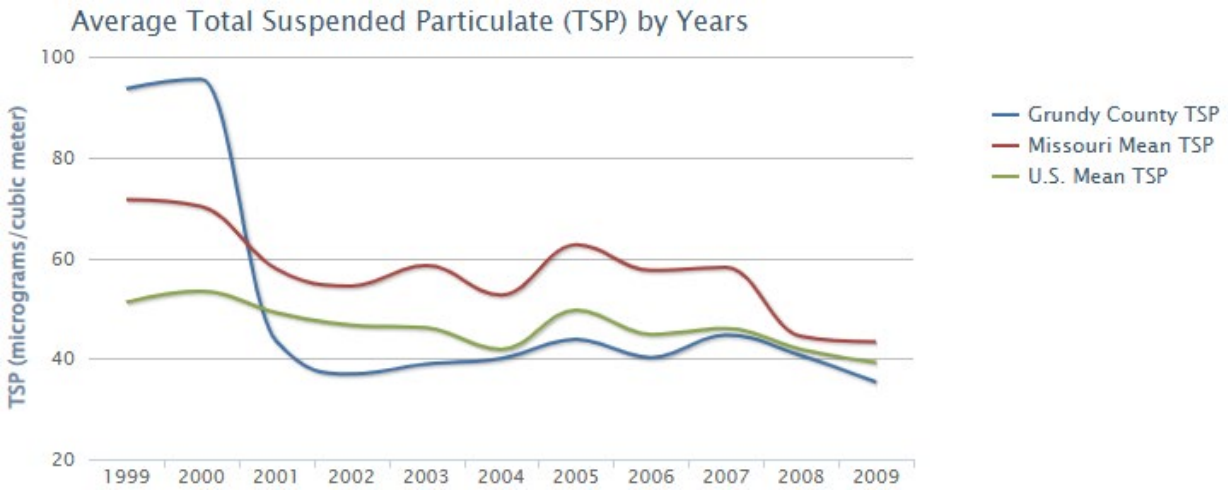


Figure 18: Average Total Suspended Particulates, Grundy County (1999-2009)

High concentration of fine particulate matter can pose health risks. The small size of these particles allows them to penetrate deeply into the respiratory tract, reaching the lungs. Exposure to PM2.5 can lead to various short-term health effects, including irritation of the eyes, nose, throat, and lungs, resulting in symptoms like coughing, sneezing, a runny nose, and shortness of breath. Furthermore, exposure to PM2.5 can impact lung function and exacerbate existing medical conditions such as asthma and heart disease. Individuals with respiratory and cardiovascular problems, along with young children and the elderly, are particularly vulnerable to the adverse effects of PM2.5.

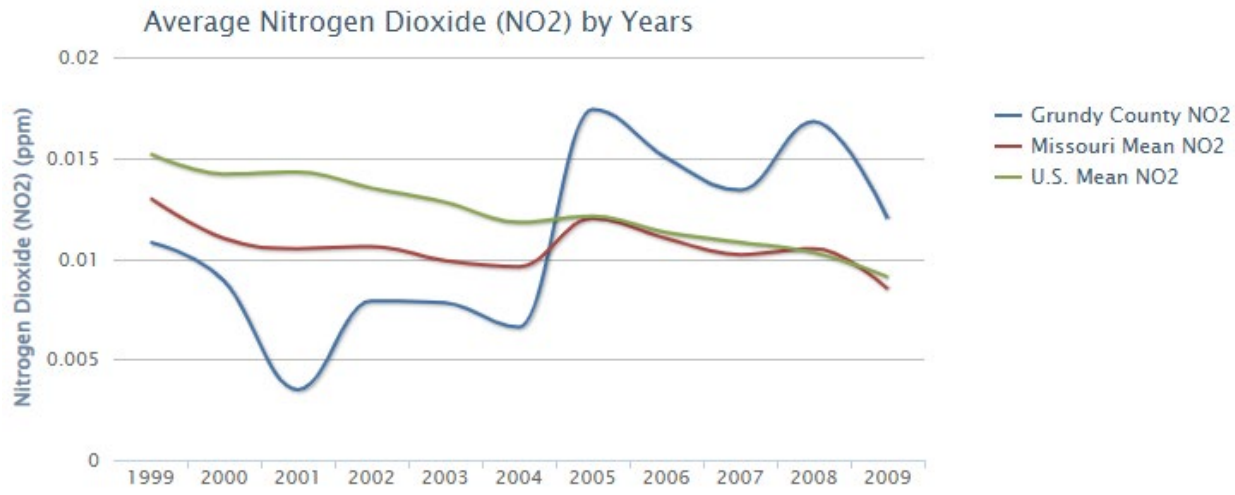


Figure 19: Average Nitrogen Dioxide, Grundy County (1999-2009)

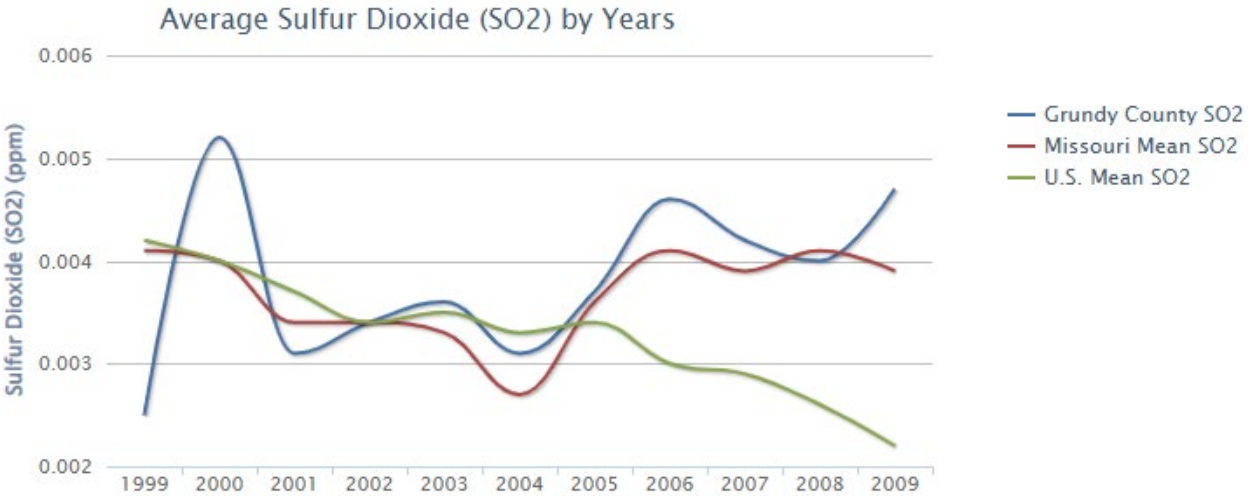


Figure 20: Average Sulfur Dioxide, Grundy County (1999-2009)

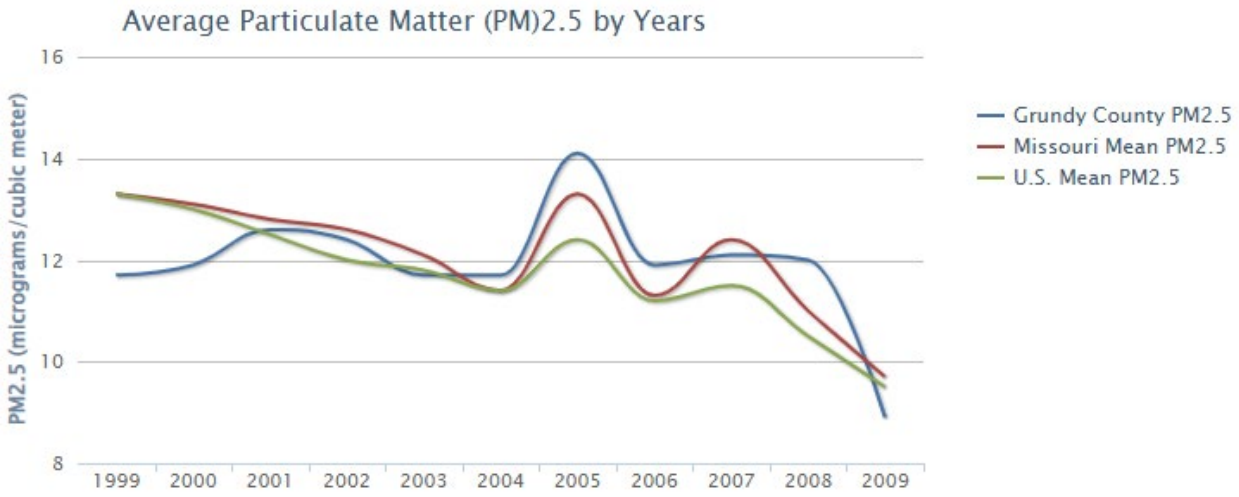


Figure 21; Average Particulate Matter 2.5, Grundy County (1999-2009)

Food Establishment Inspections

Missouri LPHAs conduct food establishment inspections to assess whether food handlers are operating in compliance with Missouri's Food Code. Foodborne illness can be caused by a range of contaminants, including bacteria, viruses, parasites, and chemical toxins, and can result in symptoms such as nausea, vomiting, diarrhea, and fever. In severe cases, it can lead to hospitalization and even death.

By conducting food establishment inspections, public health agencies can identify and correct potential food safety hazards before they result in illness, preventing food-related outbreaks before they occur. Inspections may include checking for proper food storage and handling, hot and cold cooking and storage temperatures, proper hygiene, food preparation surfaces and equipment, and compliance with all regulations in Missouri's Food Code.

Table 26: Environmental Health Inspections, Grundy County

Agency	Total Inspections
Food – Restaurant inspections	53
Drinking water violations	0
Summer food service program	0
Temporary/mobile food	7
Food complaints	0
Childcare inspections	4
Onsite sewage complaints	0
lodging	2
Total inspections 2024	108

Table 27: Environmental Health Inventory, Grundy County

Agency	Priority	Locations
Food	High (3x/yr)	2
	Medium(2x/yr)	18
	low(1x/yr)	27
Drinking water violations		0
Summer food service program		0
Temporary/mobile food		7
Childcare		4

Chapter 5: Maternal, Child, and Family Health

Maternal, child, and family health refers to the health of women, children, and families, and includes reproductive health, prenatal care, childbirth, postpartum care, child development, child health, family planning, men's health, and healthy aging.

Maternal health refers to the physical and mental well-being of women during pregnancy, childbirth, and the postpartum period. It includes access to healthcare, nutrition, and education to ensure the best possible outcomes for both the mother and the baby.

Child health refers to the physical and mental well-being of children from birth to adolescence. It includes access to healthcare, nutrition, and education, as well as efforts to prevent illnesses and injuries.

Family health refers to the health of the family unit, including the well-being of parents, children, and other family members. It includes issues related to family planning, such as contraception and fertility, as well as efforts to promote healthy relationships and communication within the family.

Birthweight, Live Births, Infant Mortality and WIC Utilization

Table 28: Birthweight, WIC, and Infant Mortality Data, Grundy County (2017-2020)

	Grundy County	Missouri
Low Birth Weight Births (2017-2020)	8.25%	8.78%
Low Birth Weight and Term (2017-2020)	2.53%	2.66%
Very Low Birth Weight Delivered in Level III Centers (2017-2020)	33.33	87.91
Birth Defects per 10,000 (2017-2020)	464.52	706.26
Non-hospital Live Births per 1,000	240.06	26.44
Women, Infants, and Children Program		
Infants Participating in WIC (2021)	30.28	40.74
WIC Infants, Ever Breastfed (2021)	61.9	70.72
WIC Participation: Ages 12 to 59 Months	14.57	17.25
Infant Deaths per 1,000 (2010-2020)	11.43 (n=18)	6.3
Sudden Infant Death Syndrome per 1,000 (2010-2020)	1.9 (n=3)	0.25

Table 29: Live Birth Date, Grundy County (2022)

Live Births 2022	Grundy	Missouri	USA
Teen Birth per 1000	22.4	16.9	13.1
% Low Birth weight(<2500gms/5.8pounds)	8.3	9.12	8.58

Retrieved from KIDS COUNT Data Center

Births to Teens aged 15-19: Teen pregnancy can be a complex issue with many underlying factors, including a lack of access to comprehensive sexual health information and contraception, poverty, cultural or societal pressures, family dynamics, and a range of individual factors. High rates of teen pregnancy can indicate the need for greater support and resources for young people in the community, as well as efforts to address the social and economic factors that contribute to the issue.

Low birth weight infants: This indicator can be a sign of poor maternal health, inadequate prenatal care, and a range of environmental and social factors that can affect fetal growth and development. Infants born with low birth weight are at greater risk for a range of health problems and developmental delays. Therefore, addressing this issue can be an important public health priority.

Infant and Child Mortality

The infant mortality rate (IMR) is the number of deaths of infants under one year of age per 1,000 live births in a given population. It is a critical public health indicator that reflects the health status and well-being of a community. Infant mortality is an important measure of the quality of health care, nutrition, and social support for mothers and infants.

Infant Mortality

Table 30: Child Mortality, Grundy County (2023)

Deaths 2023	Grundy	Missouri	USA
Child Mortality rate (Number of deaths among children under age 18 per 100k population.)	8.6	38	28
Infant Mortality Rate (Number of all infant deaths, per 1,000 live births.)	13.6	6.7	5.61

Retrieved from KIDS COUNT Data Center

The 2025 Annie E. Casey Foundation KIDS COUNT Data Book for Missouri ranks Grundy County 48th in the state (out of 115) and 19th among rural counties on the composite scores for outcome measures (with "1" indicating the most positive finding and "115" the worst). KIDS COUNT outcome measures assess child well-being across domains like economic security, education, health, family, and community and includes such data as children under 18 in poverty, food insecurity for children, low birthweight infants, child abuse or neglect cases, and measures of educational proficiency and childhood health.

Child Food Insecurity and Poverty

Students enrolled in free & reduced lunch program: This indicator can provide insight into the economic hardship experienced by families in the community, as eligibility for the program is based on household income. High rates of enrollment in the program can suggest that many families in the area are struggling financially, which can have implications for children's health, education, and well-being.

Food Stamp Recipients (with children under 18 years): This indicator can provide information about the prevalence of poverty and food insecurity among families with children in the community. High rates of food stamp recipients can suggest a need for greater support and resources for families facing economic hardship, as well as efforts to address the underlying factors that contribute to poverty and food insecurity.

Children enrolled in Medicaid: This indicator can provide information about access to health care among children in the community, as Medicaid provides health coverage to many low-income families. High rates of enrollment in Medicaid can suggest that many families in the area face financial barriers to accessing health care, and efforts to improve access to health care for children may be an important priority for public
health agencies.

Table 31: Childhood Household Poverty, Food Insecurity, Data Grundy County

(0-17) ages	Grundy	Missouri	USA
Children population %	25.00%	22.20%	22.00%
%children in single parent households	17.4	23.90%	34%
licensed childcare centers rate	19.2	93.2	
% housing cost burdened households	22.60%	26.40%	30%
% food insecure children	16.7	18.7	17
% uninsured children	9.50%	5.50%	5%
% children in poverty	21.40%	14.70%	16%
children that are homeless	0.30%	2.60%	2.20%

Source: Missouri kids count data book

Chapter 6: Injury Prevention

LPHAs identify risk factors and implement strategies to reduce or eliminate injuries. The goal of injury prevention is to reduce the incidence, severity, and impact of injuries on individuals and communities.

The MO FPHS model defines injury prevention as creating a safer and healthier community by reducing the risk of injury and promoting healthy behaviors and habits. LPHAs, they work with partners to develop and test prevention strategies, policies, and programs. They evaluate interventions and apply lessons learned to prevent other types of injuries.

LPHAs prevent injuries through implementing programs and initiatives aimed at reducing risk, advocating for changes to laws and policies that can help to reduce the risk of injury, and collaborating with community partners such as schools, businesses, and community groups, to promote injury prevention.

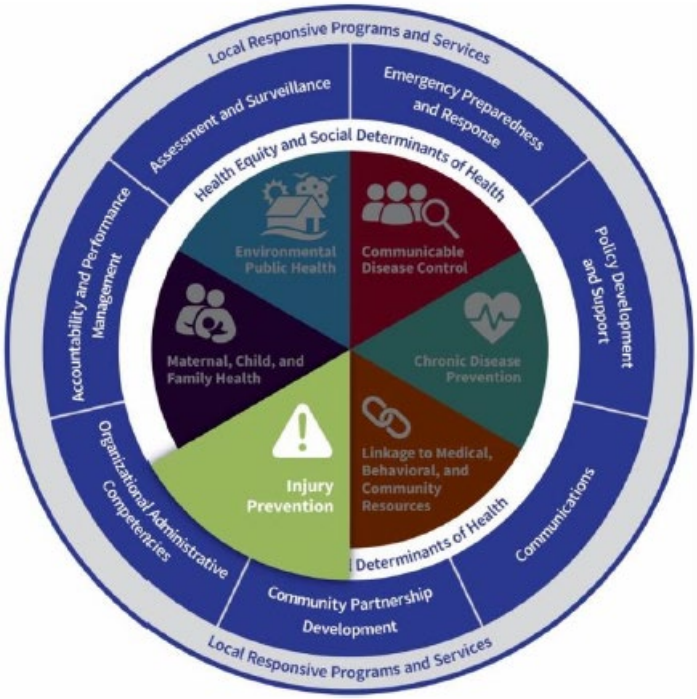


Figure 22: Missouri Public Health Services Model-Injury Prevention

Table 32: Unintential and Intentional Mortality, Grundy County

Injury Deaths	Grundy	Missouri	USA
Unintentional Injury deaths per 100,000 population	69.63	56.94	66.5
Homicide deaths per 100,000	NA	10.4	7.3
Deaths by suicide (age adjusted per 100,000)	28.1	18.7	19.7
Firearm Fatalities rate per 100,000 population	22.4	21.4	13.7

Table 33: Injury Morbidity and Mortality Data, Grundy County (2019-2023)

	Grundy County	Missouri
Injury Deaths (rate per 100,000)	112.2	104.0
Homicide Deaths (rate per 100,000)	--	12.4
Firearm Fatalities (rate per 100,000)	22.0	24.2
Driving Deaths with Alcohol Involvement (%)	--	18.0
Drug Overdose Mortality (rate per 100,000)	--	36.9
Deaths Due to Accidents and Adverse Effects (age-adjusted rate per 100,000)	63.9	68.4
Deaths by Suicide (age-adjusted rate per 100,000)	28.1	18.7

Source: HD Pulse

Public Safety and Domestic Violence

A perception of public safety is central to the quality of a neighborhood and the overall well-being of its residents. High rates of crime and violence can indicate an unsafe environment, increasing stress, anxiety, and the potential for physical injuries. Closer to home, domestic violence and child abuse and neglect can also have serious public health consequences. High rates of children entering and re-entering state custody may indicate a lack of support for families in the community and could be a sign of other underlying issues such as poverty, substance abuse, or mental health problems.

Alcohol and Drug Use

According to a 2013 *Mercatus Center* study, Missouri has one of the least restrictive alcohol statutory environments in the United States, with no blue laws and low alcohol taxes. It also has no statewide open container law, no prohibition on drinking in public, and no local option for installing laws more restrictive than current state law.

In terms of tobacco laws, Missouri has the lowest cigarette excise taxes in the country (17 cents per pack) and has never seriously entertained a statewide smoking ban. As of 2008, only 27.5% of Missourians supported a statewide ban on smoking in bars and restaurants. According to the Centers for Disease Control and Prevention, in 2008 Missouri had the fourth highest percentage of adult smokers among U.S. states, at 24.5%. In 2025, the percentage had declined to 15.3%.

Marijuana smoking has become more prevalent in the last decade. In 2014, Missouri partially decriminalized possession of cannabis and legalized CBD oil. In 2018, a constitutional amendment was passed to establish a system for licensing, regulating, and taxing medical marijuana. And in November 2022, Missouri passed Amendment 3, legalizing recreational marijuana and becoming the 21st state to do so.

Vaping

Vaping products, including e-cigarettes, have gained significant popularity in recent years, particularly among teenagers. While initially marketed as a safer alternative to traditional tobacco smoking, mounting evidence suggests vaping is not without health risks. The specific health consequences of vaping, especially among teenagers, have become a subject of concern in Grundy County.

Many e-cigarettes contain nicotine, which is highly addictive. Teenagers who vape are at risk of developing nicotine addiction, as the adolescent brain is particularly susceptible to the effects of addictive substances. Nicotine addiction can lead to long-term dependence and make it harder for individuals to stop vaping or smoking in the future. Research suggests that nicotine can interfere with brain development, impacting cognition, attention, learning, and impulse control. It may also increase the risk of developing mental health disorders.

Vaping is a relatively recent phenomenon, and long-term health effects are still being studied. Many of the chemicals present in e-cigarette aerosols, including nicotine, flavorings, and other additives, have not undergone thorough evaluation for their safety when inhaled into the lungs over an extended period. Vaping has been associated with various respiratory problems. Inhalation of aerosols produced by e-cigarettes can irritate the airways and cause symptoms such as coughing, wheezing, and shortness of breath. Additionally, there have been cases of severe lung injuries, known as e-cigarette or vaping-associated lung injury (EVALI), reported among vapers, including teenagers.

To address the health risks associated with vaping among teenagers, public health authorities and educational institutions have been implementing measures to raise awareness, provide accurate information, and promote prevention. Most of the policies being developed focus on discouraging underage vaping, ensuring that teenagers are well-informed about the potential health hazards, and restricting access to e-cigarettes and flavored vaping products, which tend to attract young users.

CHA- SUMMARY

Accidental poisoning or overdose can be caused by a variety of substances, including prescription medications, over-the-counter medications, illegal drugs, alcohol, and household chemicals. Some of the main causes of accidental poisoning or overdose include improper storage or use of medications and chemicals, lack of knowledge or understanding of potential risks and side effects, and intentional misuse or abuse of substances.

Chapter 7: Linkage to Medical, Behavioral, and Community Resources

Healthcare resources differ by community, but all Missouri LPHAs who follow the MO FPHS model provide linkages to medical, behavioral, and community resources to their communities. LPHAs collaborate with other community organizations, such as hospitals, clinics, and social service agencies, to facilitate linkages to medical, behavioral, and community resources. This may involve establishing formal partnerships or simply coordinating services and referrals as needed.

GCHD also helps ensure that residents have access to the resources they need to maintain their health and well-being by providing referrals, and educating the public about the availability of medical, behavioral, and community resources. GCHD maintains a community asset and resources list on its website.

Early intervention and treatment for behavioral health issues can lead to cost savings in the long run by reducing emergency room visits, hospitalizations, and other health care costs associated with untreated mental health and substance use issues.

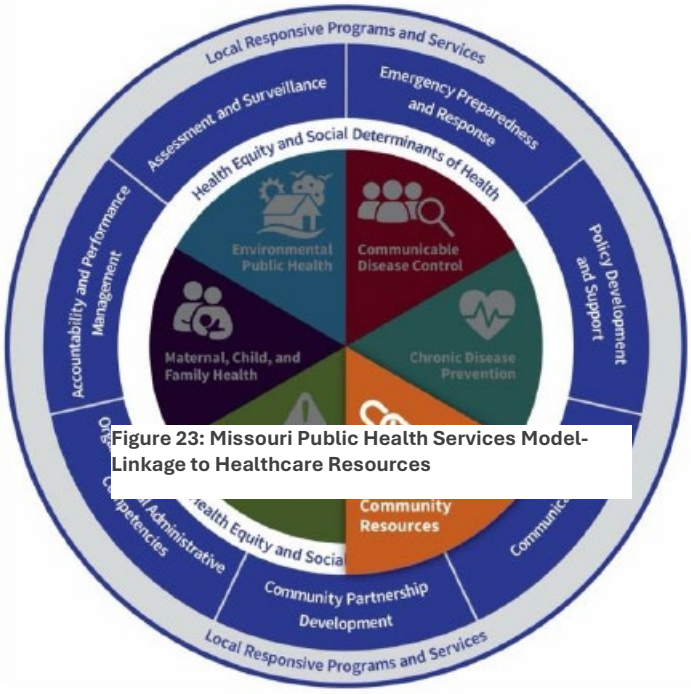


Figure 23: Missouri Public Health Services Model- Linkage to Healthcare Resources

Healthcare Resources

Healthcare providers deliver preventive and curative care to individuals in Grundy County. Health care providers include doctors, nurse practitioners, nurses, midwives, pharmacists, and other health professionals who diagnose and treat illnesses and injuries.

Oral health is essential to the overall health and well-being of Grundy County. Poor oral health can lead to a range of health problems, including oral infections, gum disease, tooth decay, tooth loss, and even serious systemic health conditions such as heart disease, stroke, and diabetes. Neither of the two dental care offices in Grundy County accept Medicaid.

Behavioral Health Resources contribute to the community health in Grundy County by addressing mental health issues, such as depression and anxiety, and substance use issues that, left untreated, can significantly impact a person's quality of life. Behavioral health resources include mental health services, substance use treatment, support groups, and crisis intervention services.

Health Professional Shortage Areas (HPSAs)

Shortages of health professionals can limit access to healthcare, reduce quality of care, and significantly degrade the health of a community. People in HPSAs may have to travel long distances for medical care, may have longer waits for service, or may not receive service at all. Overworked and understaffed healthcare providers may not have the time or resources to provide the level of care necessary for patients.

Shortages of healthcare professionals and healthcare organizations can lead to increased healthcare costs due to increased demand for services and a lack of competition. This can put financial strain on individuals and families who may not be able to afford necessary medical care. When people do not have access to necessary healthcare services or receive poor quality care, it can result in poor health outcomes for individuals and the community. This can lead to higher rates of illness, disability, and premature death.

LPHAs can help address shortages of health professionals/organizations by partnering with existing healthcare providers. Coordinating with community partners to improve the quality of care and health outcomes for the community by remediating health professional shortages is a productive strategy.

Table 34: Primary Care Provider and Insurance Rates, Grundy County (2024)

	Grundy County	Missouri
Patient-to-Primary Care Physician Ratio	4860:1	1420:1
Other Primary Care Provider Ratio	1400:1	730:1
Dentist Ratio	1968:1	1600:1
Mental Health Provider Ratio	360:1	380:1
Uninsured		
Medically Uninsured (Under 65 years)	14.9%	10%
Medically Uninsured, Adults	17%	12%
Medically Uninsured, Children	10%	6%

Source: Countyhealthrankings.org

Paying for Healthcare

Medical Insurance in Grundy County

The ability to pay for healthcare is an important consideration in individuals' decisions to seek treatment. Lack of health insurance or inability to pay for healthcare can be a significant barrier to accessing health care in rural communities. Delaying needed healthcare for chronic diseases or foregoing preventative care can ultimately lead to higher healthcare costs.

Barriers to Care in Rural Grundy County

Rural communities often face unique challenges in accessing medical and behavioral health care services. Rural areas often have fewer healthcare providers compared to urban areas. The shortage of doctors, nurses, and other healthcare professionals can make it difficult for rural residents to access medical care, especially specialty care.

Rural residents may have to travel long distances to access medical, dental, or mental healthcare. This can make it difficult for rural Grundy County residents to reach healthcare facilities. The cost of transportation can also be a barrier for low-income residents.

Rural Grundy County residents may have lower incomes and less access to health insurance, which can make it difficult for them to afford medical care. Even with insurance, high deductibles and co-pays can be a barrier to accessing care.

Furthermore, rural areas often have a culture that values self-sufficiency and can stigmatize seeking mental health services. This, combined with a shortage of mental health care providers in Grundy County, may make it difficult for rural residents to access mental health services.

Other counties have addressed similar barriers by providing increased funding for healthcare facilities, expanding telemedicine options, recruiting and training healthcare professionals to work in rural areas, and increasing access to health insurance and other resources to make care more affordable. Discussions about removing barriers to healthcare in rural Grundy County may use these ideas as starting points for conversations about how barriers unique to Grundy County may be similarly addressed.

Chapter 8: Locally Responsive Programs and Services

In addition to the foundational public health capabilities and areas of expertise, some local public health agencies in Missouri offer unique programs and services that meet specific needs in their own communities. Missouri public health agencies have a rich history of creatively solving the challenge of increasing demand for services with shrinking resources. Local programs and services may not be fundamental statewide but are important to meet unique gaps in individual communities.

These local public health services are depicted in the outer ring of the Missouri FPHS model shown.

Figure 24; Missouri Public Health Services Model-Local Programs and Services

Table 35: Community Services, Grundy County (2024)

	Grundy County	Missouri
Flu Vaccinations	41%	47%
Access to Exercise Opportunities	49%	77%
Limited Access to Healthy Foods	14%	7%
Food Insecurity	17%	15%

Source: Countyhealthrankings.org

Public School Districts: Grundy R-5, Laredo R-7, Pleasant View R-6, Spickard R-2, Trenton R-9.

Public libraries: Grundy County Jewett Norris Library

Colleges: North Central Missouri College

Parks: Crowder State Park, Moberly Park, Trenton Aquatics Center

Fitness: Resolution Gym Fitness, Green Hills Recreation Association, Ketcham Community Center.

Other: MU Extension, Community Food Pantry of Grundy County (Second Harvest Community Food Bank), Green Hills Community Action Agency, Green Hills Head Start, Access II, Community Action Partnership of North Central MO, Missouri Vocational Rehabilitation, Senior Living (4), LifeOptions

Shelters: Green Hills Women's Shelter

Counseling: Preferred Family Healthcare, North Central Missouri Mental Health Center

Transportation: OATS

*Most resources located around Trenton.

Figure 25: Community Resources, Grundy County (2025)

Chapter 9: Health Disparities and Social Drivers of Health

This community health needs assessment has been constructed with a focus on identifying differences in health outcomes in the population. This means that in addition to providing all available data about Grundy County, special attention has also been given to potential health disparities and social drivers of health. This section describes the health equity lens through which the assessment is created.

What are health disparities?

Health ***disparity*** is a difference in health status between people that is closely associated with social, economic, or environmental disadvantages. Studies of *health inequities* focus on differences in health outcomes specifically caused by unfairness or injustice within processes, structures, institutions, or systems that influence health. This can manifest as greater barriers to accessing health care, as well as disparities in health outcomes. Health disparities may be linked to factors such as race or ethnicity, religion, socioeconomic status, gender, age, mental health, cognitive, sensory, or physical disability, sexual orientation, geographic location, or other characteristics historically associated with discrimination or exclusion.

An example of a health equity intervention would be implementing measures to eliminate differences in tobacco use and exposure to secondhand smoke among vulnerable groups. This could involve targeted education campaigns, changes to public policies, or the provision of resources to help those individuals quit smoking. By addressing the underlying social, economic, and environmental factors that contribute to health disparities, health equity interventions aim to promote fair and just opportunities for optimal health outcomes for all individuals.

What is the difference between Equity and Equality?

In public health policy and practice, equity and equality are two concepts that are often used to describe different approaches to addressing health disparities. While both terms aim to promote fairness and social justice, they each have distinct meanings.

Equality refers to treating everyone the same, regardless of their individual circumstances or needs. This approach assumes that everyone has the same starting point and the same ability to access resources and opportunities. However, in reality, people have different starting points and may require different levels of support to achieve the same outcomes. For example, providing the same health care services to everyone will not be effective if some groups have different health needs due to factors such as age, gender, or ethnicity.

Equity, on the other hand, refers to ensuring that everyone has access to the resources and opportunities they need to achieve optimal health outcomes, regardless of their individual circumstances, the environment in which they live, and the social drivers that affect them. This approach acknowledges pre-existing differences in starting points and responds by adjusting the levels of support to the level needed. For example, health care services can be targeted to populations with specific health needs, such as making screening programs responsive to the culture or retooling health education programs for minority groups, thereby reducing health disparities.

What is a Health Disparities Lens?

Health disparities are differences in health outcomes that more prominently affect specific groups. Public health researchers continue to explore causes of health disparities, but the origins are complex and intertwined within societal, cultural, and individual differences. The ***health disparities lens*** considers the preexisting conditions in a community and historical context to identify evidence-based strategies necessary to address the social, economic and environmental **drivers (sometimes referred to as determinants) of health** that contribute to disparities and to achieve a more just and equitable society.

What are the Social Determinants of Health in Grundy County

The ***social determinants of health*** are the social, economic, and environmental factors that contribute to the health of individuals and populations. These determinant social factors can include things like education, employment, income, social support, housing, transportation, and access to healthcare.

How do the social drivers of health contribute to quality of life in Grundy County?

Social drivers of health affect the quality of life, for good or ill, for all residents and communities in Grundy County. Residents who have access to good education and employment opportunities are more likely to have a higher quality of life. They are more likely to be able to afford healthcare and to be able to navigate the healthcare system effectively.

On the other hand, individuals who face challenges such as poverty, poor health, and limited education may lack access to these community resources, which can ultimately contribute to a decrease in health and happiness. Research has shown that policy and program interventions that reduce health inequities can lead to improved health outcomes and a higher quality of life for everyone in a community.

How can disparities in social drivers of health be addressed in Grundy County?

As GCHD collaborates with community members on a Community Health Improvement Plan, here are some ways to collectively address the social drivers of health to reduce health disparities.

1. **Providing access to education:** Improving the retention of high school graduates in the community and improving access to higher education would provide greater return on educational investment. Greater equity in school funding could help address the differences in educational outcomes in the county.

2. **Promoting economic development:** This can involve policies and programs that support job creation and economic growth in Grundy County, as well as measures to reduce poverty and income inequality.

3. **Improving housing:** Develop policies and programs to increase access to affordable housing and improve quality of existing housing.

4. **Enhancing transportation:** Being 100% rural, Grundy County residents overwhelmingly rely on their own transportation. Initiatives to improve public transportation can make towns and cities more accessible and encourage walking and bicycling.

5. **Improving access to healthcare:** Increase access to healthcare services and make healthcare more affordable and accessible to disadvantaged groups.

Addressing the social drivers of health requires a multi-faceted approach that involves policy and program interventions at the local, state, and national levels. It also requires collaboration and partnership between various sectors, including government, healthcare, education, and community-based organizations.

Table 36: Health Disparities, Grundy County

	Grundy County	Missouri
Inadequate Prenatal Care (Missouri index)		
White	36.06	16.83
Black/African-American	40.0	35.58
All Injuries		
White	11,626.57	8,473.23
Black/African-American	6,393.44	11,482.90

Table 36 provides examples of health disparities that exist in Grundy County. This table also reflects the limitations of data collection and reporting in rural areas of Missouri. With small numbers of racial and ethnic categories, it is often difficult to obtain data to clearly identify health disparities that exist.

Table 37: Household Income Data by Race and Ethnicity, Grundy Count (2024)

	Grundy County	Missouri
Median household income	$48,457	$88,759
AIAN	--	$79,177
Asian	$63,750	$99,379
White	$51,420	$81,876
Hispanic	$29,344	$60,888
African American/Black	--	$52,538
Per Capita Income	$30,705	$36,753
Unemployment	3.1%	3.1%

Source: Census.gov (2024)

Chapter 10: Community Perspectives

Community Input

As part of the process of developing Community Health Assessment, in August 2025, GCHD convened a group of community members and facilitated a group discussion using the MAPP 2.0 *Forces of Change* tool. The assessment aimed to identify external forces that currently affect public health or may impact it in the future. The eight focus areas considered included social, ethical, economic, legal, environmental, scientific, and technological forces of change, which may present either threats or opportunities to the public health system and the communities it serves.

Forces of Change

The following forces of change were identified during community meetings, and it is important to note that this list is not exhaustive and that the forces may shift over time. And, of course, these findings reflect the perspectives of the specific individuals who chose to participate in the survey process. Their responses will more accurately reflect those of individuals representative of the survey-takers. Ongoing reflection and feedback on these forces should be a part of continuous discussion about the CHA and improvement planning.

Social threats included the lack of social skills and **opportunities for socialization**, particularly among the aging population. The **spread of misinformation** also poses a threat that may cause fear, affect mental health, and lead to miscommunication. Opportunities recognized in this area include more **social connection** clubs and organizations, more widespread **communication** to increase access to information, and access to virtual resources such as Zoom or Telehealth to help reduce transportation barriers.

Ethical threats identified included the authority and **ability to make decisions** about who may receive/benefit from the community's limited resources, including health care resources, and how these decisions may prompt a "survival instinct" response among those who do not receive the services they need. Opportunities in this area include incorporating **equity** into community-level work and changing gender roles in the workplace and throughout the community while promoting **inclusion**, such as through the LGBTQ+ community.

Economic threats to the public health system and communities included the increase in **poverty** rates, increasing costs of goods and services, **inflation**, and its impact on healthy choices, and **wages**. An opportunity under the economic force of change area is using **wind energy** projects to boost the economy, including providing direct and indirect employment, land lease payments, local

tax revenue, and lower electricity rates. Starting and supporting more **businesses** may also lead to economic gain.

Access to legal services and increased waiting time to receive those services present ***threats under the area of legal*** forces of change. **Bias towards age and wealth** when seeking help from legal professionals is also a threat, as society grows more litigious, preferring to settle matters via legal actions than through negotiation or alternative dispute resolution and wanting to receive money through outrageous, frivolous lawsuits. An opportunity created by the legal force area is the **expansion of Medicaid**, which seeks to increase the number of individuals with health insurance.

Many threats were identified as ***environmental forces*** of change, including weather-related factors like **global warming**, droughts that impact agriculture and access to water, **storms** that damage homes and crops, and **flooding** that lead to population and agriculture loss. Other threats include increased **population density** that reduces access to qualified professionals (potentially related to population loss), **food and housing safety**, chemicals in farming products, cancer, exposure to lead that could result in lead poisoning, sanitation, and lack of health ordinances.

Political forces of change that pose threats include movement toward recession and **inflation**, lack of **funding**, and increased involvement of **politicians in healthcare**, which could result in distrust of medical professionals. Opportunities include conversations about changing **regulations**, electing government officials who support public health, and increasing education and awareness of political issues.

Scientific forces of change that create threats include feelings of **skepticism**, **unwillingness to change**, and **distrust** when it comes to science or advancements in medicine and technology. Scientific opportunities include improvements in health and resources through advancements in **medicine and technology**, such as creating and providing vaccines, and **windmills**.

Technological forces of change pose threats through the possibility of accessing **unreliable information** through technology. Another threat is the risk of **addiction to technology**, which can lead to reduced productivity and social isolation. Furthermore, some individuals may face **reduced access to internet** services due to high costs or limited availability, which can limit their ability to receive critical health information. These technological forces of change can also lead to social threats, such as decreased face-to-face conversations resulting in reduced social skills or **social isolation**. Both **technological** and social forces of change can create threats to community health.

Despite these challenges, technological forces of change offer numerous opportunities to improve community health. Medical advancements such as high-tech surgeries, telemedicine, and the use of fiberoptic internet in rural areas can greatly improve health outcomes.

As these forces of change continue to shape the landscape of community health in Grundy County, the Health Department and its partners must remain vigilant in monitoring and anticipating these forces to respond effectively to protect public health. It is crucial to ensure that foundational public health services are available to all residents in the county.

Community Context Assessment Survey

In September 2025, GCHD, with the assistance of Ozarks Public Health Institute, conducted a Community Context Assessment Survey. This survey asked about the availability of foundational public health services in Grundy County. Two- hundred and thirty-two Grundy County residents completed the online survey, and their perspectives have been shared throughout this report.

In this section, we learn more about the characteristics of these 232 residents, followed by the conclusions about public health in Grundy County from the *Community Context Assessment Survey*.

Comparing the Workgroup to Grundy County Residents

An open invitation was extended to Grundy County residents and public health partners to attend a series of community meetings in order to begin conducting a community health assessment and improvement process. A total of 26 community members and representatives of public health partner organizations attended. Participants formed an informal workgroup from which GCHD gathered input on community values and co-designed a mission and vision statement for pursuing health improvement in Grundy County.

Participation was voluntary, but since they represented Grundy County, we felt it was important to compare their makeup to the overall demographics of county residents. They were a close match to county residents racially, but the workgroup skewed older, more highly educated, higher percentage female, and wealthier than county residents. Ninety percent (90.0%) of residents have a high school diploma, compared to 99% of workgroup participants with at least a high school diploma and 59.4% with a college degree or higher. More details about the workgroup can be found from the tables below. Totals for the workgroup vary slightly based upon participants who answered the items being tabulated.

Community Survey Data

Community survey data was presented to community partners during the early fall of 2025. Further discussion redefined the survey results to highlight the interconnectedness of many of the health conditions and the following priorities were identified for the community.

Top Health Priorities

1) Healthcare Access
2) Mental Health, Substance Use/Misuse, Suicide
3) Cancer Prevention
4) Cardiovascular disease

The following health behaviors were observed to be associated with the health priorities.

Top Health Behavior Priorities

1) Physical Inactivity
2) Tobacco, Vape, Alcohol and Illegal Drug Use/Misuse
3) Health screenings
4) Personal health care, including stress management
5) Poor diet

The following prioritized Social Drivers of Health were observed to be associated with the health priorities.

Prioritized SDoH

1) Food security
2) Healthcare Access
3) Safe and Affordable Housing
4) Education
5) Poverty