

Community Health Needs Assessment August 2022



Perry County Health System

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Health Department



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2022 COMMUNITY HEALTH NEEDS ASSESSMENT

PERRY COUNTY, MISSOURI

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INTRODUCTION

With a goal to improve the health of those living within Perry County, MO, the 2022 Community Health Needs Assessment contains data from a variety of sources to identify key areas as either health-related strengths or gaps that need to be established as priorities moving forward within the community. The information contained in this Community Health Needs Assessment (CHNA) will be utilized by Perry County Health System and Perry County Health Department as a resource for planning service delivery, establishing new programs, and appropriating funds to meet community needs.

COMMUNITY HEALTH NEEDS ASSESSMENT PROCESS AND REQUIREMENTS

A CHNA must be conducted every three years by not-for-profit hospitals in order to comply with federal tax-exemption requirements under the Affordable Care Act. Although this assessment is a recent requirement for hospitals, they have long been utilized as a tool by hospitals, local public health agencies, and other social service agencies to identify health concerns within the communities they serve.

The CHNA process involves:

1. Analyzing health-related data for the community served while comparing it to the regional, state, and/or national statistics.
2. Gaining input from community members and key stakeholders to assist in the identification of the health needs of the community.
3. Establishing health priority areas to focus future efforts.
4. Creating an organizational plan to address identified priority health needs.
5. Disseminating to the broader community the CHNA data, identified priority areas, and organizational plans to meet community health needs moving forward.

ABOUT PERRY COUNTY HEALTH SYSTEM

Perry County Memorial Hospital (PCMH) was organized in 1951 under the Missouri 205, County Hospital Statutes. PCMH is a Critical Access Hospital located in Perryville, Missouri.

PCMH is owned by Perry County, Missouri and has been tax exempt since its inception. PCMH receives an annual tax levy of one mill-cent collected by the county. In 1998, with the cooperation of the county commission, county attorney, and overall county community, the PCMH Board of Trustees sought the formation of Perry County Health System, a Missouri 501c3 Corporation for the purposes of operating PCMH. It was determined that such a corporate structure would offer advantages to PCMH that would result in better financial stability, improved sustainability, and ultimately lead to the expansion of healthcare services to the community.

Perry County Health System's primary service area is Perry County, Missouri. Its mission is to be the first choice of quality health care for the community. Through the years, Perry County Health System has expanded the healthcare services offered to the community and now includes Perry County Memorial Hospital, the physician practices found on the PCMH campus which encompasses over 20 specialty clinics, PFCC West, Perry County Counseling Center, PCMH Home Health Care, Perry County Memorial Hospital Ambulance Service, Prescriptions Plus Pharmacy, Equipment Plus Home Services, and more.

PERRY COUNTY HEALTH SYSTEM GOVERNANCE STRUCTURE

The Perry County Memorial Hospital Board of Trustees, as organized under the Missouri 205 Statutes, continues as organized in 1951 as the principal authority for the purpose of maintaining a County owned hospital and healthcare system. The “205 Board” administers a lease to the 501c3 Health System Board of Directors (the “System Board”) for the operation of the Hospital and all related healthcare services. Although duties between the boards differ in detail, the mission and vision of the both boards are bound into a single and identical form. The System Board carries out the duties of operating a hospital and health system, meeting the requirements set forth in the 205 statutes, through an operational lease. The Perry County Memorial Hospital Medical Staff structure continued unchanged through the formation of the Health System and conducts its duties independently and in cooperation with the Health System.

ABOUT PERRY COUNTY HEALTH DEPARTMENT

In January of 1967, the Perry County Health Department began as a nursing service for the community. On April of 1976 a mil tax was passed by the citizens of Perry County to establish a governmental entity to support local public health under Chapter 205, Revised Statutes of Missouri.

Perry County Health Department services the county of Perry. Its mission is to be committed to the protection and improvement of quality of life for the citizens of Perry County by monitoring and investigating health problems, educating people about health issues, developing policies and plans that support public health efforts, enforcing laws and regulations that protect health and ensure safety, prevention and control of diseases, and promotion of healthy life styles. The Perry County Health Department is dedicated to making Perry County a more caring, safe, healthy, happy, and thriving place to live and work.

PERRY COUNTY HEALTH DEPARTMENT GOVERNMENT STRUCTURE

Perry County Health Department is one of 114 local public health agencies in the State of Missouri. Each health department operates independently of each other and are independent of state and federal public health agencies. The local agencies work directly with the Missouri Department of Health and Senior Services through contracts to deliver public health services to the communities they serve. Other funding for the Health Department comes from local mil taxes and grants.

The Perry County Health Department is governed by a five-member Board of Trustees elected by the citizens of Perry County. Perry County Health Department is considered a political subdivision and therefore has its own budget and leadership separate from other county entities.

COLLABORATION OF PCHS AND PCHD

In 2021, Perry County Health System (PCHS) and Perry County Health Department (PCHD) decided a collaborative approach in the creation of the Community Health Needs Assessment for Perry County would best serve the community. By doing this, we are able to align our efforts, eliminate duplication, and address the community’s needs with a unified, stronger strategy. All of this will bring a larger benefit to the community as we work together on addressing the top health needs for Perry County.

METHODS

Perry County Health System (PCHS) and Perry County Health Department (PCHD) have collaborated with community partners and county residents to complete the 2022 Community Health Needs Assessment. The procedure taken by Perry County Health System and Perry County Health Department in completing a meaningful community health needs assessment included a multifaceted approach when gathering data.

At the beginning of 2022, PCHD and PCHS facilitated a focus group with community agencies¹ as a part of the Council of Agencies meeting, held every other month, to identify health topics of concern these agencies have encountered in their everyday services to the community. In addition to this effort, PCHS began a series of community-wide discussions which included similar agencies from the brainstorming session in addition to some local business representatives.²

Also in early 2022, surveys were distributed to physicians of PCHS and the community overall. Both surveys included potential health needs of the community and asked for respondents to rank what they perceived as the highest community need. The community member survey also included some data on health behaviors with one of the purposes being to help fill data gaps with information not available from traditional data sources. The data was managed electronically allowing one the opportunity to segregate data efficiently to understand specific subgroup perceptions.

In addition to the above methods, data was collected and analyzed from a variety of sources to examine and compare rates and occurrences among populations at the Local, State, Regional, and National levels. The 2022 Community Health Needs Assessment contains baseline and trended data from a variety of sources including, but not limited to, U.S. Census Bureau, Missouri Department of Health and Senior Services, Missouri Department of Elementary and Secondary Education, Living Wage Calculator, U.S. Bureau of Labor Statistics, Feeding America, National Low Income Housing Coalition, County Health Rankings, Environmental Public Health Tracking, Prevention Research Center at Washington University in St. Louis, the Missouri State Highway Patrol, Missouri Kids Count, Community Counseling Center, Community Commons Health Needs Assessment, United States Diabetes Surveillance System, Missouri Department of Social Services, Centers for Medicare & Medicaid Services, America's Health Rankings, and other state and local data reports.

After all data was collected, a review took place to identify and prioritize the top needs of the community (Perry County, Missouri). A summary of the findings from data collection through the above-mentioned methods and a prioritizations of community needs based on these findings can be found at the end of this document under the Summary of Findings.

The information contained in this Community Health Needs Assessment will be utilized by the Perry County Health Department as a resource for identifying and planning service delivery and program planning in addition to the creation of a Community Health Improvement Plan (CHIP). In response to the results of this assessment, PCHS also created an implementation strategy plan to prioritize the needs identified. This CHNA and implementation plan was presented to, and adopted by, the PCHS Board of Directors in July of 2022. The actions to be taken to develop each priority area, given adequate resources are available, have been outlined in the implementation plan, inserted into the relevant planning section for the leadership team, and will be reported to the Board at least annually.

¹ University of Missouri Extension, City of Perryville: Mayor and City Administrator, Perry County Community Task Force, Regional Family Crisis Center, Cross Trails Medical Center, New Life Mission Inn, 32nd Circuit Juvenile Office, Southeast Missouri Prevention Resource Center, Options for Women, Community Counseling Center, Perry County School District 32
² Additional agencies: TG Missouri, First State Community Bank, Independent Care Systems, Saxony Lutheran High School, Athletico Physical Therapy, Nurses for Newborns, Bank of Missouri, Missouri's National Veterans Memorial, Perry County Sheriff Department

DEMOGRAPHICS

An individual's risks of certain health conditions can vary depending on their age, sex, race, or ethnicity. Knowing the demographic breakdown of a community is essential for identifying and targeting programs and services to improve the overall health of a population.

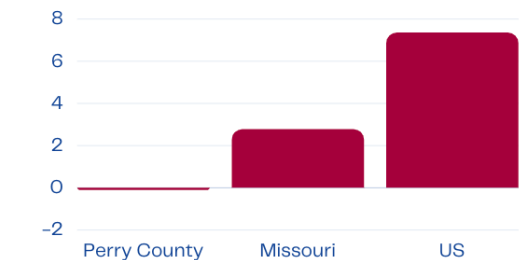
The primary service area of both Perry County Memorial Hospital and the Perry County Health Department is identical. Perry County is comprised of seven zip codes (63775, 63732, 63746, 63748, 63770, 63673, and 63783) and seven primary cities.

POPULATION

According to U.S. Census Data, Perry County's population decreased by 0.09% from 18,971 persons in 2010 to 18,956 persons in 2020; while the population for Missouri grew 2.77% and the U.S. grew 7.35% as seen in Figure 1.1

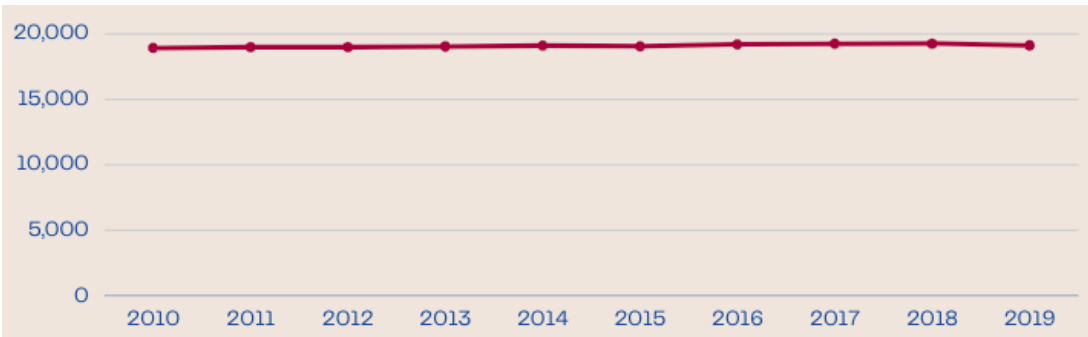
Furthermore, as illustrated by Figure 1.2, Perry County's population has remained relatively constant over the last ten years.

Figure 1.1: Percent Population Change – Perry County, Missouri & the U.S., 2010-2020



Source: U.S. Census Bureau, 2020

Figure 1.2: Population – Perry County, 2010-2019

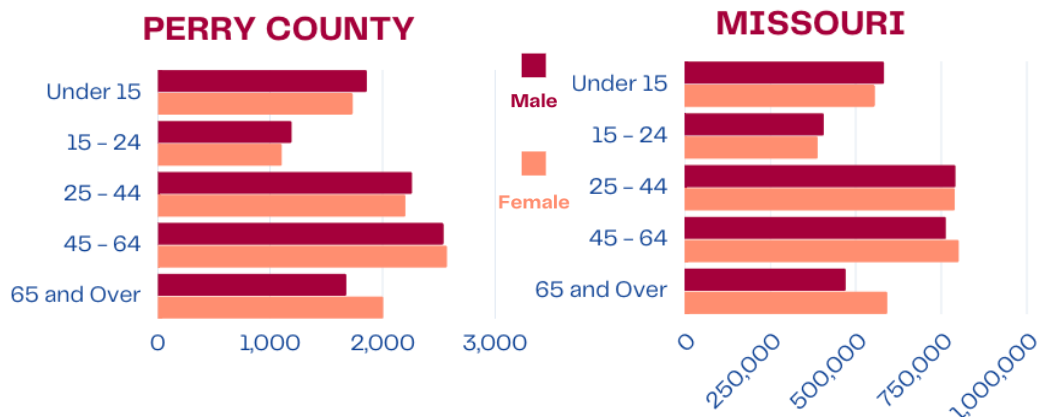


Source: U.S. Census Bureau, Population Division, Annual Estimates of the Resident Population, April 1, 2010 to July 1, 2019

AGE AND SEX

According to the Missouri Department of Health and Senior Services, persons in the 45 to 64 age group make up the largest population group in Perry County. Figure 1.3 indicates the number of residents by age group and sex for Perry County and Missouri.

Figure 1.3: Resident Estimated Population by Age and Sex – Perry County & Missouri, 2019

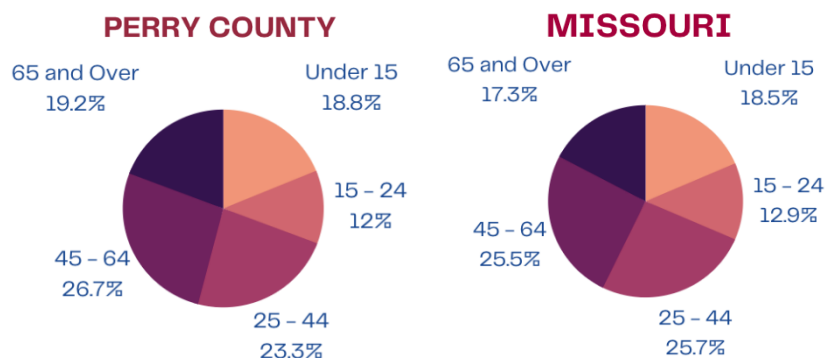


Source: DHSS, MOPHIMS, Population MICA

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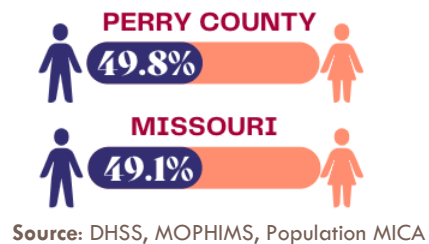
As Figure 1.4 illustrates these age group percentages for Perry County and Missouri. As demonstrated in the figure, Perry County age distribution is very similar to the State.

Figure 1.4: Resident Estimated Population by Age Percentages – Perry County & Missouri, 2019



Source: DHSS, MOPHIMS, Population MICA

Figure 1.5: Percent Male Population – Perry County & Missouri, 2019



Source: DHSS, MOPHIMS, Population MICA

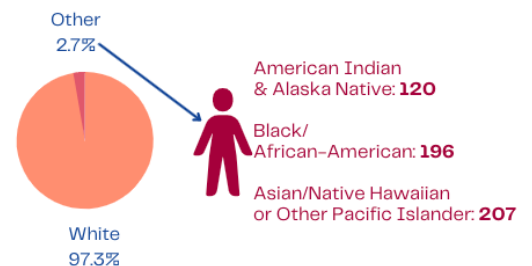
The ratio of males to females within Perry County is relatively even. Males represent 49.8% of the Perry County population as compared to 49.1% of the Missouri population.

RACE/ETHNICITY BREAKDOWN

According to the Missouri Department of Health and Senior Services, the population of Perry County is 97.3% White. Figure 1.6 illustrates Perry County's this majority along with a racial breakdown of the other 2.7% of the county's population. When looking at the number of individuals, 2.7% consists of 523 individuals belonging to a racial minority, whose health risks and corresponding interventions may look different compared to the rest of the community.

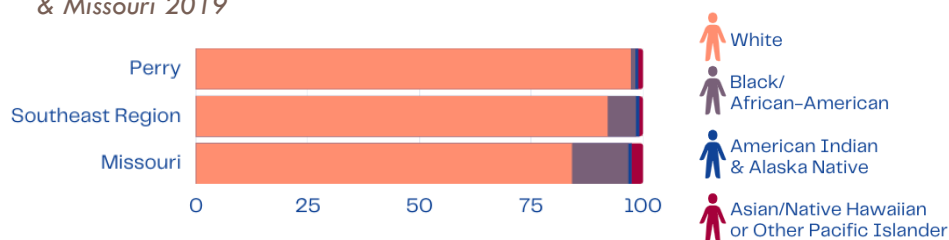
Though Perry County is less diverse than Missouri, the racial breakdown of Perry County does reflect that of many counties in the Southeast Missouri Region. Figure 1.7 illustrates the racial breakdown of Perry County, the Southeast Region overall, and Missouri.

Figure 1.6: Population by Race and Racial Breakdown of Other Population – Perry County, 2019



Source: DHSS, MOPHIMS, Population MICA

Figure 1.7: Percent of Population by Race – Perry County, Southeast Region & Missouri 2019

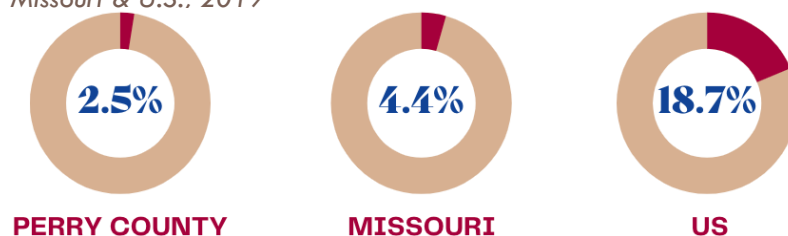


Source: DHSS, MOPHIMS, Population MICA

PERRY COUNTY, MO

Figure 1.8 illustrates the population breakdown by ethnicity in Perry County, Missouri and the U.S. Approximately 2.5% of Perry County residents self-report as Hispanic or Latino as compared to 4.4% Missouri residents and 18.7% U.S. residents.

Figure 1.8: Percent of Hispanic or Latino Population – Perry County, Missouri & U.S., 2019



Source: DHSS, MOPHIMS, Population MICA and U.S. Census Bureau, Population Division, Annual Estimates of the Resident Population by Sex, Race, and Hispanic Origin for the United States, 2010-2019

HOUSEHOLD CHARACTERISTICS

According to the 2015-2019 American Community Survey 5-Year Estimates, there were 7,576 households in Perry County with an average of 2.5 persons per household. Table 1.1 demonstrates how Perry County household characteristics vary from State and National percentages due to marital status. Married with Children (21.7%) and Married without Children (36.6%) were higher than the State and National percentages, whereas Unmarried Partner (5.5%), Single Parents (5.5%) and Living Alone (24.1%) were all lower than the State and National percentages.

Table 1.1: Household Characteristics Comparison by County, State, and Nation, 2019

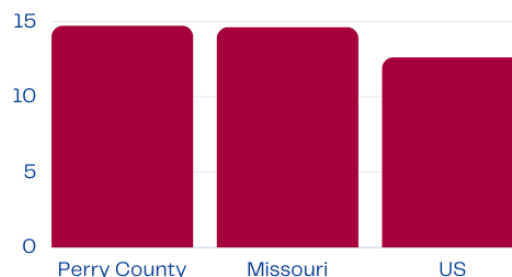
	Perry County	Missouri	United States
Total Households	7,576	2,414,521	120,756,048
Married with Children	21.7%	17.8%	18.8%
Married without Children	36.6%	30.1%	29.4%
Unmarried Partner	5.5%	6.3%	6.3%
Single Parents	5.5%	6.6%	6.6%
Living Alone	24.1%	29.5%	27.9%

Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

PERSONS WITH DISABILITIES

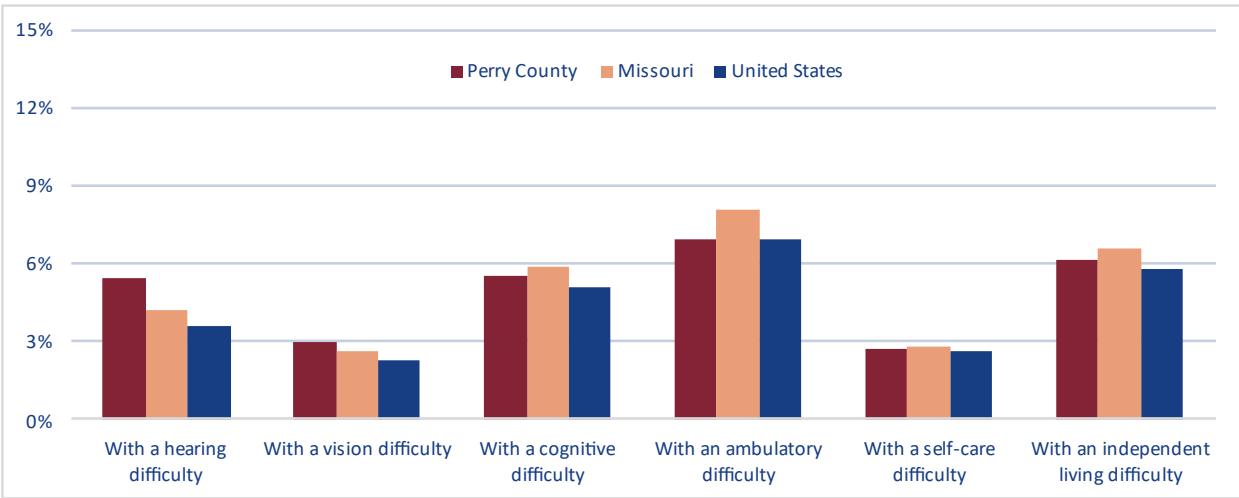
The total disabled population is derived from the percentage of non-institutionalized individuals with a disability. According to the 2015-2019 American Community Survey, Perry County's disabled population rate is 14.7%. Figure 1.9 demonstrates that while this is comparable to the State rate (14.6%), this is higher than the National rate (12.6%). Figure 1.10 breaks down these rates by specific disability for Perry County, Missouri and the United States.

Figure 1.9: Percent Population with a Disability – Perry County, Missouri & US, 2019



Source: US Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

Figure 1.10: Percent Civilian Noninstitutionalized Population by Disability – Perry County, Missouri & US, 2019



Source: US Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

KEY TAKEAWAYS

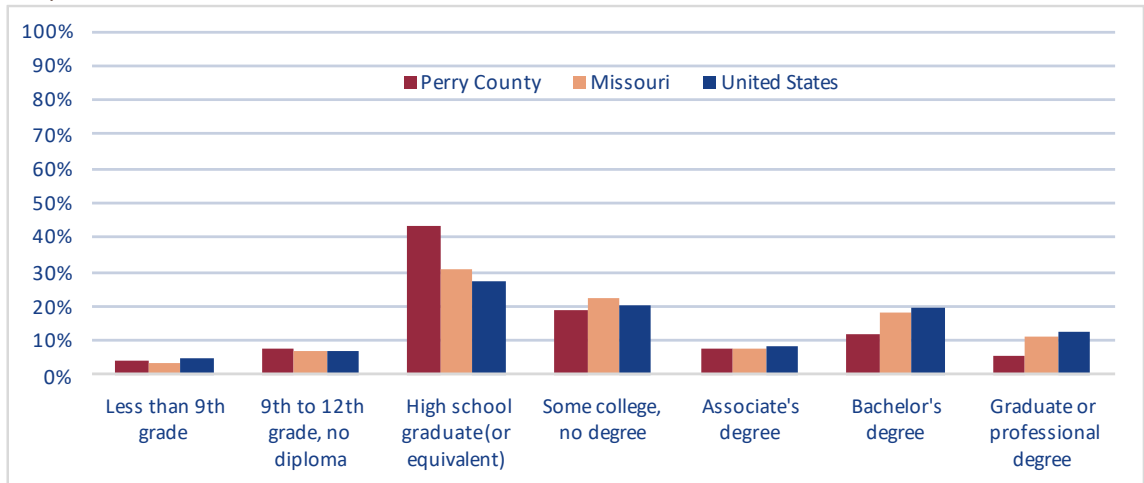
- Perry County's population is stagnant compared to the State or Nation overall.
- Perry County's demographic breakdown by age and sex is very comparable to Missouri, with the largest population groups being 15-44 and 45-64 year olds.
- Perry County is not very racially or ethnically diverse, with only 2.5% of the population self-reporting as Hispanic or Latino and 2.7% of the population not belonging to a Caucasian demographic.
- Residents of Perry County are more likely to be married as compared to residents of Missouri or the U.S.
- The rate of individuals with disabilities in Perry County is similar to Missouri, but higher than the National rate.

SOCIAL CHARACTERISTICS

EDUCATIONAL ATTAINMENT

Educational attainment has been proven to be linked to health outcomes. Individuals with higher levels of education are more likely to be healthier and live longer. Alternatively, poor health can also cause educational setbacks and interfere with schooling. Figure 2.1 compares County, State, and National educational attainment levels. Data obtained from the American Community Survey (ACS) through the Census Bureau indicated that 43.3% of Perry County residents age 25 or older graduated with a high school, or equivalent, degree compared to 30.6% for Missouri and 27.0% for the U.S. overall. However, approximately 12.3% of Perry County residents had less than a high school diploma compared to 10.0% of Missourians. Additionally, Perry County residents were less likely to attend some college or obtain their associate's degree (26.7% for Perry County, 30.1% for Missouri, and 28.9% for the U.S.) or obtain their Bachelor's degree (12.1% for Perry County, 18.0% for Missouri, and 19.8% for the U.S.) as compared to Missouri and the U.S. overall.

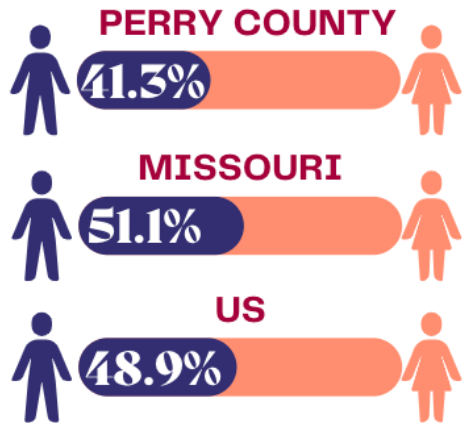
Figure 2.1: Percent Educational Attainment of Population 25+ Years – Perry County, Missouri & U.S., 2019



Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

Figure 2.2: Percent Less than High School Education by Sex – Perry County, Missouri & U.S., 2019

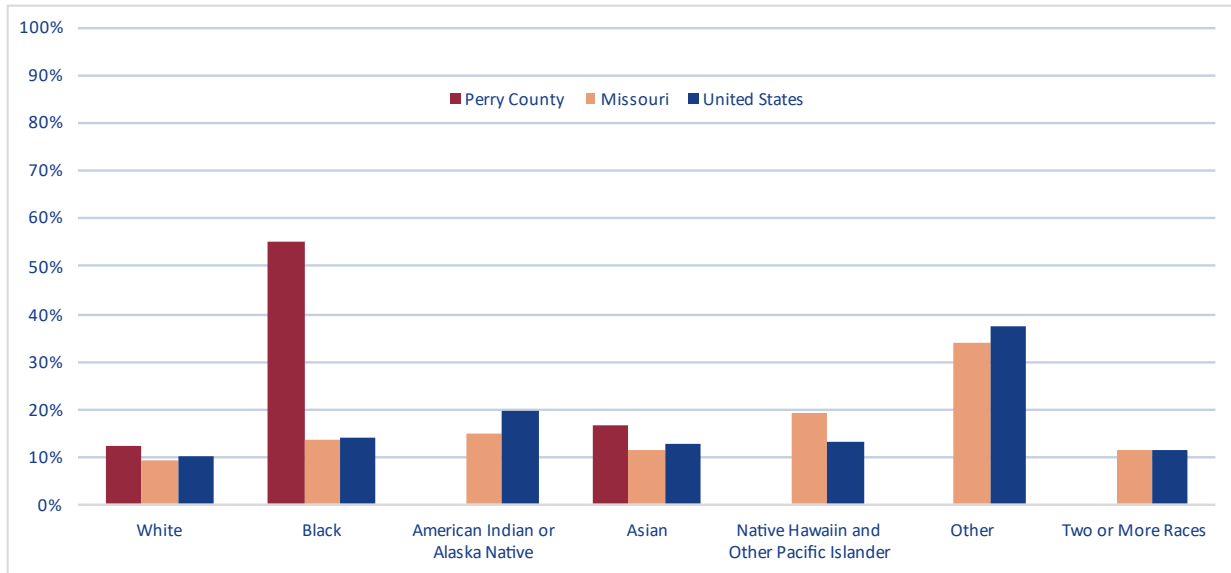
According to the ACS, of those in Perry County with less than a high school degree, 58.7% were female. This percentage is larger than Missouri (48.9% female) and the United States (48.9% female). This is represented visually in Figure 2.2. A disparity also exists in Perry County for high school diploma (or equivalent) educational attainment by race, as shown in Figure 2.3.



Source: US Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

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Figure 2.3: Population with No High School Diploma by Race Alone, Percent of Race – Perry County, Missouri & U.S., 2019

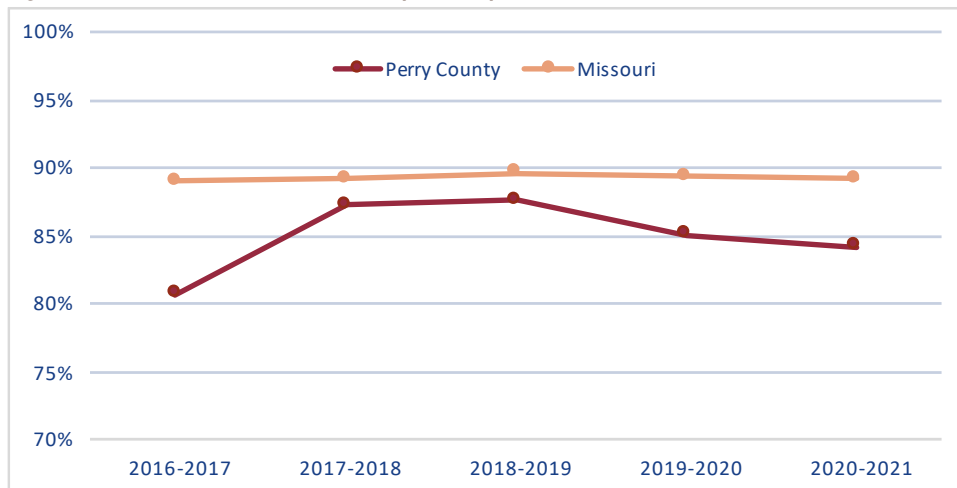


Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

GRADUATION RATES

Figure 2.4 displays a trend line of the graduation rates for Perry County and Missouri. Perry County's graduation rate is consistently below that of Missouri, with a larger gap between the County and State occurring in recent years (note the adjusted scale for easier viewing). According to the National Center for Education Statistics, the adjusted cohort graduate rate (the percentage of public high school freshmen who graduate with a regular diploma within 4 years of starting 9th grade) in the United States was 86% in the 2018-2019 school year.

Figure 2.4: Graduation Rate – Perry County & Missouri, 2016-2021



Source: Missouri Department of Elementary and Secondary Education, County Annual Graduation Rates

LIMITED ENGLISH PROFICIENCY

The U.S. Census Bureau defines Limited English Proficiency as “the percentage of the population 5 years and older who speak a language other than English at home and speak English less than very well.” Perry County has a much lower percent of individuals with limited English proficiency (0.7%) than the rest of Missouri (2.2%) and the U.S. (8.4%), as seen in Table 2.1.

Table 2.1: Percent Population 5 Years and Older with Limited English Proficiency, 2019

Area	Percent Population
Perry County	0.7%
Missouri	2.2%
United States	8.4%

Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

KEY TAKEAWAYS

- Perry County’s population has a higher proportion of individuals with only a high school education as compared to Missouri and the U.S.
- Among those without a high school diploma or equivalent, females represent a larger proportion than males and blacks represented a larger portion than any other race.
- Residents of Perry County have consistently lower graduation rates than that of Missouri, with a gap that has increased in recent years.
- Perry County has a very low proportion of individuals with limited English proficiency.

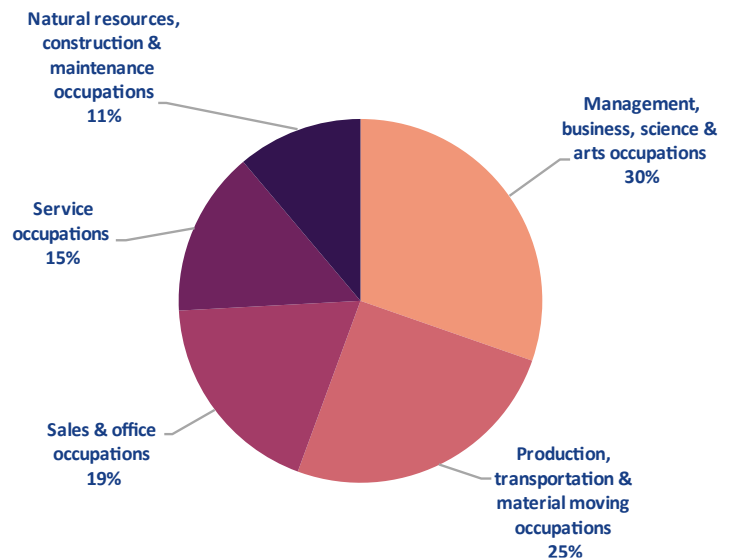
SOCIOECONOMIC INDICATORS

EMPLOYMENT

According to the 2019 U.S. Census Bureau estimates, 9,395 Perry County residents 16 years of age and older were in the Civilian Labor Force. Figure 3.1 shows the percent of the Civilian Employed Population in Perry County by type of occupation for the 2015-2019 report period.

During the 2015-2019 report period, the leading occupation types were management, business, sciences, and arts with 30% of the workforce followed by production, transportation, and material moving occupations with 25%.

Figure 3.1: Types of Occupations, Perry County Civilian Population, Percent 2015-2019

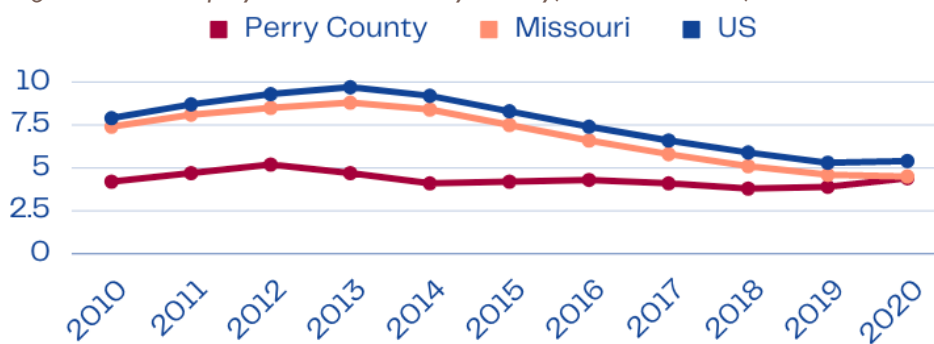


Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

UNEMPLOYMENT

The unemployment rate in Perry County has remained relatively constant over the past 10 years. Figure 3.2 illustrates the unemployment rate in Perry County, Missouri, and the U.S. over this time period. The lowest value for Perry County was in 2019 (3.8%) and the highest value was in 2012 (5.2%). Perry County's unemployment rate is consistently below that of Missouri and the U.S.

Figure 3.2: Unemployment Rates – Perry County, Missouri & U.S., 2010-2020

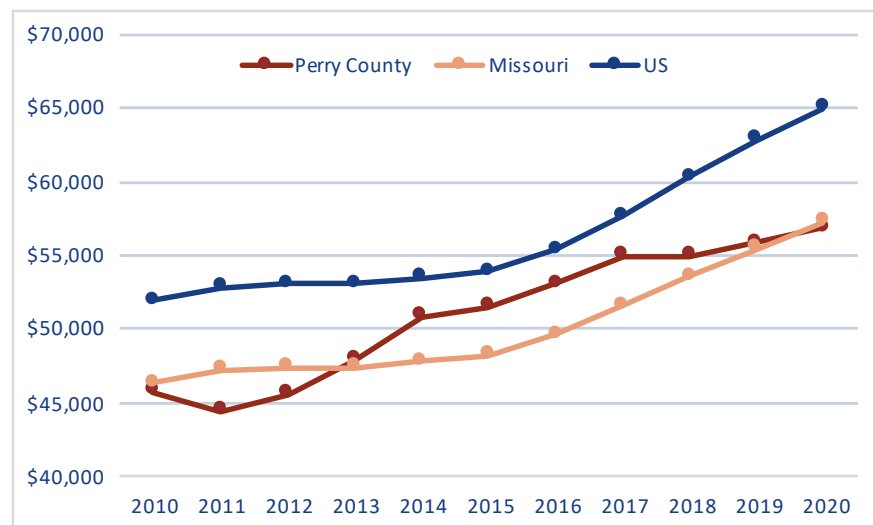


Source: U.S. Census Bureau, 2010-2020 American Community Survey 5-Year Estimates

MEDIAN INCOME LEVELS

Median household income is a common measure of the financial status of a community and is defined as the exact middle dollar amount for all incomes in an area. According to the American Community Survey (ACS) through the Census Bureau, the median household income for Perry County in 2020 was \$56,861. This amount is less than 1% below the state average and 14% the National average. Figure 3.3 shows the comparison of the median household income levels for Perry County, Missouri, and the U.S.

Figure 3.3: Median Household Income – Perry County, Missouri & U.S., 2010-2020



Source: U.S. Census Bureau, 2010-2020 American Community Survey 5-Year Estimates

WAGES

Living Wage is the hourly rate an individual must earn to support their family, if they are full-time (assumed to be 2,080 hours per year). Living Wage also takes into consideration if one or both adults are able to work. In 2020, the Living Wage for a family of four (two adults, two children) in Perry County was \$18.58. The Living Wage for one adult in Perry County was \$12.79. Tables 3.1 and 3.2 compare the hourly Living Wage for Perry County and Missouri in 2020 with one or both adults working.

Table 3.1: Hourly Living Wage, One Adult Working – Perry County & Missouri, 2020

Household Type	Perry County	Missouri
1 Adult, 0 Children	\$12.79	\$13.72
1 Adult, 1 Child	\$27.24	\$28.65
1 Adult, 2 Children	\$33.31	\$34.97
1 Adult, 3 Children	\$42.47	\$44.47
2 Adults, 0 Children	\$21.92	\$22.97
2 Adults, 1 Child	\$26.68	\$27.84
2 Adults, 2 Children	\$30.38	\$31.55
2 Adults, 3 Children	\$32.48	\$33.74

Source: Glasmeier, Amy K. Living Wage Calculator, 2020

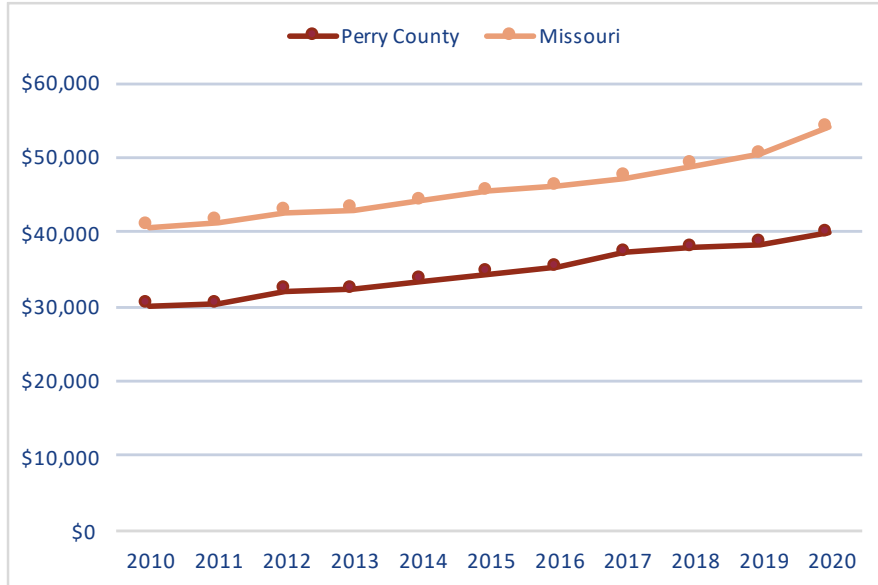
Table 3.2: Hourly Living Wage, Two Adults Working – Perry County & Missouri, 2020

Household Type	Perry County	Missouri
2 Adults, 0 Children	\$10.96	\$11.48
2 Adults, 1 Child	\$15.03	\$15.74
2 Adults, 2 Children	\$18.58	\$19.41
2 Adults, 3 Children	\$21.33	\$22.33

Source: Glasmeier, Amy K. Living Wage Calculator, 2020

According to the U.S. Bureau of Labor Statistics, the Perry County average wage was \$39,940 compared to a statewide average of \$54,046 in 2020. Figure 3.4 displays how the average annual wage has changed between 2010 and 2020 for Perry County and Missouri.

Figure 3.4: Average Annual Wage – Perry County & Missouri, 2010-2020



Source: U.S. Bureau of Labor Statistics, Average Annual Pay in All Industries for All Establishment Sizes, 2010-2020

Level for various population groups. Perry County's rate of children below the Federal Poverty Level (9.0%) is substantially lower than the State (17.4%). Perry County's poverty rate among Black or African Americans (37.5%) is significantly higher than the State's rate (23.6%). Lastly, Perry County's rate among those with less than a high school degree (18.1%) is lower than the State rate (26.0%). Figure 3.5 also outlines the population below the Federal Poverty Level by Census Tract for Perry County.

Table 3.3: Percent Below Poverty Level by Category – Perry County & Missouri, 2020

Category	Perry County	Missouri
All People	9.1%	13.0%
Under 18 Years	9.0%	17.4%
18-64 Years	10.2%	12.6%
65+ Years	5.2%	8.6%
White	9.0%	11.2%
Black or African American	37.5%	23.6%
Hispanic or Latino	5.8%	19.6%
Less than High School Graduate	18.1%	26.0%
Unemployed	36.6%	35.2%

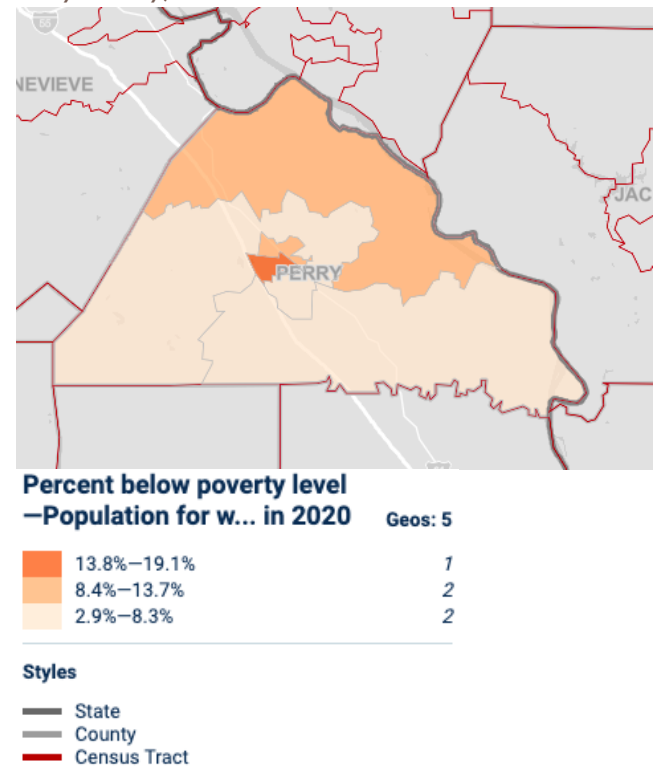
Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates

POVERTY

Poverty can be an indicator of the health status of a community since it can be a barrier when accessing health care, healthy foods, and other commodities. According to the U.S. Census Bureau data from 2020, 13.0% of Missouri residents were below the Federal Poverty Level while only 9.1% of Perry County residents were below this level. 2020 Perry County poverty level rates were 5% lower than what was seen in 2015 for the County (9.6%) and 27% lower than what was seen in 2012 (12.5%).

Table 3.3 outlines the percentage of residents below the Federal Poverty

Figure 3.5: Population Below Poverty by Census Tract – Perry County, 2020



Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates

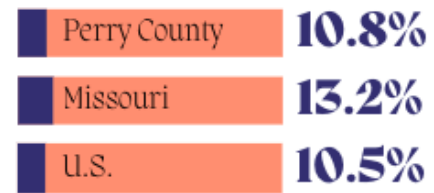
PUBLIC ASSISTANCE PROGRAMS

Children from households with incomes less than 130% of the Federal Poverty Level are eligible for free lunches while those from households below 185% of the Federal Poverty Level are eligible for reduced price lunches through the National School Lunch Program. According to the Missouri Hunger Atlas, the percent of children enrolled to receive free or reduced lunch through the National School Lunch Program for the 2018-2019 school year was 47.7% in Perry County and 49.5% in the State. The Missouri Hunger Atlas also found the percent enrolled and participating to be 75.7% for the county and 74.7% for the state. The percentage for Perry County is only slightly lower than in 2016 (79.2%) but significantly lower than in 2013 (92.1%).

Food insecurity is defined by the U.S. Department of Agriculture as a lack of consistent access to enough food for an active, healthy lifestyle. Figure 3.6 shows the percentage of households in Perry County, Missouri, and the U.S. that report food insecurity.

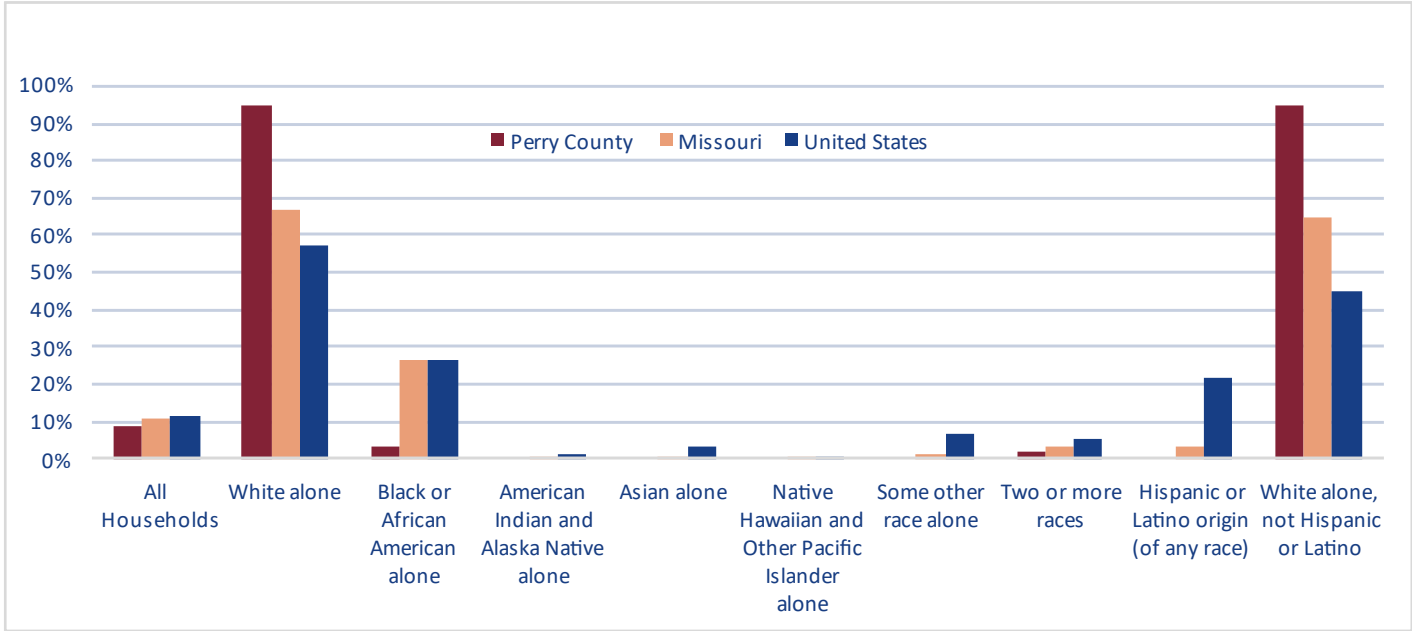
The Supplemental Nutrition Assistance Program (SNAP) provides nutrition benefits to supplement the food budget of families. Figure 3.7 provides a comparison of the race and Hispanic origin of households participating in SNAP. Perry County’s SNAP participants are primarily White, which is in line with the demographic makeup of the county.

Figure 3.6: Household Food Insecurity as a Percent of Population – Perry County, Missouri & U.S., 2019



Source: Feeding America, Coronavirus Hunger Research, 2019

Figure 3.7: Race and Ethnic Origin of Households Participating in SNAP – Perry County, Missouri & U.S., 2020



Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates

Table 3.4 shows the number and percentage of households receiving SNAP benefits in Perry County, Missouri, and the U.S. The county historically has a lower percentage of individuals receiving SNAP benefits than the State or U.S.

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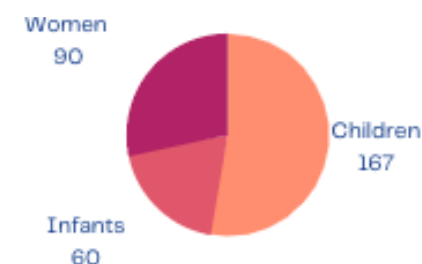
Table 3.4: Households Receiving Food Stamps – Perry County, Missouri & U.S., 2016-2020

Area	2016	2017	2018	2019	2020
Perry County	652 (8.8%)	774 (10.3%)	794 (10.4%)	753 (9.9%)	692 (9.1%)
Missouri	308,375 (13.0%)	291,916 (12.2%)	278,848 (11.6%)	268,633 (11.1%)	255,682 (10.5%)
United States	15,360,951 (13.0%)	15,029,498 (12.6%)	14,635,287 (12.2%)	14,171,567 (11.7%)	13,892,407 (11.4%)

Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates

According to the Missouri Department of Health and Senior Services, the Missouri WIC program provides “supplemental food, health care referrals, nutrition education, and breastfeeding promotion and support to eligible pregnant women, new mothers, breastfeeding and postpartum women, infants, and children up to age five”. Benefits received through WIC are in addition to any SNAP benefits an individual may also receive. To be eligible, household income must be below 185% of the Federal Poverty Level. According to the Missouri Hunger Atlas, of the child population under 5 in Perry County, 56.9% were eligible and participating in the WIC program. This is slightly above the 55.9% eligible and participating in Missouri. Figure 3.8 shows the number of WIC participants in Perry County in 2019.

Figure 3.8: WIC Counts in Perry County by Category of Participant, 2019



Source: DHSS, WIC

HOUSING

Estimates from the U.S. Decennial Census show there were 2,786,621 housing units in Missouri in 2020, with 90.0% being occupied. The median value of Missouri housing units was estimated to be \$163,600. In 2020, it was estimated that Perry County had 8,464 housing units, with 89.3% of these units being occupied. About 79.2% of these units were considered a single-family detached home. The median value of housing units in Perry County was \$151,900.

According to the U.S. Department of Housing and Urban Development, Fair Market Rent is a statistic developed to determine payments for housing assistance. Table 3.5 outlines the Fair Market Rent for Perry County compared to the State.

Table 3.5 Fair Market Rent – Perry County & Missouri, 2021

Area	Efficiency (Studio: 0 Bed)	1 Bed	2 Bed	3 Bed	4 Bed
Perry County	\$466	\$513	\$676	\$963	\$1,170
Missouri	\$622	\$690	\$867	\$1,156	\$1,328

Source: National Low Income Housing Coalition

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The National Low Income Housing Coalition reports yearly the amount of money a household must earn to afford a rental unit based on Fair Market Rents. Table 3.6 shows the Hourly Wage needed for a household to afford a rental unit within Perry County and the State.

Table 3.6: Hourly Wage Needed to Afford a Fair Market Rent – Perry County & Missouri, 2021

Area	Efficiency (Studio: 0 Bed)	1 Bed	2 Bed	3 Bed	4 Bed
Perry County	\$8.96	\$9.87	\$13.00	\$18.52	\$22.50
Missouri	\$11.96	\$13.27	\$16.66	\$22.22	\$25.55

Source: National Low Income Housing Coalition

Together, the fair market rent and the hourly wage needed to afford a rental unit indicate the cost of rental housing in Perry County is lower than the State average. According to the U.S. Bureau of Labor Statistics, assuming a 40-hour work week, the average hourly wage in Perry County in 2020 was \$19.20. With this hourly wage, individuals would only be able to afford a 3-bedroom rental unit if rental costs were set at Fair Market Value.

The U.S. Department of Housing and Urban Development provides housing subsidies for low-income renters. Section 8 Housing is a program in which units owned by private landlords accept Section 8 vouchers from their renters. In 2021, Perry County had 32 Section 8 housing units available, of which 88% were occupied. This percentage is lower than that of the State (91%) for the same year.

The U.S. Department of Housing and Urban Development divides states into Continuums of Care (CoCs). According to the department, a CoC is defined as a community plan to organize and deliver housing and services to meet the specific needs of people who are homeless as they move to stable housing and maximize self-sufficiency. It includes action steps to end homelessness and prevent a return to homelessness. Perry County falls within the Continuum of Care (CoC) for the balance of the state. As a result, the data obtained on homelessness is generic to non-metropolitan regions of Missouri. According to this data, there are 5.7 homeless persons per 10,000 people in the population. Since the population of Perry County in 2020 was 18,956, it is estimated that were 10.8 homeless persons in Perry County in 2020.

KEY TAKEAWAYS

- Perry County's unemployment rates have been relatively constant and below the State and National rates for the last 10 years.
- The median household income for Perry County is consistent with that of the State average.
- Perry County has a lower percentage of residents living under the Federal Poverty Level. Of those living under the Federal Poverty Level, African Americans represent a larger proportion in Perry County than they do at the State level.
- Depending on the size of a household, Perry County's average hourly wage could leave individuals below the Living Wage and the Fair Market Rent.
- Children enrolled in Free/Reduced Priced Lunch is similar in Perry County to the State.
- A lower proportion of individuals are enrolled in SNAP in Perry County as compared to the State and country.
- A slightly larger proportion of children are participating in the WIC program as compared to the state.

ENVIRONMENTAL HEALTH RISK FACTORS

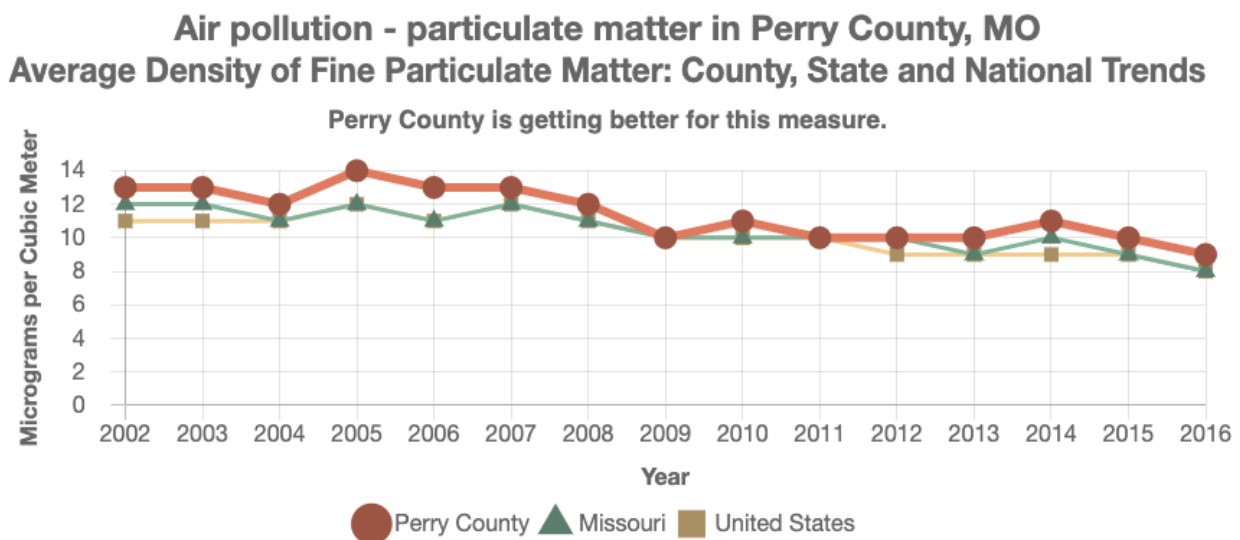
OUTDOOR AIR QUALITY

Outdoor Air Quality is typically evaluated using two indicators: Ozone Levels and Particulate Matter. Ozone Levels are monitored through the tracking of the number of days per year in which the Ozone Levels are above the National Ambient Air Quality Standard of 75 parts per billion (ppb). According to the Centers for Disease Control and Prevention, in 2018, Perry County had 1 day in which the Ozone Levels were above 75 ppb. This is higher than the average for Missouri (0.78 days), but below the national average (1.61 days).

The Environmental Protection Agency (EPA) defines Particulate Matter (PM) as “a mixture of solid particles and liquid droplets found in the air”. PM is categorized by size into PM₁₀ and PM_{2.5}. PM₁₀ are inhalable particles with diameters that are 10 micrometers and smaller. In terms of health, these particles most commonly irritate the eyes, nose, and throat. The Centers for Disease Control and Prevention cite dust from roads, farms, dry riverbeds, construction sites, and mines as common examples of PM₁₀. PM_{2.5} are considered fine inhalable particles and have diameters that are 2.5 micrometers and smaller. These particles are considered more dangerous since they are small enough to enter the lungs and bloodstream. Smoke from fires and emissions from power plants, industrial facilities, and vehicles and trucks are common examples of PM_{2.5}.

Figure 4.1 shows the average density of PM_{2.5} and smaller for Perry County, Missouri, and the U.S. While Perry County has rates above that of Missouri and the U.S., Perry County has experienced a downward trend in this time frame which is an improvement.

Figure 4.1: Air Pollution Density for Particulate Matter of 2.5 or smaller – Perry County, Missouri & U.S., 2002-2016



Source: County Health Rankings 2021, Environmental Public Health Tracking 2016 data

INDOOR AIR QUALITY

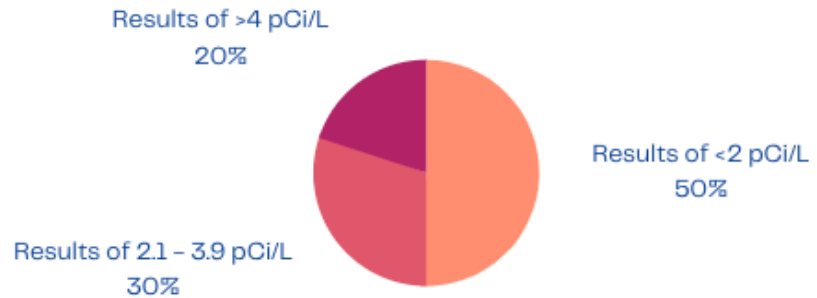
The Environmental Protection Agency (EPA) defines Indoor Air Quality as “the air quality within and around buildings and structures, especially as it relates to the health and comfort of building occupants.” According to the Missouri Department of Health and Senior Services, radon is “a gaseous radioactive element that occurs from the natural breakdown of uranium in the soil and rocks”. Radon can be a risk indoors because, as it

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breaks down, it emits atomic particles that are then inhaled and can increase the risk of lung cancer. It is also particularly dangerous because it is colorless, odorless, and tasteless. According to the Environmental Protection Agency, the concentration of radon in homes should be less than 4 pCi/L (picocuries per liter). The average indoor radon concentration for homes in the U.S. is about 1.3

pCi/L. According to data collected by the Missouri Department of Health and Senior Services, the average indoor radon concentration for homes in Perry County is 3.62 pCi/L, which is higher than the U.S. average. Figure 4.2 displays, by percentages, the results of radon tests in Perry County conducted between 2005 and 2015.

Figure 4.2: Residential Results of Radon Tests – Perry County, 2005-2015



Source: Environmental Public Health Tracking

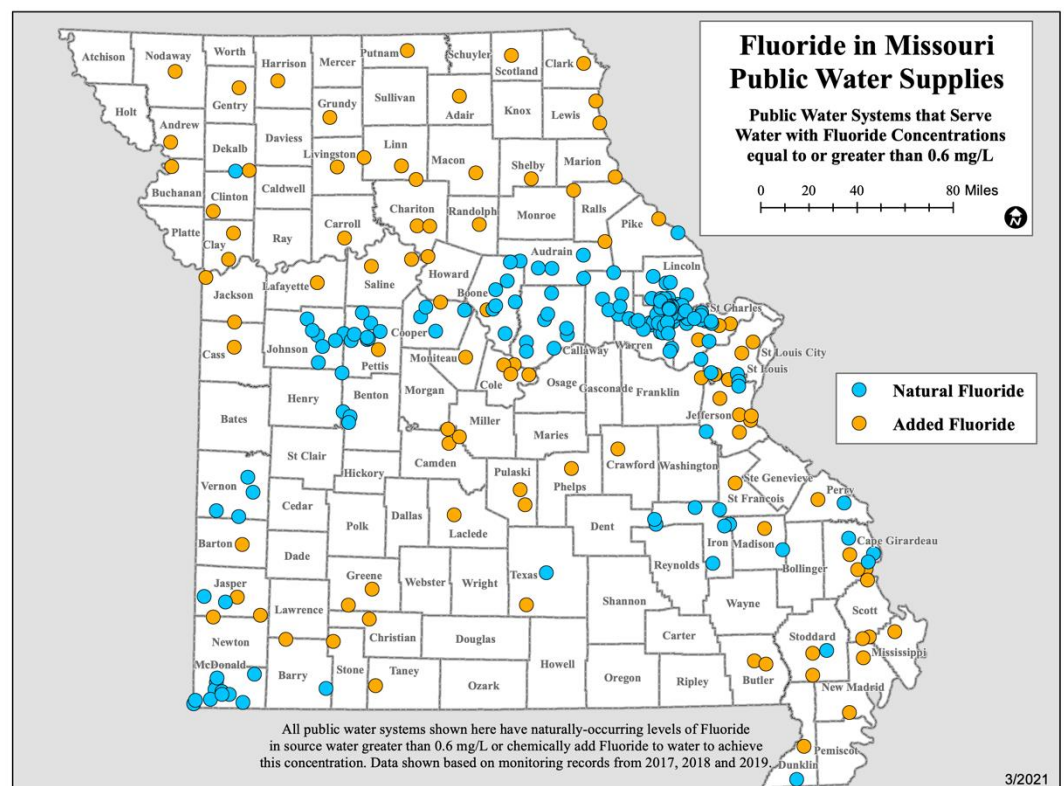
WATER

According to the Environmental Protection Agency (EPA), a public water system “provides water for human consumption through pipes or other constructed conveyances to at least 15 service connections or serves an average of at least 25 people for at least 60 days a year.” There are three types of public water systems: (1) community water systems supply water to the same population year-round; (2) non-transient non-community water systems supply water to the same population, but not year-round like schools; (3) transient non-community water systems do not consistently serve the same community like a campground or gas station.

According to the EPA’s Safe Drinking Water Information System, Perry County has 14 water systems (11 community water systems and 3 non-transient non-community water systems).

The Missouri Department of Natural Resources regulates the water system in Perry County and requires testing on a regular basis to ensure its safety. All of the samples taken in 2021 were in compliance with Department standards.

Figure 4.3: Fluoride in Missouri Public Water Supplies – Missouri, 2021



Source: DHSS, Water Fluoridation, Fluoridation Map

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The fluoridation of water systems is an important part of preventative dental care. According to the Missouri Department of Oral Health, fluoridation prevents at least 25% of tooth decay in both children and adults. and saves money for residents. As a result of water fluoridation, less expensive dental treatments are needed. Although fluoride is naturally present in water sources, additional fluoride is also added to achieve the level needed for health benefits. The percentage of Missouri residents receiving fluoridated water is 76.8%. This is higher than the rest of the country for which only 72.8% receive fluoridated water. Figure 4.3 shows the public water sources in Missouri color-coded by whether the fluoride in the water is natural, has been added, or both.

CHILDHOOD LEAD POISONING

The Environmental Public Health Tracking (EPHT) program in Missouri collects and analyzes data about environmental hazards, community exposure to environmental hazards, and the health effects related to exposure to said hazards. The Childhood Lead Poisoning Prevention Program (CLPPP) is one aspect of the EPHT program. Table 4.1 shows the childhood blood lead testing results for 2011-2019. Elevated blood lead levels are defined as test results of 5 micrograms per deciliter or greater.

Table 4.1: Childhood (0-72 Months) Blood Lead Testing – Perry County & Missouri, 2011-2019

Area	Total Tested	Percent of Population Tested	Blood Levels Elevated
Perry County	1,631	10.38%	31 (1.9%)
Missouri	969,153	19.36%	45,054 (4.7%)

Source: Environmental Public Health Tracking

Childhood lead poisoning is often linked to the availability of affordable housing since lack of affordable housing may push families to live in older homes with deteriorating lead paint. In 1978, the Federal Government banned lead paint for residential structures, but homes built before 1960 still often contain heavily leaded paint. Table 4.2 compares the number of housing units and the time frame in which they were built for Perry County and Missouri. Table 4.3 compares the number of renter-occupied housing units and the time frame in which they were built. Perry County has lower rates of housing units and renter-occupied units built prior to 1980 compared to Missouri. This census data does not account for older homes that have been renovated or have had lead mitigation treatments.

Table 4.2: Median Housing Unit Age – Perry County & Missouri, 2020

Area	Total Housing Units	Built 1939 or Earlier	Built Between 1940 and 1979	Built 1980 and 2013	Built 2014 or Later
Perry County	7,577	852 (11.2%)	3,090 (40.8%)	3,341 (44.1%)	294 (3.9%)
Missouri	2,440,212	313,525 (12.8%)	1,012,901 (41.5%)	1,043,926 (42.8%)	69,860 (2.9%)

Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates

Table 4.3: Renter-Occupied Housing Unit Age – Perry County & Missouri, 2020

Area	Total Housing Units	Built 1939 or Earlier	Built Between 1940 and 1979	Built 1980 and 2013	Built 2014 or Later
Perry County	2,002	146 (7.3%)	799 (39.9%)	955 (47.7%)	102 (5.1%)
Missouri	802,838	115,662 (14.4%)	358,465 (44.6%)	302,902 (37.7%)	25,809 (3.2%)

Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates

BUILT ENVIRONMENT

The Centers for Disease Control and Prevention define built environment as “the physical makeup of where we live, learn, work, and play—our homes, schools, businesses, streets and sidewalks, open spaces, and transportation options.” The availability of these resources, in addition to access to healthy food, reduces adverse health outcomes associated with poor diet and lack of physical activity. The County Health Rankings and Roadmaps, created by the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, provide a ranking of the Food Environment Index. For the data years 2015 and 2018, Perry County had a Food Index Environment score of 8.4 and Missouri had a score of 7.0. The Food Environment Index ranges from 0 (worst) to 10 (best) and equally weights two indicators of the food environment:

- 1. Limited Access to Healthy Foods which estimates the percentage of the population that is low income and does not live close to a grocery store
- 2. Food insecurity which estimates the percentage of the population who did not have access to a reliable source of food during the past year

Washington University in St. Louis conducted a study that included 81 Perry County Residents. A variety of questions were asked in regard to the built environment for physical activity. All respondents reported that they had access to indoor exercise equipment and that the equipment was nice to use, was well kept, and in areas that are generally safe. Additionally, 60.5% of Perry County respondents report that they met physical activity guidelines (defined as 150 minutes of moderate physical activity per week, 75 minutes of vigorous physical activity per week, or a combination of the two). Table 4.3 outlines responses to additional survey questions.

Table 4.3: Outdoor Built Environment Survey Questions and Responses – Perry County, Missouri, 2020

Question	Percentage that Agrees or Strongly Agree
There are crosswalks in the area around my home.	50.0%
The roads around my home have a place to walk or ride a bike next to the road.	60.4%
The roads around my home have good lighting.	69.7%
There are sidewalks on most of the roads in the area around my home.	51.3%
There are sidewalks in the area I live that connect places so that you can walk from place to place.	70.0%
There is so much traffic along the street I live on that it makes it difficult or unpleasant to walk in my neighborhood.	23.8%
There is so much traffic along nearby streets that it makes it difficult or unpleasant to walk in my neighborhood.	33.8%
The speed of traffic on the street I live on is usually slow.	78.8%
The speed of traffic on most nearby streets is usually slow.	70.1%
Most drivers exceed the posted speed limits while driving in my neighborhood.	53.3%

Source: Prevention Research Center at Washington University in St. Louis, Funded by NIH/NCI grant #R01CA211323, and CDC grant #U48DP006395

KEY TAKEAWAYS

- Perry County’s outdoor air quality is historically worse than the rest of Missouri or the U.S. average, but is on the downward trend similar to the State and Nation overall.

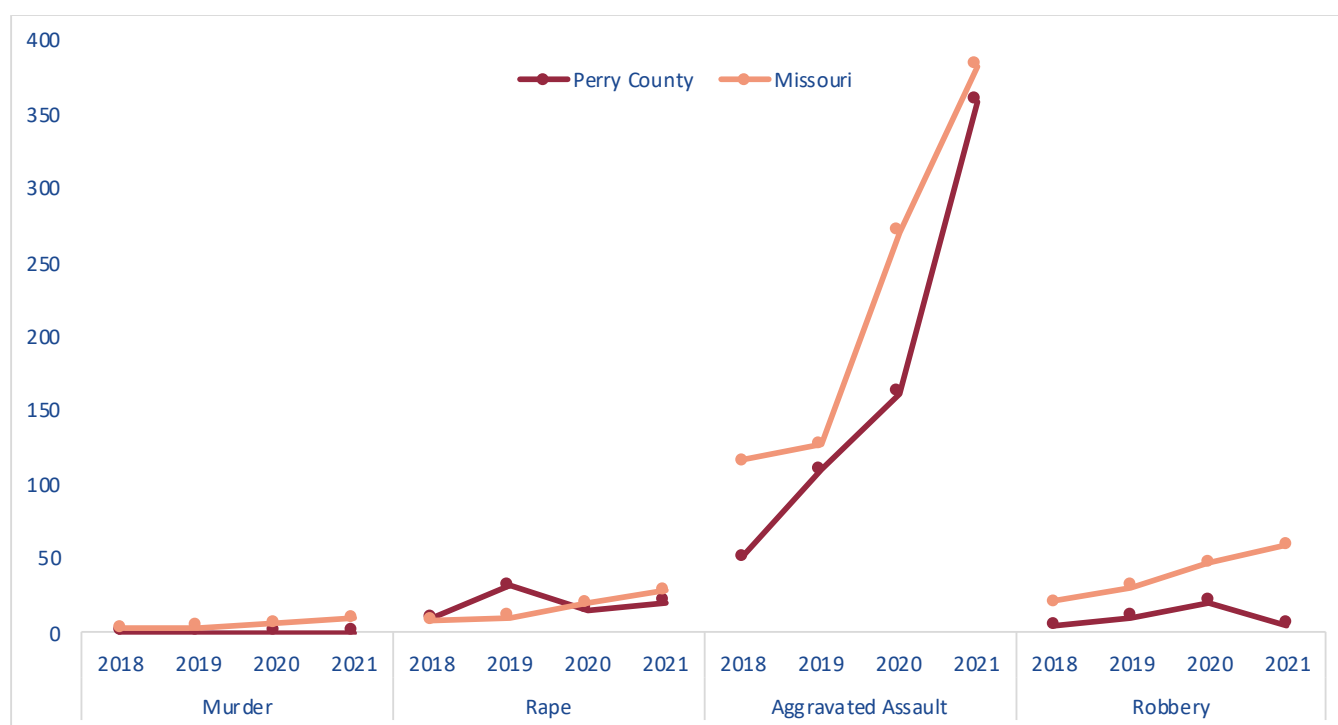
- The average indoor radon concentration for homes in Perry County is almost 2.8 times higher than the National average. In addition, 20% of homes have detectable radon levels above what is recommended by the EPA.
- Perry County has lower rates of both housing units and renter-occupied units built prior to 1980, which typically have a higher risk for lead exposure, than Missouri.
- Perry County has lower rates of elevated blood lead levels in children 0-5 years of age compared to the State.
- Perry County's Food Index Environment score, a measure of access to healthy foods, is above that of the rest of Missouri.
- Perry County residents reported in a recent survey that they have access to reliable and safe means of exercise.

PUBLIC SAFETY AND DOMESTIC VIOLENCE

CRIME INDEX

The Federal Bureau of Investigation (FBI) tracks crime within the United States. The Crime Index is a weighted average of eight major offenses and is used to measure the magnitude of crime in the U.S. The eight offenses included in the Crime Index are (1) murder, (2) forcible rape, (3) robbery, (4) aggravated assault, (5) burglary, (6) theft, (7) motor vehicle theft, and (8) arson. These offenses are included due to the likelihood they will be reported to law enforcement agencies and how frequently they are likely to occur. The first four offenses are part of the Violent Crime Index and the latter four are part of the Property Crime Index. Figure 5.1 shows the crime rates for the four violent crimes that make up the Violent Crime Index for Perry County and Missouri from 2018-2021.

Figure 5.1: Violent Crime Rates per 100,000 – Perry County & Missouri, 2018-2021

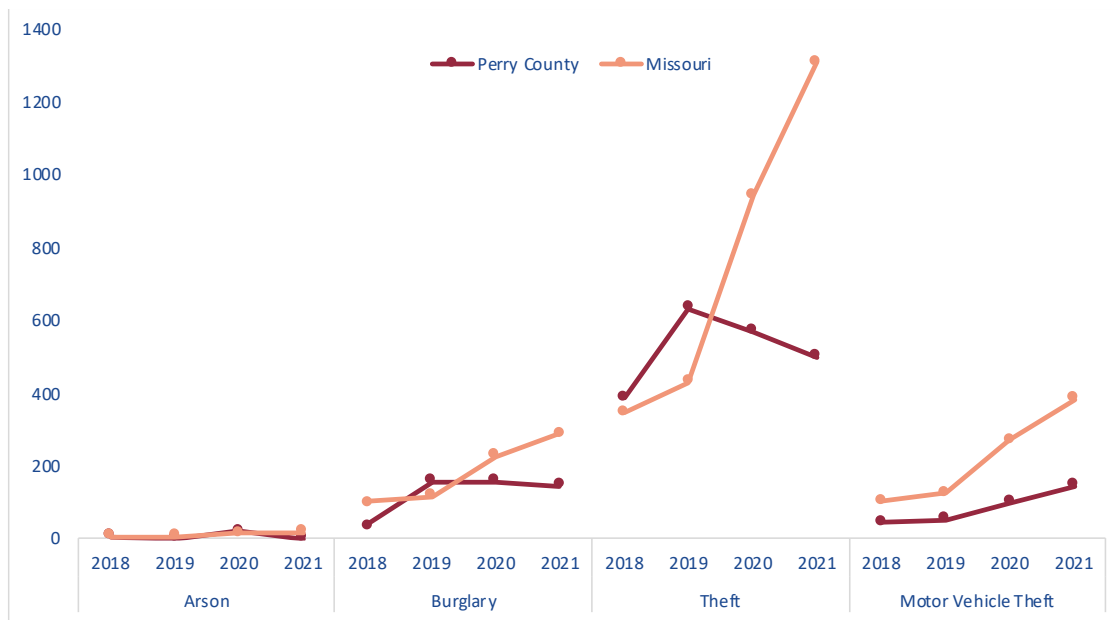


Source: Missouri State Highway Patrol, NIBRS Crime Rates by County, 2018-2021

Missouri has seen an increasing trend in all four violent crimes since 2019. Perry County has also seen an increasing trend in violent crime, with the exception of robbery, since 2019. In both jurisdictions, aggravated assault had the largest rate increase with Perry County 2021 rates being seven times what they were in 2018. For almost all crimes, Perry County's rate is comparable to or below that of the State, with the exception of rape in 2019.

Figure 5.2 shows the crime rates for the four offenses that make up the Property Crime Index. Perry County has generally had rates of property crime comparable to or below that of the State, with the exception of burglary and theft in 2019. Rates of theft have decreased in Perry County since 2019, while it has drastically increased across the State.

Figure 5.2: Property Crime Rates per 100,000 – Perry County & Missouri, 2018-2021



Source: Missouri State Highway Patrol, NIBRS Crime Rates by County, 2018-2021

Table 5.1 lists the number of Offenses and Arrests by crime type in Perry County from 2019 to 2021. From 2019 to 2021, criminal offenses in Perry County, in general, decreased in number with the exception of aggravated assault and motor vehicle theft. The highest number of offenses were thefts and the highest number of arrests were aggravated assaults.

Table 5.1: Offenses and Arrests by Crime Type – Perry County, 2019-2021

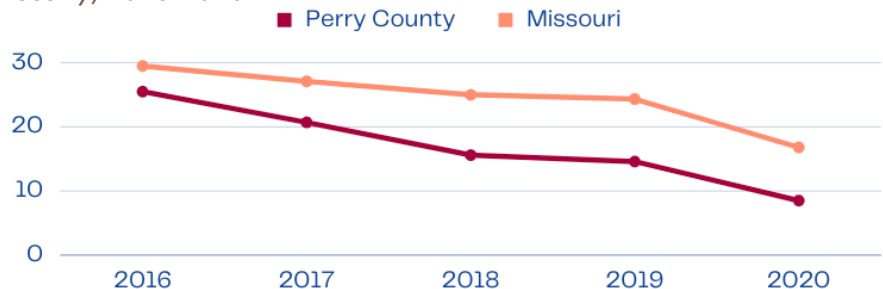
Crime Type	Number of Offenses			Number of Arrests		
	2019	2020	2021	2019	2020	2021
Murder	0	0	0	0	0	0
Rape	6	3	4	1	1	4
Aggravated Assault	20	29	62	40	32	50
Robbery	2	4	1	0	2	0
Burglary	30	30	28	12	6	13
Arson	0	4	0	0	0	0
Theft	121	109	96	53	49	25
Motor Vehicle Theft	17	16	26	3	3	6

Source: Missouri State Highway Patrol, NIBRS Crime Rates by County and SRS Summary Arrests, 2019-2021

JUVENILE CRIME AND COURT REFERRALS

Juvenile Crime consists of referrals to juvenile courts for acts that would be violations of the Missouri Criminal Code if committed by an adult. Figure 5.3 displays rates per 1,000 youth age 10-17 for juvenile law violation referrals.

Figure 5.3: Juvenile Law Violation Referrals per 1,000, Age 10-17 – Perry County, 2016-2020



Source: Missouri Kids Count

DOMESTIC VIOLENCE

Domestic Violence incidents include any dispute arising between spouses, persons with children in common regardless of whether they reside together, persons related by blood, persons related by marriage, non-married persons currently residing together, and non-married persons who have resided together in the past. These incidents are reported whether or not an arrest is made.

Table 5.2: Domestic Violence Incidents, Victims, and Rates per 1,000 – Perry County & Missouri, 2021

Area	Incidents	Incident Rate (per 1,000)	Victim	Victim Rate (per 1,000)
Perry County	125	6.50	137	7.13
Missouri	36,481	5.91	42,109	6.83

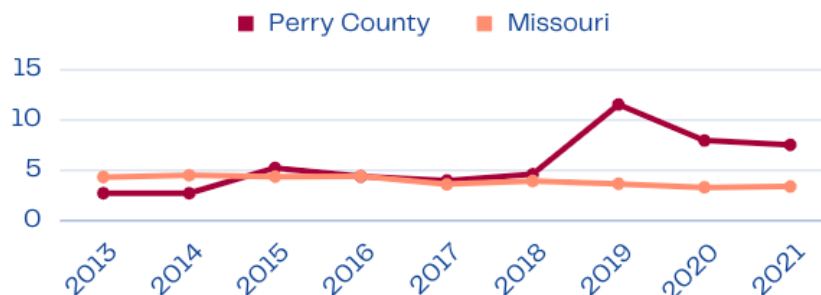
Source: Missouri State Highway Patrol, Domestic Violence, 2021

Domestic Violence incidents and rates for Perry County and Missouri for 2021 are shown in Table 5.2. Compared to the State, Perry County had a higher rate of incidents and victim. Based on the difference between the Incident Rate and Victim Rate, we can conclude multiple incidents involved more than one victim.

CHILD ABUSE AND NEGLECT

According to the Missouri Department of Social Services, there were a total of 166 incidents of Child Abuse and/or Neglect in Perry County in 2021. This is an 11.4% increase from 2019. Out of the 166 incidents, 22 (13.3%) were considered substantiated claims, defined as reports that have been investigated and classified as having “probable cause” that child abuse or neglect has occurred. Of the 166 incidents, 106 (63.9%) were referred for a family assessment. Figure 5.4 shows the trend of victims of substantiated claims for Perry County and Missouri. Since 2018, Perry County has experienced higher rates of child abuse and neglect compared to the State.

Figure 5.4: Child Abuse/Neglect Victims of Substantiated Claims per 1,000 – Perry County & Missouri, 2013-2021



Source: DHSS, Missouri Children's Division Annual Reports 2013-2021

KEY TAKEAWAYS

- Perry County, similar to the State, has seen an increasing trend in violent crime since 2019, with the exception of robbery. Aggravated assault had the largest rate increase in Perry County with 2021 rates being seven times that of 2018.
- Perry County, generally, has property crime rates comparable to, or below, the State, with the exception of burglary and theft in 2019.
- Rates of theft have decreased in Perry County since 2019, while it has drastically increased across the State.
- County rates of juvenile crime between 2016 and 2020 showed a downward trend that was consistently lower than the State.
- Compared to the State, Perry County had a higher rate of incidents and victims of domestic violence in 2021.
- Victims of substantiated claims of child abuse/neglect have increased in recent years and rates remain higher in Perry County compared to the rest of Missouri.

ALCOHOL, TOBACCO, AND SUBSTANCE USE

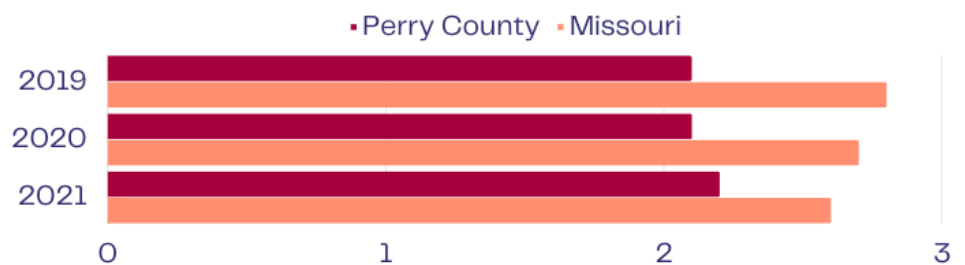
ALCOHOL USE

Consequences of excessive alcohol use include alcohol poisoning, hypertension, acute myocardial infarctions, sexually transmitted infections, unintended pregnancy, fetal alcohol syndrome, sudden infant death syndrome, suicide, interpersonal violence, and vehicular accidents. According to the County Health Rankings and Roadmaps developed by the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, 19% of Perry County residents reported either binge drinking (consuming 4 drinks for women or 5 drinks for men on a single occasion) or heavy drinking (consuming 1 drink for women or 2 drinks for men per day on average) in the past 30 days. This is the same percentage of Missouri residents reporting binge drinking or heavy drinking in the past 30 days.

According to the Behavioral Health Profile developed by the Missouri Division of Behavioral Health, “alcohol is one of the most common substances used by Missouri youth.” In 2018, 25.1% of Perry County youth self-reported alcohol use in the past 30 days.

The Missouri Highway Patrol, Missouri Uniform Crime Reporting Program provides information on the number of alcohol-related arrests. Figure 6.1 shows a comparison between Perry County and Missouri for arrests made for Driving Under the Influence. Arrests of Driving Under the Influence was lower than the State.

Figure 6.1: Rate of Alcohol Related Arrests per 1,000 Population – Perry County & Missouri, 2019-2021

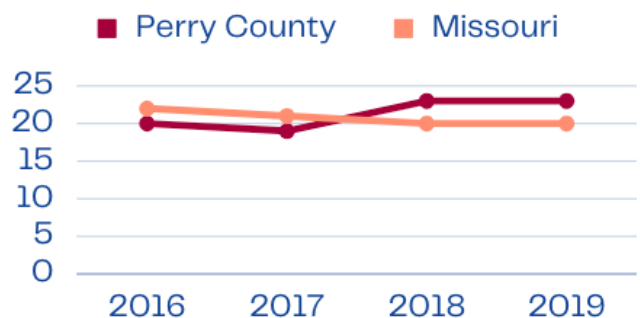


Source: Missouri Highway Patrol, Missouri Uniform Crime Reporting Program

TOBACCO

The County Health Rankings and Roadmaps developed by the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute define current cigarette smoking as “smoking every day or most days and smoking at least 100 cigarettes in a lifetime.” According to the County Health Rankings, in 2019, the prevalence rate for current smokers was 23% for Perry County compared to 20% for Missouri. Figure 6.2 depicts the trend of current smokers for Perry County and Missouri. In 2019, the average prevalence rate for current smokers in the Southeast Missouri Region was 26.0%. Though Perry County’s rate is higher than the State’s, it is lower than the BRFSS regional average.

Figure 6.2: Prevalence of Current Cigarette Smoking – Perry County & Missouri, 2016-2019



Source: County Health Rankings and Roadmaps, Adult Smoking

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Smoking attributable hospitalizations and Leading Causes of Death are based on a smoker's increased likelihood of experiencing a condition or dying from a specific disease. The Missouri Department of Health and Senior Services identifies specific smoking-related diagnoses and causes of death. Table 6.1 lists rate of death due to these smoking-related diseases. As compared to the State, Perry County's rate of deaths due to smoking-related causes are lower except for heart disease. Furthermore, they are consistently lower than Southeast Missouri Region's rates.

Table 6.1: Smoking-Related Causes of Death, Number and Rates per 100,000 – Perry County & Missouri, 2009-2019

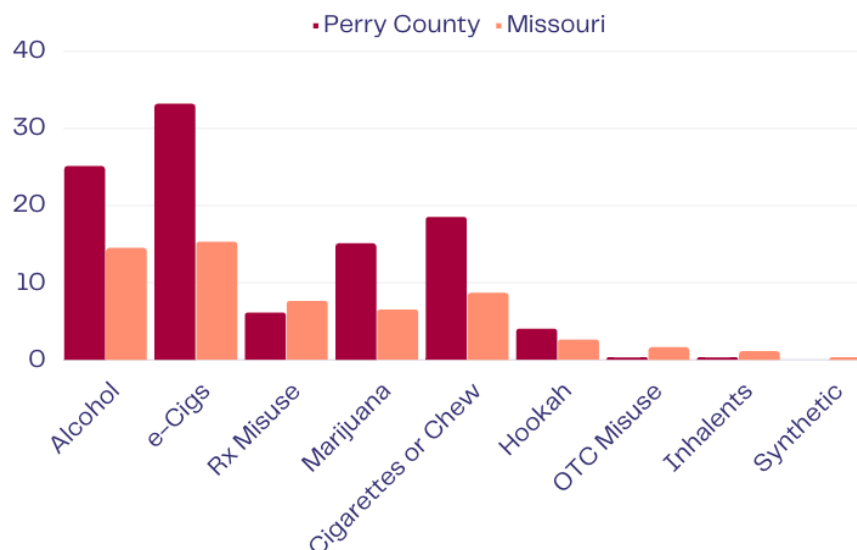
Cause of Death	Perry County	Missouri
Heart Disease	201.07	193.95
Lung Cancer	48.31	51.08
Breast Cancer	11.33	11.97
Stroke	40.65	41.02
Chronic Lower Respiratory Disease	48.44	51.03
Pneumonia and Influenza	11.76	17.17

Source: DHSS, MOPHIMS, Death MICA

Cigarette use in electronic form has become a growing concern across the United States. In 2018, the Missouri Student Survey conducted by the Missouri Department of Health and Senior Services found that Perry County youth reported higher use of e-cigarettes in the past 30 days (32.2% of respondents) as compared to cigarettes or chew (18.5% of respondents). Additionally, the survey found that 17.3% of respondents in Perry County believed there was “no” or “slight risk” to smoking one or more packs of cigarettes, but 49.3% believed there was “no” or “slight risk” to smoking e-cigarettes.

Figure 6.3 compares the results of the Student Survey conducted by the Missouri Department of Mental Health for the method of current substance use for students in Grades 6-12 in Perry County and Missouri. The method with the highest percent in both the County and the State was e-Cigarettes (33.2% for the Perry County and 15.3% for the State). Rates of substance use for Perry County youth was higher than the State for alcohol, e-cigarette, marijuana, cigarettes or chew, and hookah use. Perry County youth use rates were lower than the State for prescription medications, over the counter medications, inhalants, and synthetic drugs.

Figure 6.3: Percent Current Substance Use for Grades 6-12 – Perry County & Missouri, 2018



Source: Behavioral Health Profile, Student Survey, 2018

SUBSTANCE USE

The opioid crisis has become a top priority across the United States. Figure 6.4 depicts the number of incidents with one or more seized drugs for Perry County. In 2019, the rate of drug incidents in Perry County was lower than the State. Since that time, as depicted in Figure 6.4, the number of drug incidents in Perry County has increased. When comparing rates of drug incidents per 1,000 residents, Perry County has a higher rate (8.48) than the State (5.69).

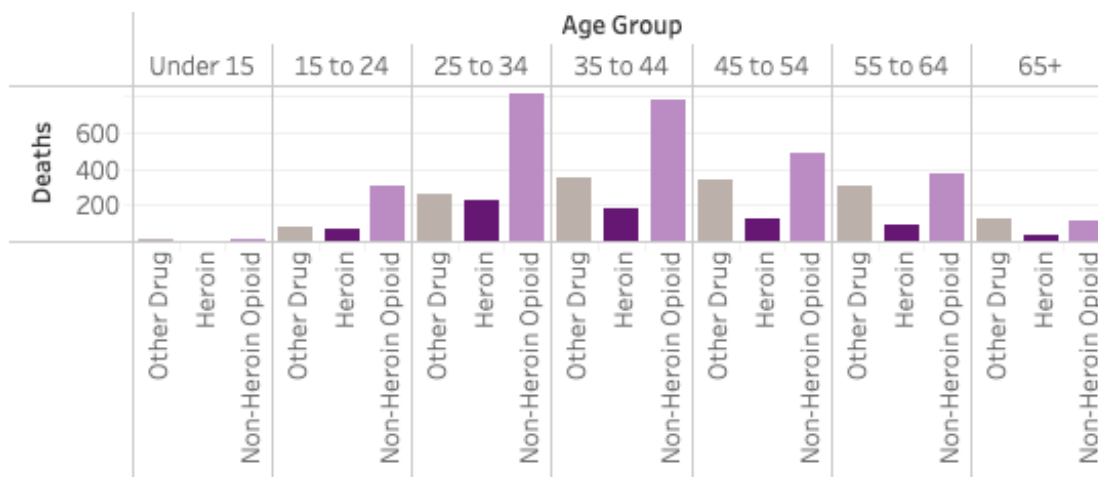
In 2018, there were 1,132 opioid overdoses in the state of Missouri. In that same year, there was 1 opioid overdose and 2 other/unspecified drug overdoses in Perry County. Figure 6.5 displays the Missouri resident overdose deaths by age groups for 2018 through 2020. County-specific death data was not available. Missouri opioid-involved deaths show similar patterns for heroin and non-heroin opioids when comparing age groups. In the years evaluated, the peak age group for opioid-involved overdose deaths was the 25 to 34 age group.

Figure 6.4: Illegal Drug Use Incidents, Perry County, 2019-2021



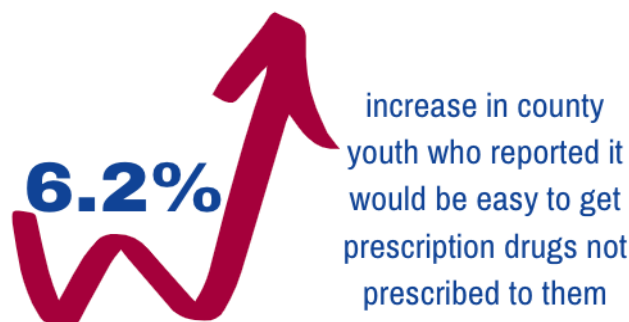
Source: Missouri State Highway Patrol, NIBRS Drug Report by County, 2019-2021

Figure 6.5: Missouri Resident Overdose Deaths by Age and Type – 2018-2020



Source: DHSS Drug Overdose Dashboard

According to the Missouri Student Survey conducted by the Missouri Department of Health and Senior Services, in 2018, 24.7% of youth respondents in Perry County stated that they believed it would be “very” or “sort of easy” to get prescription drugs that were not prescribed to them. This is an increase from 2016 in which only 18.5% responded that it would be “very” or “sort of easy”.



With increasing rates of substance abuse, it is important for residents to feel that they have resources available to them if they need support with addiction. However, data from a survey conducted by Perry County Health System along with the National Rural Health Resource Center with almost 200 responses showed 83% of respondents either did not have a substance abuse counselor they could go to or did not know if they had one.

KEY TAKEAWAYS

- The percentage of Perry County residents who reported either binge drinking or heavy drinking in the past 30 days is the same as the percentage of Missouri residents (19%).
- The prevalence rate for current smokers in Perry County (23%) is higher than Missouri (20%), but lower than the BRFSS Southeast Regional average (26%).
- In 2018, a survey of students in Grades 6-12 showed rates of substance use for Perry County youth was higher than the State for alcohol, e-cigarettes, marijuana, cigarettes or chew, and hookah use. Perry County youth use rates were lower than the State for prescription medications, over-the-counter medications, inhalants, and synthetic drugs.
- The number of drug incidents in Perry County has increased over the past two years and is now higher than the State (8.48 incidents per 1,000 Perry County residents as compared to 5.69 incidents per 1,000 Missouri residents).

INJURY

The overall injury rate for Perry County was 74.03 per 1,000 people in 2020. In Missouri, the overall injury rate was 63.79 per 1,000 during that same time. Though Perry County has a higher rate as compared to Missouri, both Perry County and the state have had a decreasing rate of injury since 2016. Table 7.1 displays the burden of injuries by age group for Perry County and Missouri. The age group with the highest rate of injury was 15-24 years for both jurisdictions.

INJURY BY AGE

When looking at specific age groups, injury rates in Perry County are higher than Missouri in every age group except 25 to 44.

Table 7.1: Injury Rates per 1,000 by Age Group and Location – Perry County & Missouri, 2016-2020

Area	Under 15	15-24	25-44	45-64	65+	All Ages
Perry County	92.33	107.46	81.74	67.62	103.75	74.03
Missouri	85.19	94.64	82.74	61.1	79.75	63.79

Source: Missouri Department of Health and Senior Services, Special Request, 2022

Children under the age of 15 can have different injury risks compared to other ages. Therefore, this age category was broken down further, as seen in Table 7.2. The age group with the highest rate of injury, within this broken-down category, was 1-4 years for both Perry County and Missouri. Similar to Table 7.1, injury rates in Perry County are higher for all age groups compared to the State, except 10 to 14.

Table 7.2: Injury Rates in those Under 15 per 1,000 by Age Group and Location – Perry County & Missouri, 2016-2020

Area	Under 1	1-4	5-9	10-14	Under 15
Perry County	64.4	119.45	84.99	85.02	92.33
Missouri	56.31	109.93	74.06	87.04	85.19

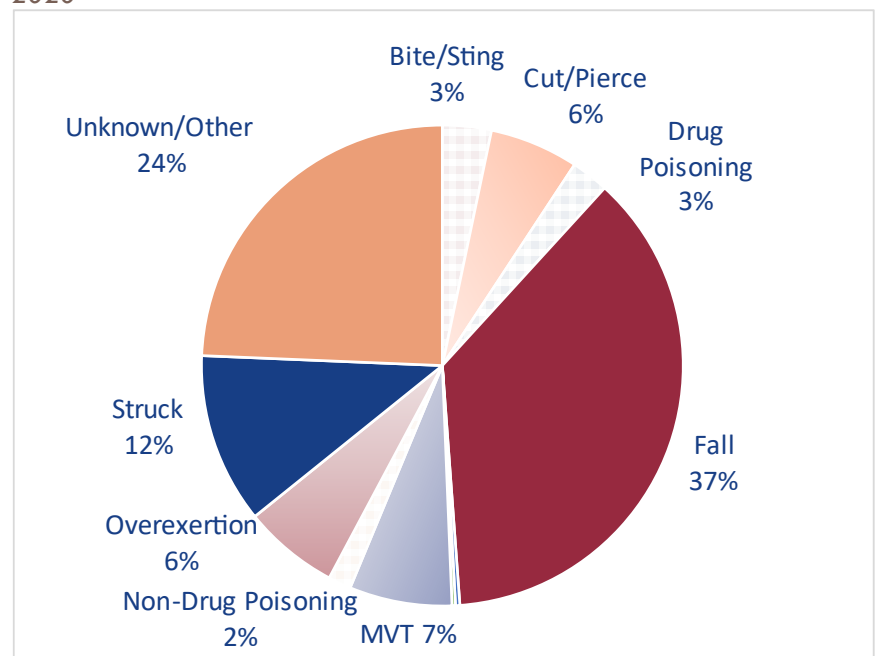
Source: Missouri Department of Health and Senior Services, Special Request, 2022

LEADING CAUSES OF INJURY

Figure 7.1 shows the percent of overall injuries by type/mechanism for all ages in Perry County. The largest percent of injuries in Perry County are attributed to falls. The same is true for the State. Table 7.3 shows rates for the leading causes of injury for all ages for Perry County as well as the corresponding rates for the State.

Figure 7.2 further breaks the information in Table 7.3 by age groups to determine what age groups are burdened most.

Figure 7.1: Percent of Injury Mechanism for All Ages – Perry County, 2016-2020



Source: Missouri Department of Health and Senior Services, Special Request, 2022

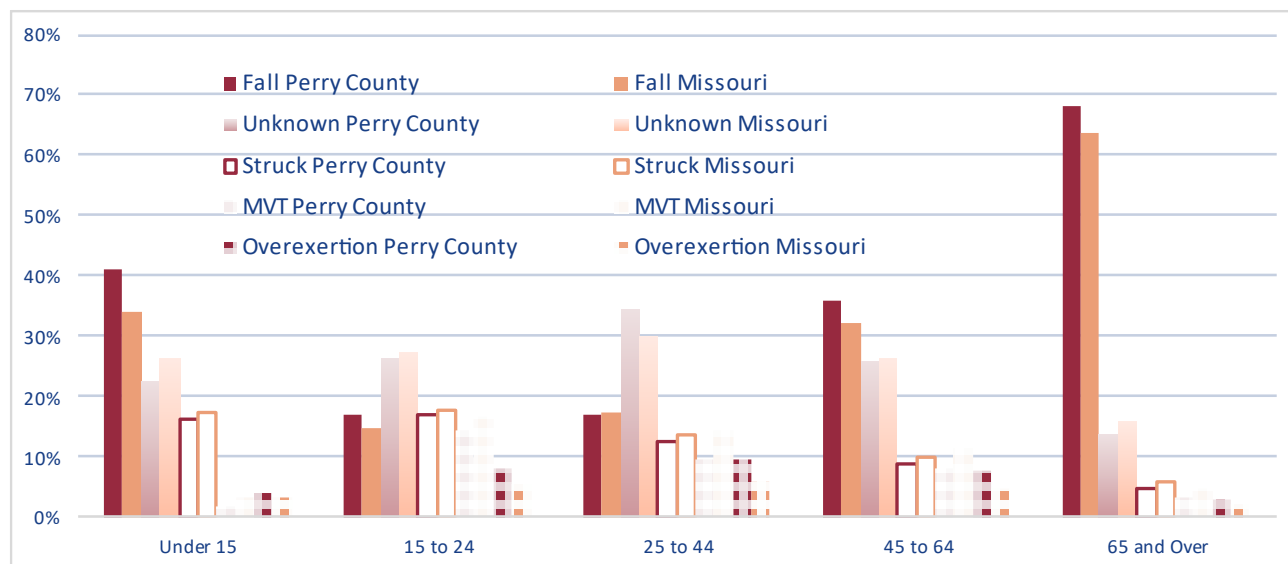
Figure 7.3 shows the percentage of Unintentional Injuries by type/mechanism of injury for children less than 15 years of age in Perry County. Percentages in Perry County were comparable to those of the State.

Table 7.3: Leading Cause of Injury Rates per 1,000 by Mechanism of Injury – Perry County & Missouri, 2016-2020

Mechanism of Injury	Perry County	Missouri
Fall	32.3	24.6
Unknown/Other	21.2	20.1
Struck	10.0	10.2
Motor Vehicle Non-Traffic	6.9	10.3
Overexertion	6.4	4.3

Source: Missouri Department of Health and Senior Services, Special Request, 2022

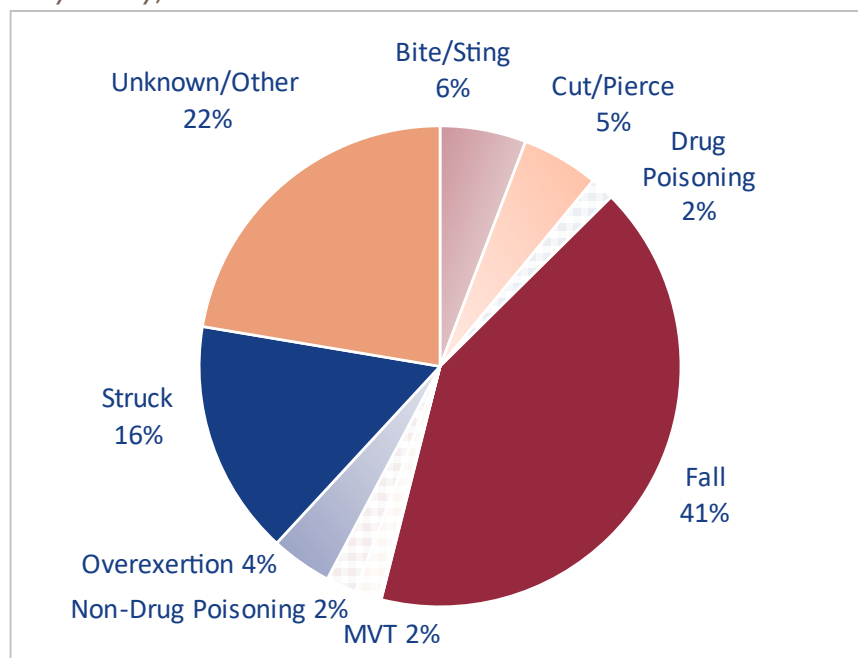
Figure 7.2: Percent of Injury for Leading Causes of Injury by Age Group – Perry County & Missouri, 2016-2020



Source: Missouri Department of Health and Senior Services, Special Request, 2022

The Missouri State Highway Patrol keeps a record of motor vehicle crashes in the State and categorizes the crashes by the severity of injury: crash with fatalities or crash with serious injuries. From 2016 to 2018, Perry had an increasing trend in both crashes with fatalities and crashes with serious injuries. Table 7.4 shows the number of each type of crash per year between 2016 and 2018. For both types of crashes, the leading cause was horizontal curves. According to the U.S. Department of Transportation, horizontal curves are those that change the alignment or direction of the road (as opposed to vertical curves, which change the slope).

Figure 7.3: Percent of Injury Mechanism for Children under 15 Years Old – Perry County, 2016-2020



Source: Missouri Department of Health and Senior Services, Special Request, 2022

Table 7.4: Crash Statistics – Perry County, 2016-2018

Crash Type	2016	2017	2018
<i>Crashes with Fatalities</i>	2	3	7
<i>Crashes with Serious Injuries</i>	8	8	15

Source: Missouri State Highway Patrol, 2022

KEY TAKEAWAYS

- Perry County's injury rates are higher than that of Missouri.
- The highest rate of injury is in the 15-24 year age group. When considering the 1-15 year age group, the 1-4 year olds have the highest rates overall.
- The largest percentage of injuries are attributed to falls, with those in the 65 and over age group being particularly vulnerable.

MATERNAL AND CHILD HEALTH INDICATORS

PRENATAL CARE

According to the National Institutes of Health, “having a healthy pregnancy is one of the best ways to promote a healthy birth. Getting early and regular prenatal care improves the chances of a healthy pregnancy and birth outcomes.” The Missouri Department of Health and Senior Services obtains information regarding prenatal care from birth certificate records.

The Missouri Department of Health and Senior Services defines inadequate prenatal care as “fewer than five prenatal visits for pregnancies less than 37 weeks, fewer than eight visits for pregnancies 37 weeks or longer, or care beginning after the first four months of pregnancy.” Table 8.1 shows the number and rates of inadequate prenatal care in Perry County and Missouri between 2016 and 2020.

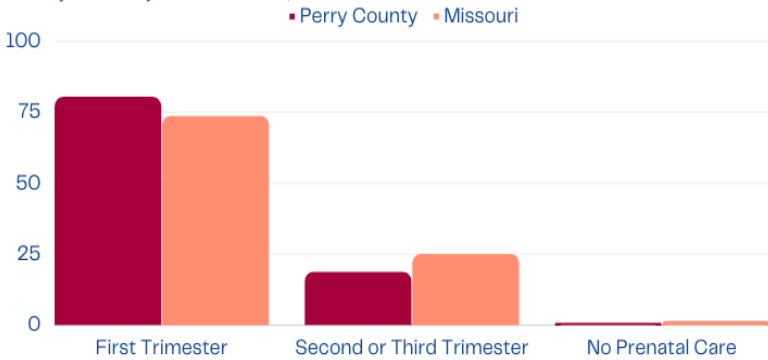
Table 8.1: Inadequate Prenatal Care by Number and Rate per 100 – Perry County & Missouri, 2016-2020

Area	Number	Rate
Perry County	155	14.53
Missouri	69,482	20.49

Source: DHSS, MOPHIMS, Birth MICA

The rate of inadequate prenatal care is lower for Perry County than for the State and, as shown in Figure 8.1, women in Perry County had a higher rate of beginning prenatal care early in their pregnancy. Figure 8.1 compares the rates between Perry County and Missouri for First Trimester, Second and Third Trimester, and No Prenatal Care. In Perry County, between 2010 and 2020, 80.38% of live births had prenatal care beginning in the first trimester, 18.78% in the second or third trimester (considered late prenatal care), and 0.84% had no prenatal care at all.

Figure 8.1: Initiation of Prenatal Care, Rate per 100 Live Births – Perry County & Missouri, 2010-2020



Source: DHSS, MOPHIMS, Birth MICA

SMOKING DURING PREGNANCY

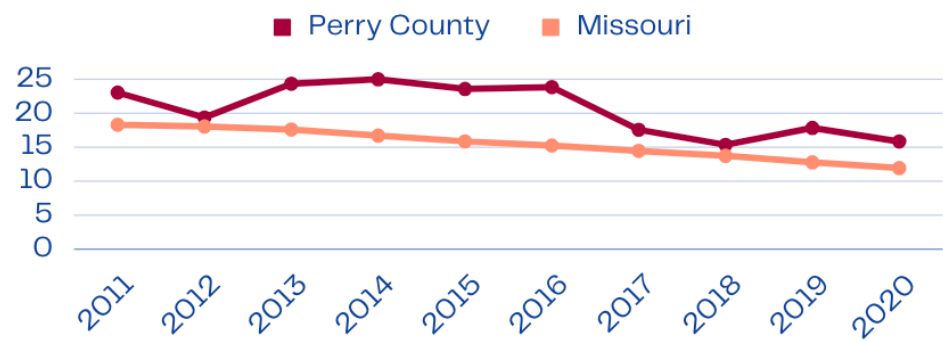
Women who smoke during pregnancy put themselves and their unborn children at risk for health complications. Dangers of smoking during pregnancy include:

- Higher risk of miscarriage
- Premature birth or low birth weight
- Birth defects, such as cleft lip or cleft palate
- Infant death
- Problems with the placenta, which is the source of the baby's food and oxygen during pregnancy
- Higher risk for Sudden Infant Death Syndrome (SIDS)

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According to the Missouri Department of Health and Senior Services, in 2020, 15.84% of mothers in Perry County smoked during pregnancy as compared to 11.94% of mothers in Missouri. Figure 8.2 shows the timeline of the rate of mothers who smoked during pregnancy for the County and State. Although County rates have decreased overall since 2011, the trend is not consistent and still remains higher than the State.

Figure 8.2: Rate per 100 of Mothers who Smoked During Pregnancy – Perry County & Missouri, 2011-2020



Source: DHSS, MOPHIMS, Birth MICA

Table 8.2 shows smoking rates in each county within the Southeast Missouri Region, where the average rate was 20.71 per 100 between 2019 and 2020. Perry County was below this average. Reynolds County had the highest rate (37.06 per 100 births) and Cape Girardeau had the lowest (13.41 per 100 births).

Table 8.2: Rates per 100 of Smoking During Pregnancy – Southeast Missouri Region, 2019-2020

County	Rate	County	Rate	County	Rate
Bollinger	19.93	Mississippi	21.50	Shannon	23.08
Butler	25.65	New Madrid	21.49	St. Francois	21.63
Cape Girardeau	13.41	Oregon	28.30	Ste. Genevieve	16.95
Carter	23.97	Ozark	22.31	Stoddard	21.95
Douglas	16.87	Pemiscot	19.05	Texas	20.19
Dunklin	22.48	Perry	16.87	Wayne	25.40
Howell	20.90	Reynolds	37.06	Wright	17.19
Iron	31.47	Ripley	26.30		
Madison	26.56	Scott	19.51		

Source: DHSS, MOPHIMS, Birth MICA

BIRTHS AND GESTATION

Table 8.3 compares the number of live births in Perry County and Missouri for 2017 and 2020.

According to the Missouri Department of Health and Senior Services, live births have decreased in recent years for both Perry County (-10.4%) and Missouri (-5.4%).

Table 8.3: Number of Live Births – Perry County & Missouri, 2017 & 2020

Area	Births, 2017	Births, 2020	Percent Change
Perry County	223	202	-10.4%
Missouri	73,017	69,277	-5.4%

Source: DHSS, MOPHIMS, Birth MICA

Preterm gestation is defined as less than 37 completed weeks of pregnancy. This measure is important to consider since the brain, lungs, and liver are still largely in development prior to week 37. According to the Missouri Department of Health and Senior Services, in 2017, 8.07% of births in Perry County had a gestation period of less than 37 weeks. This compares to 12.38% of births in 2020.

Table 8.4: Preterm Gestation, Rate per 100 Live Births – Perry County & Missouri, 2017 & 2020

Area	Rate, 2017	Rate, 2020
Perry County	8.07	12.38
Missouri	10.57	10.98

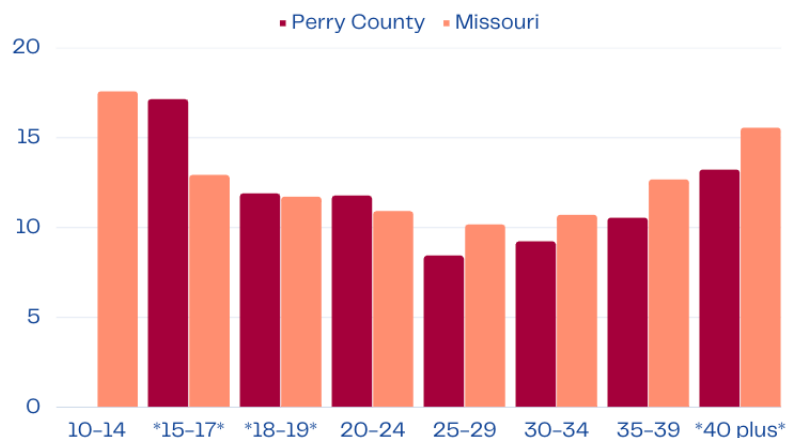
Source: DHSS, MOPHIMS, Birth MICA

PERRY COUNTY, MO

Rate of preterm births in Perry County went from being below the state rate in 2017 to above the state rate in 2020.

Figure 8.3 shows the rate of preterm births for 2010-2020 by age group of the mother. Although the age group with the highest preterm birth rate in Perry County was the 15–17-year-olds (17.17 per 100 live births), this rate is considered unreliable due to the low number of mothers. Other age groups considered unreliable for the county are the 18-19 (11.89 per 100 live births) and 40 plus (13.21 per 100 live births) age groups. Of the remaining age groups, 20-24 year olds within the county had higher rates (11.77 per 100 live births) of preterm births compared to the state (10.90 per 100 live births).

Figure 8.3: Preterm Gestation, Rate per 100 Births, by Age of Mother—Perry County & Missouri, 2010-2020

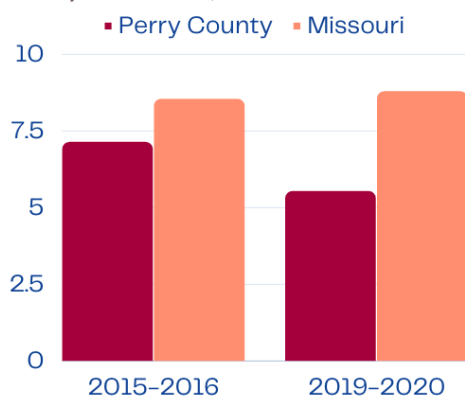


Source: DHSS, MOPHIMS, Birth MICA

Note: Age groups denoted with asterisks (*) are unreliable due to the low number of mothers

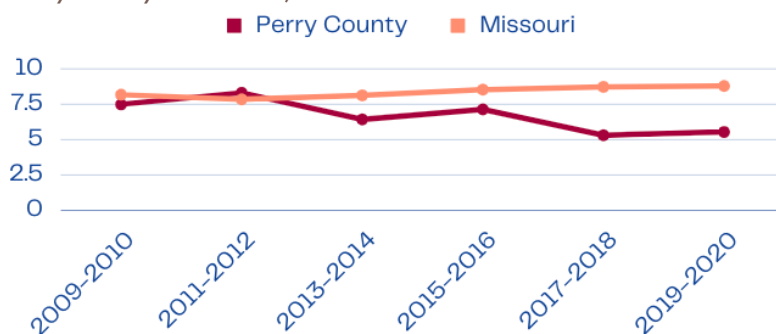
According to the Missouri Department of Health and Senior Services, low birth weight is defined as “less than 2500 grams at birth” (5 pounds and 8.2 ounces). Figure 8.4 shows the percentage of births with a low birth weight for Perry County and Missouri. The percentage of live births with low birth weight in Perry County in 2015-2016 was 7.14%. This decreased to 5.54% in 2019-2020. In comparison, the percentage of live births with low birth weights in Missouri increased from 8.54% to 8.79% in the same time period. Figure 8.5 displays the low birth weight trend for Perry County and Missouri.

Figure 8.4: Percent Low Birth Weight – Perry County & Missouri, 2015-2016 & 2019-2020



Source: DHSS, MOPHIMS, Birth MICA

Figure 8.5: Time Trend of Low Birth Weight, Rate per 100 Births – Perry County & Missouri, 2009-2020



Source: DHSS, MOPHIMS, Birth MICA

BREASTFEEDING

According to the Centers for Disease Control and Prevention, both mothers and their children gain benefits from breastfeeding. Breast milk is easily digestible for infants and contains antibodies to protect from bacterial and viral infections. An infant’s risk of becoming an overweight child also decreases with each month of breastfeeding. Women who breastfeed may have lower rates of certain breast and ovarian cancers as

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well. In a report completed by the Robert Wood Johnson Foundation and Trust for America's Health, other benefits of breastfeeding for mother and child were found. For the child, reduces the risk of ear, skin, stomach and respiratory infections; diarrhea; sudden infant death syndrome; necrotizing enterocolitis and other bacterial and viral infections. In the long term, there is a reduced risk of obesity, Type 1 and 2 diabetes, asthma, celiac disease, inflammatory bowel disease and childhood leukemia. For the mother, breastfeeding provides quicker loss of pregnancy weight; prevention of postpartum bleeding; and a reduced risk of breast cancer, ovarian cancer, Type 2 diabetes and postpartum depression.

Breastfeeding data is not available for the general population. Table 8.5 shows the rate of mothers with infants in the Women, Infants and Children (WIC) program who either had not breastfed their baby by the first postpartum visit or who never breastfed their infant. In 2020, Perry County had a higher rate of mothers who were not breastfeeding their infant as of their first postpartum visit than both the Southeast Missouri Region and the State. Additionally, though the rate of mothers in Perry County who never breastfed their infants was comparable to that of the Southeast Missouri Region, it was still higher than the State.

Table 8.5: WIC Client Breastfeeding Data, Rate per 100 – Perry County, Southeast Missouri Region & Missouri, 2020

	Perry County	Southeast Missouri Region	Missouri
Not Currently Breastfeeding as of Postpartum Visit	58.62	55.63	46.05
Never Breastfed their Infant	35.09	35.64	26.32

Source: DHSS, MOPHIMS, WIC Linked Prenatal - Postpartum MICA

TEEN PREGNANCY

According to the Missouri Department of Health and Senior Services, Teen Births is defined as, "births to women ages 15-19." This is an important indicator to examine since "Teen pregnancies and births to Teen parents have unique social, economic, and health support services implications." The Teen birth rate was 21.4 per 1,000 Teens in Perry County in 2019, as compared with the State rate of 20.3. The number of teen births for 2016 and 2019 for the County and State is shown in Table 8.6

Table 8.6: Births to Females Age 15 to 19, Counts and Rates per 1,000 – Perry County & Missouri, 2016 & 2019

Area	Births, 2016	Rate, 2016	Births, 2019	Rate, 2019
Perry County	11	18.9	12	21.4
Missouri	4,501	23.3	3,848	20.3

Source: Kids Count Data Center, Family and Community Trust

Table 8.7: Teen Births by Age— Perry County & Missouri, 2009-2020

Age Group	Perry County			Missouri		
	2009-2012	2013-2016	2017-2020	2009-2012	2013-2016	2017-2020
10-14	0 (0%)	0 (0%)	0 (0%)	280 (0.9%)	172 (0.8%)	128 (0.8%)
15-17	23 (26.7%)	16 (21.3%)	7 (15.2%)	7,900 (26.6%)	5,118 (24.9%)	3,683 (23.1%)
18-19	63 (73.3%)	59 (78.7%)	39 (84.8%)	21,510 (72.5%)	15,260 (74.3%)	12,129 (76.1%)

Source: DHSS, MOPHIMS, Birth MICA

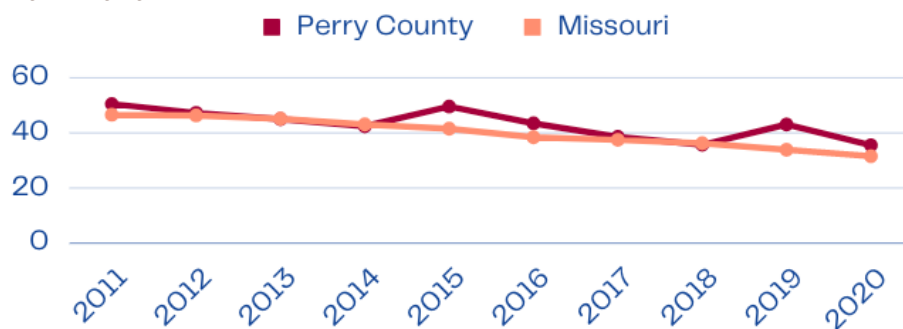
PERRY COUNTY, MO

Teen births per age of mother for Perry County and Missouri from 2009 to 2020 is shown in Table 8.7. Data is shown in three-year increments due to the low numbers of cases, which allows for increased reliability of data. Percentages shown are the percentage of teen births for that age category for the time frame shown. The age group with the highest number of teen births in Perry County and the state were 18-19 year olds. The number of teen births for both the County and the State have decreased since 2009.

WOMEN, INFANTS, AND CHILDREN (WIC)

The Missouri Department of Health and Senior Services collects data on the participation trends of mothers in the WIC program. Data collected in this program is sometimes not available for the general population. Figure 8.6 shows a decreasing trend of participation in both Perry County and the State. Since 2015, the rate of WIC participation for Perry County was typically higher than the state.

Figure 8.6: Time Trend of Mothers Participating in WIC – Perry County & Missouri, 2011-2020



Source: DHSS, MOPHIMS, Birth MICA

Table 8.8 shows smoking and quit rates of mothers participating in WIC for Perry County, the Southeast Missouri Region, and the State during various stages of pregnancy and post-partum. Smoking rates in Perry County are higher than the State in every measure. County smoking rates are lower than the region in every category except the number of women who smoked during the three months prior to pregnancy. Rate for women who quit smoking by their 1st WIC prenatal visit and stayed smoke free during delivery and their first postpartum visit is lower in Perry County (77.78) than the region (79.88) and the state (81.30). Smoking rates in the WIC population for the County are higher than the county's overall smoking rate during pregnancy of 15.84.

Table 8.8: WIC Client Smoking, Crude Rate per 100 – Perry County, Southeast Missouri Region & Missouri, 2020

	Perry County	Southeast Missouri Region	Missouri
Smoked During 3 Months Prior to Pregnancy	39.93	35.00	28.25
Smoked as of WIC Prenatal Visit	22.41	22.96	16.80
Smoked During Last 3 Months of Pregnancy	18.97	20.67	14.82
Smoked as of WIC Postpartum Visit	17.24	19.91	14.49
Quit Smoking by First WIC Prenatal Visit	40.91	34.72	40.97
Quit Smoking by 1 st WIC Prenatal Visit and Stayed Off through Delivery and First Postpartum Visit	77.78	79.88	81.30

Source: DHSS, MOPHIMS, WIC Linked Prenatal - Postpartum MICA

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Obesity during pregnancy can put the mother and child at higher risk of various health problems. According to the American College of Obstetricians and Gynecologists, women who are obese during pregnancy are at risk for the following conditions and problems:

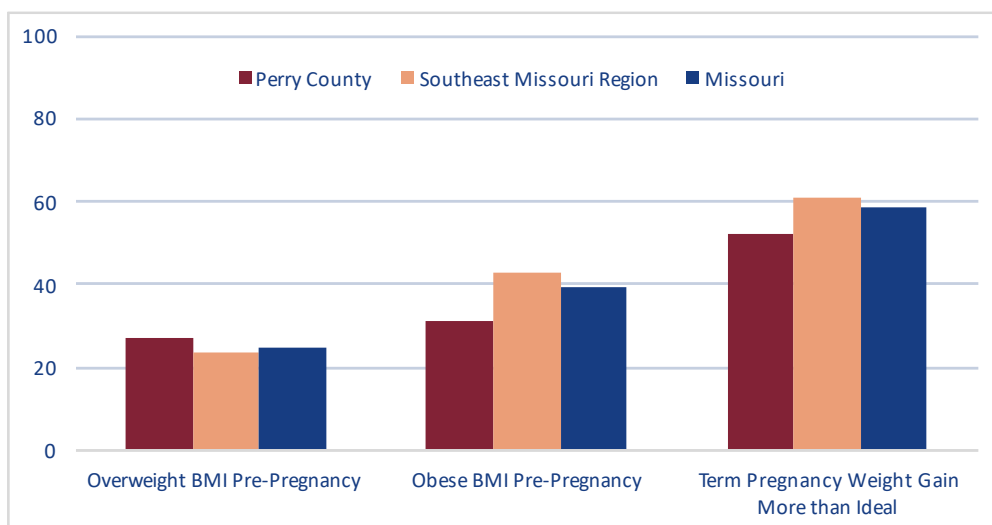
- Gestational hypertension
- Preeclampsia
- Gestational diabetes
- Obstructive sleep apnea
- Birth defects
- Preterm birth
- Stillbirth

Figure 8.7 shows the rate of WIC mothers who were overweight and obese (according to BMI) in Perry County, the Southeast Missouri Region, and the State. Perry County has a lower rate of obesity pre-pregnancy as compared to the Southeast Missouri Region and the State.

The Missouri Department of Health and Senior Services asks child WIC participants about their diet, exercise, and other behavioral habits to assess their health. Table 8.9 shows the rate of these behaviors in Perry

County, the Southeast Missouri Region, and the State. Of note, Perry County has higher rates of obesity in WIC child participants and lower rates of daily fruit and vegetable consumption as compared to the Region and the State. Perry County also has lower rates of physical activity (28.18) compared to the State (34.79).

Figure 8.7: WIC Mother Weight Data, Crude Rate per 100 – Perry County, Southeast Missouri Region & Missouri, 2020



Source: DHSS, MOPHIMS, WIC Linked Prenatal - Postpartum MICA

Table 8.9: WIC Client Health Data, Obesity and Oral Health Factors, Rate per 100 – Perry County, Southeast Missouri Region & Missouri, 2020

	Perry County	Southeast Missouri Region	Missouri
Overweight	14.58	18.89	18.03
Obese	22.92	16.41	15.78
2+ Sweetened Beverages Daily	48.65	54.14	41.12
1+ Diet Soda/Coffee/Tea Daily	10.81	12.04	6.76
Daily Screen Time Exceeds Recommendation for Age	49.18	49.47	49.75
Daily Active Play/Exercise Less than 60 Minutes	28.18	27.24	34.79
Daily Fruit Consumption Less than 2 Times	11.35	18.21	17.22
Daily Vegetable Consumption Less than 2 Times	18.38	31.90	32.99

Source: DHSS, MOPHIMS, WIC Child MICA

KEY TAKEAWAYS

- The rate of inadequate prenatal care is lower for Perry County than for the State. Perry County had a higher rate of women who initiated prenatal care within the first trimester compared to the State.
- Perry County has higher rates of smoking during pregnancy (15.84%) compared to the State (11.94%).
- Rate of preterm births in Perry County went from being below the State rate in 2017 to above the State rate in 2020. 2020 rates of preterm births were 12.38 per 100 live births for Perry County compared to the 10.98 per 100 live births for the State.
- The percentage of live births with low birth weight in Perry County is less than the State. Additionally, the percentage of live births within the county with low birth weights decreased from 7.14% in 2015-2016 to 5.54% in 2019-2020.
- Within the Women, Infants and Children (WIC) program, the rate of mothers in Perry County who never breastfed their infants was comparable to that of the Southeast Missouri Region, but was higher than the State.
- The Teen birth rates for Perry County rose from 2016 to 2019, while the State's decreased.
- Perry County has a lower rate of obesity pre-pregnancy, among WIC clients, as compared to the Southeast Missouri Region and the State.
- Perry County has higher rates of obesity in WIC child participants and lower rates of daily fruit and vegetable consumption as compared to the Region and the State. Perry County also has lower rates of physical activity (28.18) compared to the State (34.79) within the WIC child population

MENTAL HEALTH

The Robert Wood Johnson Foundation's County Health Rankings tracks the reported number of poor mental health days that is based on respondents answer to the question, "Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?" In 2019, the average number of poor mental health days was 5.0 in Perry County. Missouri residents reported 4.9 days.

The Community Counseling Center in Perry County is a private, charitable, 501(c)(3), not-for-profit behavioral health organization serving the County since 1974. Data provided by the Community Counseling Center showed that in 2019, 2020, and 2021, 82% of patients served by the Center in Perryville were Perry County residents. Though not specific to Perry County patients, a little over half (55%) of patients were female. The age breakdown of patients from 2019 to 2021 have only slightly fluctuated by year and can be seen in Figure 9.1. The largest age group served are 12 to 17 years old. The next two largest age groups served are those under 12 and those between 25 and 34 years of age.

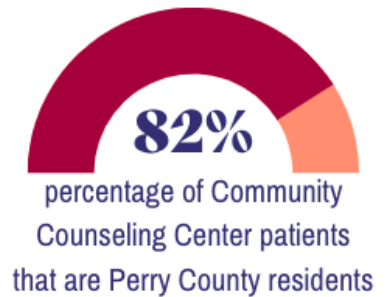
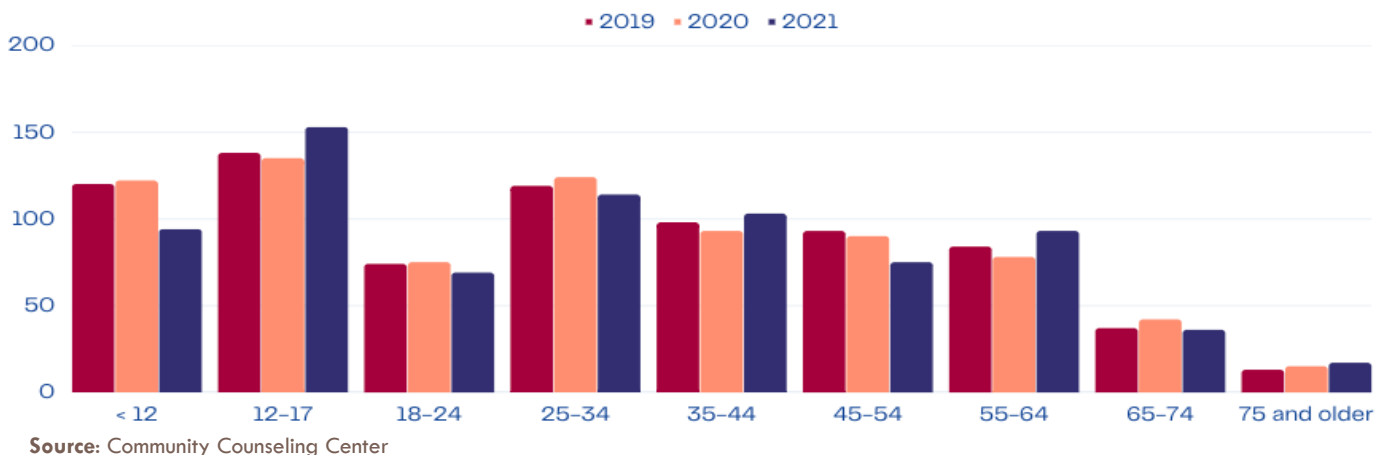
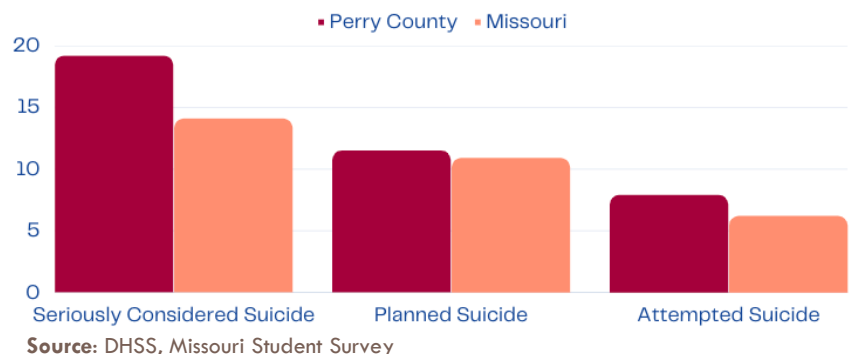


Figure 9.1: Age Breakdown of Community Counseling Center Patients – 2019-2021



According to the Missouri Student Survey conducted by the Missouri Department of Health and Senior Services, suicidal ideation is an area of concern across the State in students Grade 6 through 12. Figure 9.2 shows the percentage of respondents to the 2018 survey that considered suicide, planned suicide, or attempted suicide. The greatest difference between the percentages for the County and the State are for respondents that seriously considered suicide. In Perry County, almost one fifth of respondents (19.2%) seriously considered suicide compared to one seventh of respondents (14.1%) in the State. This survey also shows an increased percentage of students in the county who attempted suicide compared to students across the State in 2018.

Figure 9.2: Suicidal Ideation of Students – Perry County & Missouri, 2018



PERRY COUNTY, MO

The Missouri Department of Health and Senior Services also publishes an annual report on findings from the Missouri Behavioral Risk Factor Surveillance System. According to the report, in 2018, 22.2% of Missouri residents reported having been told by a health professional that they had a depressive disorder. Additionally in Missouri, a significantly greater percentage of adults with less than a high school education (26.5%) and adults with some post high school education (25.5%) had a depressive disorder as compared to adults with a high school education (19.4%) or a college degree (19.8%). County-specific data was unavailable.

The SEMO Crisis Intervention Team (CIT) was established in 2014, which includes Perry County. CIT is a collaboration between law enforcement, behavioral health providers and community members to improve outcomes for individuals with behavioral health disorders. The majority of patrol officers with the Perry County's Sheriff's Office have attended a 40-hour basic CIT training and several Perryville Police Officers have also, totaling approximately 40 individuals. The SEMO CIT Council meets monthly to discuss current trends and best practices, while also identifying additional resources.

KEY TAKEAWAYS

- The average number of poor mental health days reported by Perry County residents (5.0 days) was comparable to the number reported by Missouri residents (4.9 days).
- The largest age group served by a local mental health service provider are 12 to 17 year olds. The next two largest age groups served are those under 12 and those between 25 and 34 years of age.
- In a 2018 survey, a larger proportion of Perry County students in grades 6 through 12 have seriously considered suicide (19.2%) as compared to students of Missouri (14.1%). This survey also shows an increased percentage of students in the County who attempted suicide compared to students across the State.

ORAL HEALTH

CHILDREN

The Missouri Department of Health and Senior Services published a report in 2020 on Oral Health in Missouri. During the 2018-2019 school year, poor oral hygiene was noted in almost 22% of participants across Missouri. Figure 10.1 shows poor oral hygiene by age group, with 6-12 year olds having the highest percentage.

In Perry County, 5.7% of Medicaid eligible children aged 1-2 years old received preventive dental services and 23.2% of Medicaid eligible children and teens aged 1-20 years old received preventive dental services.

ADULTS

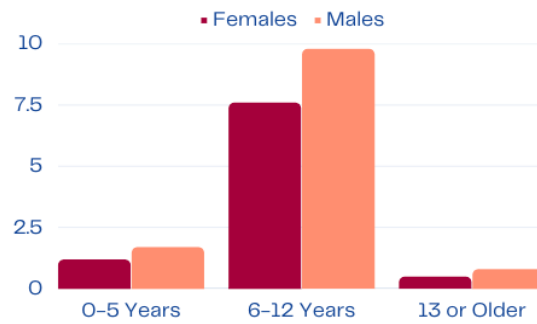
The recommended number of annual dental visits varies among individuals, but most adults should visit a dentist at least once per year. During this visit, a dentist or dental hygienist examines the teeth and gums, looks for broken or damaged teeth, and checks for signs of oral cancer. Additionally, teeth will be cleaned to prevent tooth decay. According to the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System, in 2018, 63.3% of Missouri adults visited a dentist in the last year as compared to 67.3% of the Nation. Missouri has been consistently lower than the national average throughout the years. Preventative dental services data is not available for all adults within Perry County. However, only 4.7% of Medicaid eligible pregnant women received preventive dental services.

This survey also asked participants, "How many of your permanent teeth have been removed because of tooth decay or gum disease?" The percent of adults with at least one permanent tooth extracted due to decay was higher among Missouri residents than the Nation. In 2018, 44.6% of Missouri adults had at least one permanent tooth extracted as compared to 41.3% of the Nation's adults. Lower income and educational attainment were associated with higher percentages of tooth loss. Within Perry County, data on permanent teeth removal is not available for all adults. However, 29.2% of adults over the age of 65 in Perry County have had all of their permanent teeth extracted due to decay or disease. According to America's Health Rankings, this number is 13.4% across the U.S.

DENTAL COVERAGE

According to the Missouri Department of Health and Senior Services County Level Study of those whose last dental visit was more than two years ago, only 21.7% had health insurance.

Figure 10.1: Poor Oral Hygiene by Age Group, Percentages – Missouri, 2018



Source: DHSS, Oral Health in Missouri

5.7%



of Medicaid eligible children aged 1-2 years received preventive dental services



23.2%

of Medicaid eligible children and teens aged 1-20 years received preventive dental services

4.7%



of Medicaid eligible pregnant women received preventive dental services

29.2%



of adults aged 65+ have had all of their permanent teeth extracted due to decay or disease

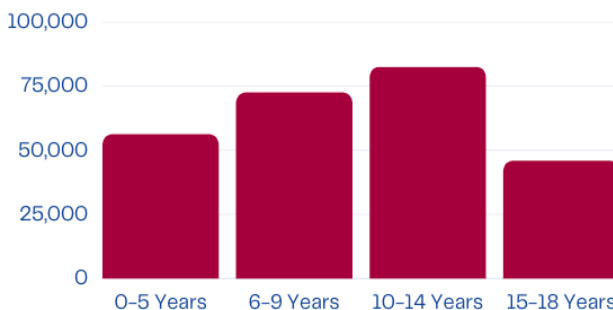
PERRY COUNTY, MO

In 2019, there were 256,916 children between the ages of 0 and 18 who were eligible to receive dental services. Figure 10.2 shows the age breakdown of the number of children eligible to receive dental services.

KEY TAKEAWAYS

- In Perry County, 23.2% of Medicaid eligible children and teens aged 1-20 years old received preventive dental services.
- Only 4.7% of Medicaid eligible pregnant women in Perry County received preventive dental services.
- Within Perry County, 29.2% of adults over the age of 65 have had all of their permanent teeth extracted due to decay or disease. This number is only 13.4% across the U.S.

Figure 10.2: Number of Children Eligible to Receive Dental Services – Missouri, 2019



Source: DHSS, Oral Health in Missouri

INFECTIOUS, COMMUNICABLE, AND VACCINE-PREVENTABLE DISEASES

INFECTIOUS AND COMMUNICABLE DISEASES

The Missouri Department of Health and Senior Services tracks deaths where infection was listed as the underlying cause of death on the death certificate. Death rates from infections were either 0 or unreliable for Perry County due to the low number of incidence and are therefore now shown.

The Centers for Disease Control and Prevention (CDC) and the Council of State and Territorial Epidemiologists (CSTE) designate certain diseases and conditions as notifiable. Table 9.1 shows the case numbers of reportable diseases, not including STDs or HIV, for Perry County.

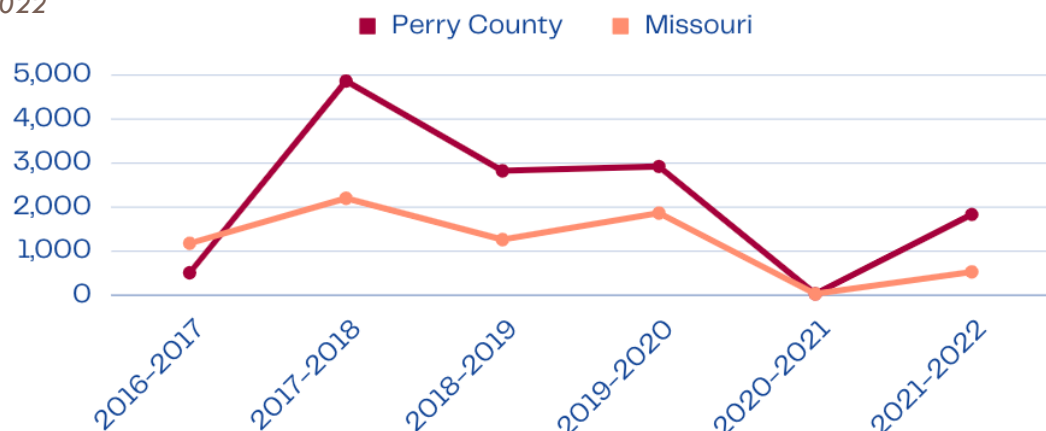
Influenza is an infectious disease that can cause mild to severe illness. Influenza season is defined as the period between the first week of October and the middle of May of the next year. Figure 9.1 compares the influenza rate per 100,000 for Perry County and Missouri for each flu season from 2016-2017 to 2021-2022. During the time period, Perry County had significantly higher rates of influenza compared to the State. Local and State data on influenza vaccine uptake is not available from the Missouri Department of Health and Senior Services. Therefore, it is unknown whether the increased rate in illness in Perry County is due to lower vaccination rates or other factors.

Table 9.1: Communicable Diseases Cases – Perry County, 2019-2021

Diagnosis	2019	2020	2021
Animal Bites	9	34	36
Campylobacteriosis	10	14	8
Cryptosporidiosis	6	13	2
Cyclosporiasis	0	2	0
E. Coli	4	4	2
Ehrlichia Chaffeensis	3	4	1
Giardiasis	1	3	2
Hemolytic Uremic Syndrome	1	0	0
Hepatitis B	0	1	0
Hepatitis C	7	11	6
Legionellosis	0	1	0
Listeriosis	0	0	1
Meningococcal Disease	1	0	0
MOTT	2	3	1
Pertussis	0	1	0
Rocky Mountain Spotted Fever	5	0	0
Salmonellosis	7	3	10
Strep Pneumoniae Invasive	0	3	2
TB Infection or Disease	2	2	5
Varicella	3	2	0
Yersiniosis	0	1	0

Source: DHSS, Statewide Disease Counts

Figure 9.1: Influenza Rate per Influenza season per 100,000 - Perry County & Missouri, 2016-2022



Source: DHSS, Influenza Data & Statistical Reports 2016-2022

In December of 2019, a novel coronavirus – SARS-CoV-2 – was discovered that causes coronavirus disease 2019 (COVID-19) which presents as a flu-like illness with symptoms primarily affecting the respiratory system. Due to the extremely contagious nature of the virus, by March of 2020, the World Health Organization declared the COVID-19 outbreak a pandemic. Table 9.2 shows the cumulative COVID-19 Cases per 100,000 for Perry County, Missouri, and the U.S.

Table 9.2: Cumulative COVID-19 Cases per 100,000 – Perry County, Missouri & U.S., 2020-2021

	2020	2021
Perry County	10,660	8,982
Missouri	7,442	9,442
U.S.	6,144	10,585

Note: Total COVID-19 cases reflect both confirmed and probable cases. Rates are calculated using the most recent population estimates. Data as of 3/14/22. All data are provisional and subject to change.

Source: DHSS per special data request

SEXUALLY TRANSMITTED DISEASES

According to the Sexually Transmitted Disease by County Reports by the Missouri Department of Health and Senior Services (DHSS), the rates of new cases of Chlamydia and Gonorrhea increased greatly between 2016 and 2019, with Chlamydia over doubling and Gonorrhea almost doubling. There were no new cases of Syphilis during this time. 2019 is the most recent data available from DHSS. Table 9.3 shows the rates of new cases of Chlamydia, Gonorrhea, and Syphilis from 2016 to 2019 for Perry County and Missouri.

Table 9.3: Rates of Sexually Transmitted Diseases per 100,000 – Perry County & Missouri, 2016-2019

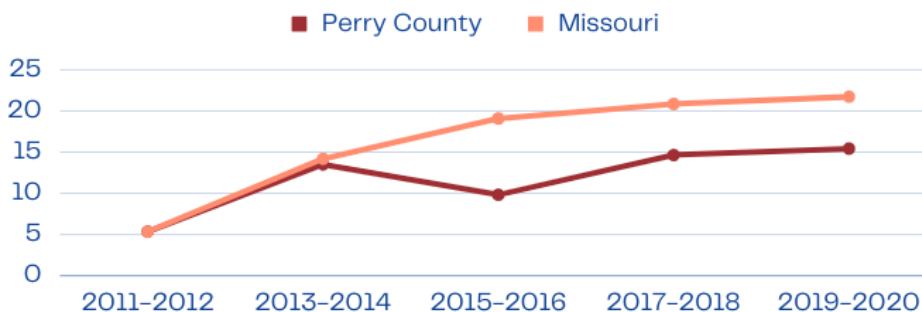
	Perry County				Missouri			
	2016	2017	2018	2019	2016	2017	2018	2019
Chlamydia	156	228	224	360	507.0	536.4	568.1	561.8
Gonorrhea	36	41	52	68	188.7	214.8	246.8	254.4
Syphilis	0	0	0	0	6.6	8.3	13.2	13.3

Source: DHSS, Epidemiologic Profile of HIV, STD, and Hepatitis in Missouri, 2016-2019

VACCINATIONS

According to the Missouri Department of Health and Human Services, Perry County WIC Infant participants are generally more up-to-date on immunizations as compared to WIC Infant participants across the State. Figure 9.2 shows the rate of Infant Participants (per 100 Infants) who do not have up-to-date immunizations. Additionally, Perry County WIC Child participants (12-60 months) are generally more up-to-date on immunizations as compared to

Figure 9.2: WIC Infant Participants with Vaccinations Not Up-to-Date – Perry County & Missouri, 2011-2020



Source: DHSS, MOPHIMS, WIC Infant MICAs

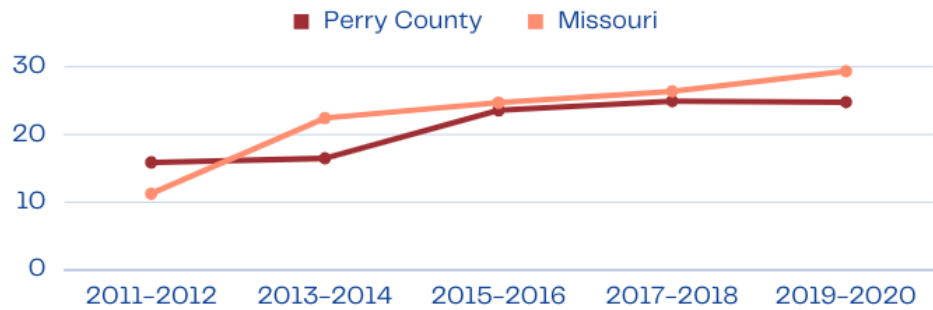
2022 COMMUNITY HEALTH NEEDS ASSESSMENT

WIC Child participants across the State, but at a lower rate than WIC Infant participants. Figure 9.3 shows the rate of Child Participants (per 100 Children) who do not have up-to-date immunizations.

Although Missouri has a statewide immunization registry, it is not required by law for all vaccine providers

to enter information into the system. Therefore, statewide and county level data are not available and accurate for the entire population.

Figure 9.3: WIC Children Participants with Vaccinations Not Up-to-Date – Perry County & Missouri, 2011-2020



Source: DHSS, MOPHIMS, WIC Child MICAs

KEY TAKEAWAYS

- Perry County does not have high case counts for communicable diseases designated as notifiable by the CDC.
- Influenza rates are historically higher in Perry County compared to the State, although it is unknown if this increase is due to a decrease in vaccination within the community or other factors.
- Perry County has low rates of sexually transmitted diseases compared to the State.
- Perry County WIC participants have higher rates of children who are up-to-date on vaccinations compared to the rest of WIC participants in Missouri.

CHRONIC DISEASE

According to the Centers for Disease Control and Prevention (CDC), chronic diseases are the leading cause of death in the United States. The CDC defines chronic diseases as “conditions that last 1 year or more and require ongoing medical attention or limit activities of daily living or both.” According to the World Health Organization (WHO), the four main types of chronic diseases are cardiovascular diseases (such as heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma) and diabetes. Risk factors can include behavioral factors such as tobacco use, physical inactivity, unhealthy diet, and the harmful use of alcohol. Metabolic risk factors include high blood pressure, overweight/obesity, hyperglycemia (high blood glucose levels), and hyperlipidemia (high levels of fat in the blood).

The Centers for Disease Control and Prevention’s Behavioral Risk Factor Surveillance Systems (BRFSS) includes questions to identify whether individuals consider their health status as fair or poor. Results for this survey question can be found in table 10.1. Perry County has seen an increase in the percentage of respondents who said their health was fair or poor and now has a larger percentage of residents who report fair or poor health compared to the State.

Table 10.1: Recent Adult Health Status, Percent Fair or Poor – Perry County & Missouri, 2016 & 2019

Area	% of Respondents, 2019	% of Respondents, 2016	% Change
Perry County	20%	16%	4%
Missouri	18%	19%	-1%

Source: County Health Rankings 2022, BRFSS 2016 and 2019 Data

PHYSICAL INACTIVITY

The CDC’s BRFSS also includes questions to assess whether respondents regularly participate in physical activity. Table 10.2 shows the percentage of adults aged 18 and over in Perry County and Missouri who reported no leisure-time physical activity.

Table 10.2: Percent of Adults with No Leisure-Time Physical Activity – Perry County & Missouri, 2016 & 2019

Area	% of Respondents, 2019	% of Respondents, 2016	% Change
Perry County	33%	27%	6%
Missouri	30%	26%	4%

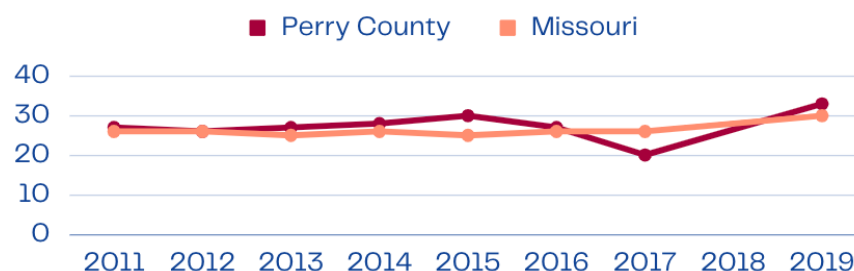
Source: County Health Rankings 2022, BRFSS 2016 and 2019 Data

According to the data collected as part of the BRFSS, Perry County has experienced an increasing trend in the percent of adults, 20 years of age and older, who report they are physically inactive. Figure 10.1 compares the trend for Perry County and Missouri from 2011 to 2019. Missouri shows a relatively steady trend in the percentage of adults who are physically inactive while Perry County decreased by approximately 10% from 2015-2017 and then reversed this progress from 2017-2019. In a recent survey of 200 individuals,

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conducted by Perry County Health System along with the National Rural Health Resource Center, 26.8% of respondents said they do not exercise and an additional 17.1% said they do, but cannot do so regularly. The primary reasons provided for lack of exercise were lack of time (33.0%) and lack of energy (29.9%).

Figure 10.1: Percentage of Adults Physically Inactive – Perry County & Missouri, 2011-2019

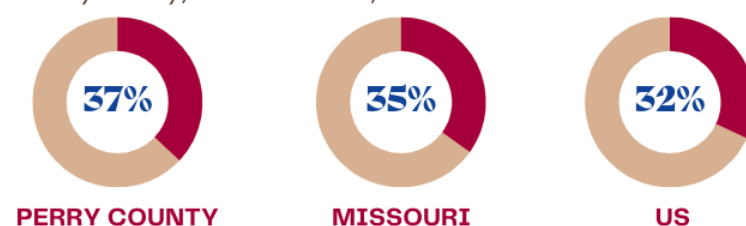


Source: County Health Rankings 2022, BRFSS Data, 2011-2019

OVERWEIGHT OR OBESE

According to the Centers for Disease Control and Prevention, obesity can lead to several other chronic conditions including heart disease, stroke, type 2 diabetes and certain types of cancer. BRFSS includes questions to identify individuals as overweight or obese. Survey participants' BMI is calculated by using their responses to the following questions: "About how much do you weigh without shoes?" and "About how tall are you without shoes?" Figure 10.2 compares the percentages of Perry County, Missouri, and United States respondents from the 2019 survey that were considered obese (BMI > 30.0). The Perry County percent is higher than the State and U.S.

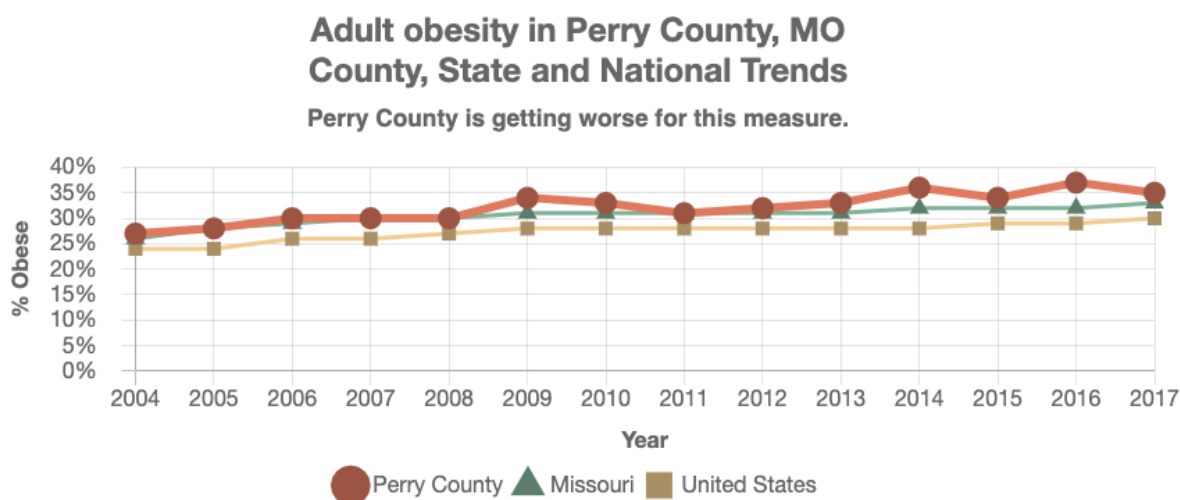
Figure 10.2: Percentage of Adults Aged 20+ Identified as Obese – Perry County, Missouri & U.S., 2017



Source: County Health Rankings 2022, BRFSS 2019 data

Figure 10.3, obtained from the County Health Rankings and Roadmaps, indicates the rate of adult obesity in Perry County, Missouri, and the United States from 2004 to 2017. Perry County has consistently higher percentages than Missouri and the United States.

Figure 10.3: Percentage of Adults Aged 20+ Identified as Obese – Perry County, Missouri & U.S., 2004 - 2017



Notes:

Each year represents a 3-year average around the middle year (e.g. 2015 is the middle year of 2014-2016).

Starting with the 2011 data, a new BRFSS methodology was introduced that included cell phone users. Data from prior years should only be compared with caution.

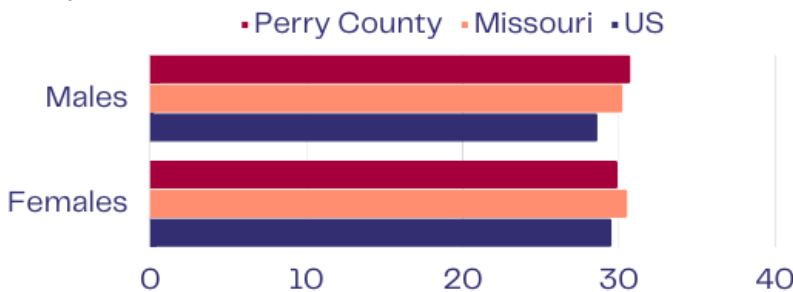
Source: County Health Rankings 2021, BRFSS 2017 data

PERRY COUNTY, MO

The Community Commons Health Needs Assessment provides the percent of adults in Perry County, Missouri, and the U.S. that are obese (BMI > 30) by gender, as shown in figure 10.4. The percentage of obese males and females in Perry County is comparable to the State and U.S. overall.

Table 10.3 shows BMI data of WIC child participants from the Missouri Department of Health and Senior Services from 2010 to 2020. The age group in Perry County with the highest rate of being overweight was the 12-23 month and 24-35 month age groups (18.2 per 100 WIC participants each), with the 24-35 month age group rate being higher than the State. The age group in Perry County with the highest rate of being obese was the 36-47 month age group. This rate is also higher than the State.

Figure 10.4: Percent of Obese Adults (BMI > 30) by Gender – Perry County & Missouri, 2019



Source: Community Commons Health Needs Assessment

Table 10.3: WIC Children Overweight and Obese, Number and Rate Per 100 – Perry County & Missouri, 2010-2020

Age	Perry County		Missouri	
	Overweight, Rate	Obese, Rate	Overweight, Rate	Obese, Rate
12-23 months	18.2	16.4	18.7	17.4
24-35 months	18.2	10.7	16.7	13.1
36-47 months	17.4	17.4	17.2	15.4
48-59 months	17.4	15.2	18.0	15.7

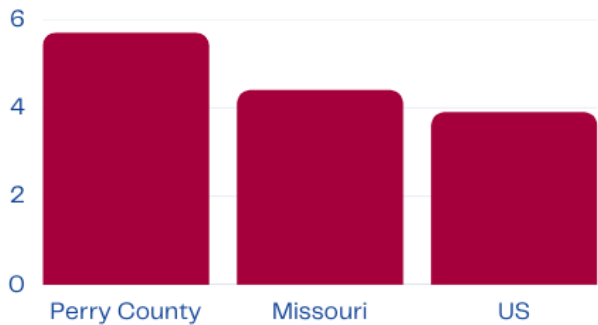
Source: DHSS, WIC Child MICA, 2010-2020

CHRONIC RISK FACTORS SUMMARY

HEART DISEASE

The 2019 Behavioral Risk Factor Surveillance System (BRFSS) conducted by the Centers for Disease Control and Prevention included the question, “Has a doctor, nurse, or other health professional ever told you that you had any angina or coronary heart disease?” to determine the percentage of those persons who had been diagnosed with angina or coronary heart disease. Figure 10.5 compares the percent of adults with heart disease in Perry County, Missouri, and the U.S. Perry County had a higher percentage than both the State and the U.S.

Figure 10.5: Percent Adults with Heart Disease – Perry County, Missouri & U.S., 2019



Source: DHSS, Missouri Resident Heart Disease Profile

CHRONIC RESPIRATORY DISEASES

The Centers for Disease Control and Prevention manages the National Environmental Public Health Tracking Network. Table 10.3 compares the prevalence of asthma among adults in Perry County and Missouri. Additionally, the National Environmental Public Health Tracking Network notes that, in 2019, the prevalence of asthma in children in Missouri was 7.0%. In 2019, asthma prevalence in Perry County was 5.3% lower than the State.

Table 10.3: Percent of Adults with Asthma – Perry County & Missouri, 2018-2019

Area	Prevalence, 2019	Prevalence, 2018	% Change
Perry County	9.8%	9.8%	0%
Missouri	15.1%	15.0%	0.1%

Source: Environmental Public Health Tracking

DIABETES

Diabetes lowers life expectancy by up to 15 years and those with diabetes are 2 to 4 times more at risk of heart disease. Diabetes is the leading cause of kidney failure, lower limb amputations, and adult-onset blindness. In addition, the estimated total financial cost of Diabetes in the United States in 2022 was \$327 billion. The Centers for Disease Control and Prevention manage the United States Diabetes Surveillance System. Table 10.4 compares the percentage of adults with diabetes in Perry County and Missouri. In 2018, diabetes prevalence in Perry County was 2.5% lower than the State.

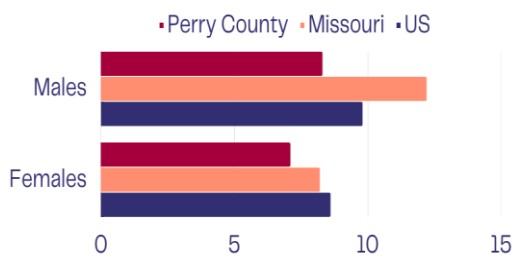
Table 10.4: Percent of Adults with Diabetes – Perry County & Missouri, 2015 & 2018

Area	Prevalence, 2018	Prevalence, 2015	% Change
Perry County	7.7%	7.4%	0.3%
Missouri	10.2%	10.2%	0%

Source: United States Diabetes Surveillance System

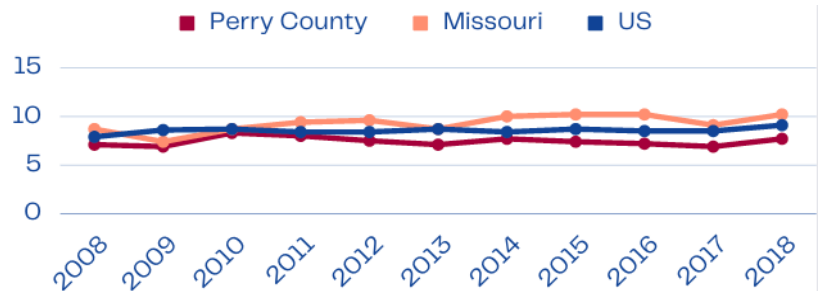
Figure 10.6 shows the percent of adults diagnosed with diabetes by gender for Perry County, Missouri, and the U.S. Males have a higher prevalence of diabetes in every region. Figure 10.7 shows the time trend of the percent of adults with diagnosed diabetes for Perry County, Missouri, and the U.S from 2008-2018. Perry County has consistently had comparable or lower rates of diabetes compared to the State and U.S.

Figure 10.6: Percent of Adults with Diagnosed Diabetes by Gender – Perry County, Missouri & U.S., 2018



Source: United States Diabetes Surveillance System

Figure 10.7: Percent of Adults with Diagnosed Diabetes by Year – Perry County, Missouri & U.S., 2008-2018



Source: United States Diabetes Surveillance System

CANCER

Cancer incidence is defined by the Missouri Department of Health and Senior Services as the number of new cases of cancer reported in a specified period of time divided by the number of persons in the population during this period. For 2018, the cancer incidence rate (all sites) for Perry County was 549.94 per 100,000 (Males 499.88, Females 625.71) and for Missouri the rate was 451.23 (Males 466.93, Females 444.96). The County had a significantly higher cancer incidence than the State, especially for Females. Table 10.5 shows the top five cancer incidence sites by percentage for Perry County. Digestive system, respiratory system, and breast cancers had the highest incidence rates within the county, making up almost 44% of the cancer burden seen within the county.

Table 10.5: Top Five Cancer Incidence Sites – Perry County, 2008-2018

	Cancer Site	Percent
All Sexes	Digestive System	19.18
	Respiratory System	16.84
	Breast	13.86
	Urinary System	9.35
	Female Genital System	5.88
Males	Digestive System	21.68
	Male Genital System	20.46
	Respiratory System	18.47
	Urinary System	12.06
	Skin excluding basal and squamous	6.26
Females	Breast	29.35
	Digestive System	16.38
	Respiratory System	15.02
	Female Genital System	12.46
	Urinary System	6.31

Source: DHSS, Cancer Incidence MICA

PREVENTION AND SCREENINGS

According to the County Health Rankings by the Robert Wood Johnson Foundation, in 2015 Perry County had a rate of 4,776 per 100,000 preventable hospital stays compared to Missouri's rate of 4,155 per 100,000. Preventable hospital stays are defined as the rate of hospital stays for ambulatory care-sensitive conditions per 100,000 Medicare enrollees.

Health screenings are an important part of maintaining good health, especially as you get older. Many deaths could be prevented if individuals received regular health screenings as recommended by their doctors. Health screenings can detect problems early in the course of disease when chances for successful treatment are greatest. In a recent survey, with almost 200 respondents, conducted by Perry County Health System along with the National Rural Health Resource Center, only 15.03% of respondents had not received a routine checkup in the last 2 years. Additionally, only 11.4% of respondents reported difficulties getting needed prescription drugs prescribed by their physician.

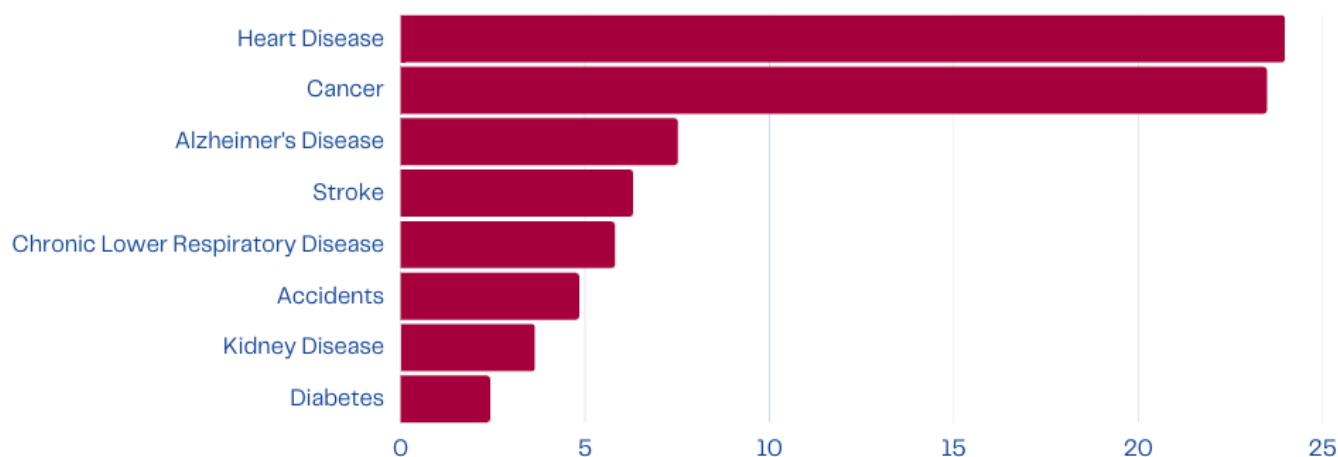
KEY TAKEAWAYS

- Perry County residents (20%) reported their health was fair or poor. This is larger than the State.
- 33% of County residents report no leisure time physical activity. The number of residents, 20 years of age and older, who are physically inactive has increased since 2017.
- Perry County has consistently higher percentages of residents who are considered obese (BMI > 30.0), compared to Missouri and the United States.
- The percent of adults with heart disease is greater in Perry County than the State or Nation.
- The percentage of adults with asthma or diabetes is lower in Perry County than the State.
- Perry County has a higher incidence of cancer than the State, with digestive system, respiratory system, and breast cancers making up almost 44% of the cancer burden seen within the county.

LEADING CAUSES OF DEATH

According to the Missouri Department of Health and Senior Services, there were 194 (Rate of 730 per 100,000) deaths in Perry County and 62,155 (Rate of 798 per 100,000) deaths in Missouri in 2019. Missouri resident's overall life expectancy in 2019 was 77.4 years. Perry County's life expectancy was very similar to the State's at 78.8 years. For males, life expectancy was 76.3 years and for females 80.8 years. Life expectancy data was based on birth and death certificate data from 2011-2019 and 2011-2019 population estimates for Missouri. Figure 11.1 shows the leading causes of death in Perry County for 2018-2019.

Figure 11.1: Leading Causes of Death by Percentage – Perry County, 2019



Source: DHSS, Death MICA, 2018-2019

The leading causes of death for Perry County and the corresponding rates for the County and Missouri is shown in Table 11.1. Compared to the State, Perry County had higher rates of death caused by heart disease, chronic lower respiratory disease, Alzheimer's, stroke, and kidney disease.

Table 11.1: Leading Causes of Death by Number and Rate per 100,000 – Perry County & Missouri, 2015-2019

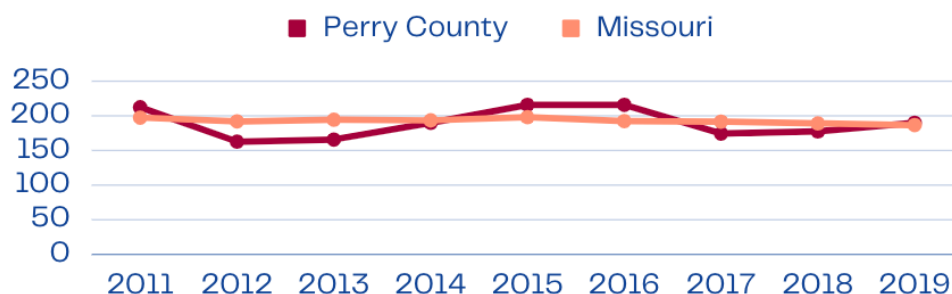
Cause	Perry County		Missouri	
	Number	Rate	Number	Rate
Heart Disease	265	193.56	74,012	190.92
Cancer	216	160.96	64,472	166.23
Chronic Lower Respiratory Disease	70	51.49	19,582	50.35
Alzheimer's Disease	67	47.66	12,437	31.63
Stroke	57	41.35	15,301	39.57
Accidents	42	40.95	18,537	57.57
Kidney Disease	29	21.78	7,460	19.29
Diabetes	23	16.30	7,836	20.47

Source: DHSS, Death MICA, 2015-2019

DEATHS RELATED TO HEART DISEASE

In 2019, Perry County experienced a similar rate of deaths due to heart disease, at 189.48 per 100,000, as the State at 186.16. The rates per 100,000 deaths from heart disease for the County and the State from 2011-2019 are shown in Figure 11.2.

Figure 11.2: Heart Disease Deaths, Rate per 100,000 – Perry County & Missouri, 2011-2019



Source: DHSS, Death MICA, 2011-2019

Table 11.2 shows heart disease deaths by age group for the County and State. Compared to the State, Perry County had a lower rate of heart disease in the 45-64 age group (130.14 per 100,000) but a higher rate for the 65 and older age group (1,319.01 per 100,000).

Table 11.2: Heart Disease Deaths by Age Group, Number and Rate per 100,000 – Perry County & Missouri, 2015-2019

Cause	Perry County		Missouri	
	Number	Rate	Number	Rate
Under 15	0	0	65	1.14
15-24	0	0	103	2.54
25-44	5	*22.14*	1,703	21.87
45-64	34	130.14	13,937	175.15
65 and Over	226	1,319.01	58,204	1,155.76

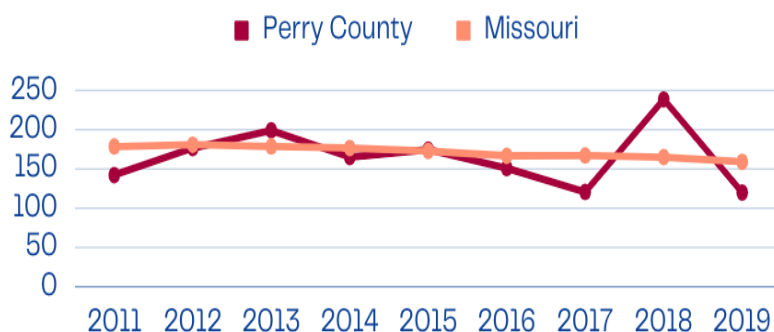
Source: DHSS, Death MICA

Note: Age groups denoted with asterisks (*) are unreliable due to the low number of deaths

DEATHS RELATED TO CANCER

Overall, from 2016-2019, Perry County had a lower rate of death from cancer than the State. 2018 was an outlier year during this period when rates of death from cancer in the County were drastically higher than the State. For the period of 2015-2019, deaths from cancer occurred at a rate of 160.96 per 100,000 in Perry County compared to the State rate of 166.23 per 100,000.

Figure 11.3: Cancer Deaths, Rate per 100,000 – Perry County & Missouri, 2011-2019



Source: DHSS, Death MICA, 2011-2019

Although Perry County had a slightly lower rate of death from cancer than the State in 2019, there are some types of cancer in which the County had higher rates than the State, such as colon cancer. Table 11.3 demonstrates this comparison.

Table 11.3: Top Cancers, Number and Rate per 100,000 – Perry County & Missouri, 2015-2019

Cause	Perry County		Missouri	
	Number	Rate	Number	Rate
Lung Cancer	58	43.14	18,287	46.33
Colon Cancer	21	15.36	5,569	14.52
Pancreatic Cancer	17	*13.19*	4,447	11.38
Breast Cancer	14	*10.59*	4,265	11.27

Source: DHSS, Death MICA

Note: Cancer Types groups denoted with asterisks (*) are unreliable due to the low number of deaths

CHRONIC LOWER RESPIRATORY DISEASE DEATHS

As the 3rd leading cause of death in the County for 2019, chronic lower respiratory disease caused 14 deaths in the County and 3,775 in the State. When looking at rates, instead of counts, a 5-year window was considered in order to provide a reliable rate for comparison. This comparison is shown in Table 11.4. From 2015-2019, Perry County had a slightly higher rate (51.49 deaths per 100,000) than the State (50.35 per 100,000).

Table 11.4: Chronic Lower Respiratory Disease Deaths, Number and Rate per 100,000 – Perry County & Missouri, 2015-2019

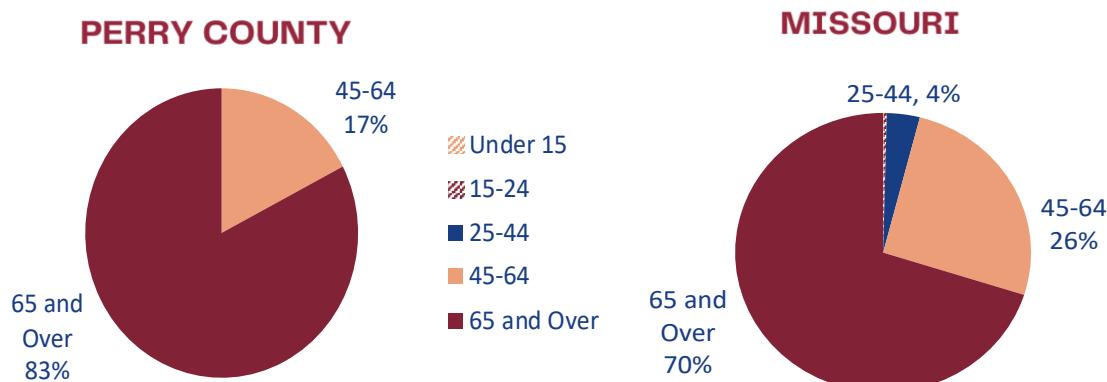
Perry County		Missouri	
Number	Rate	Number	Rate
70	51.49	19,582	50.35

Source: DHSS, Death MICA, 2015-2019

DIABETES DEATHS

Diabetes deaths ranked 7th in Missouri and 8th in Perry County for 2015-2019. Diabetes was listed as the cause of death for a total of 23 persons in Perry County during the period of 2015-2019. Of the 23 deaths, 4 were between 45 and 64 and 19 were over 65. Figure 11.4 shows the County and State percentages of Diabetes deaths by age group.

Figure 11.4: Diabetes Deaths by Age Group – Perry County & Missouri, 2015-2019

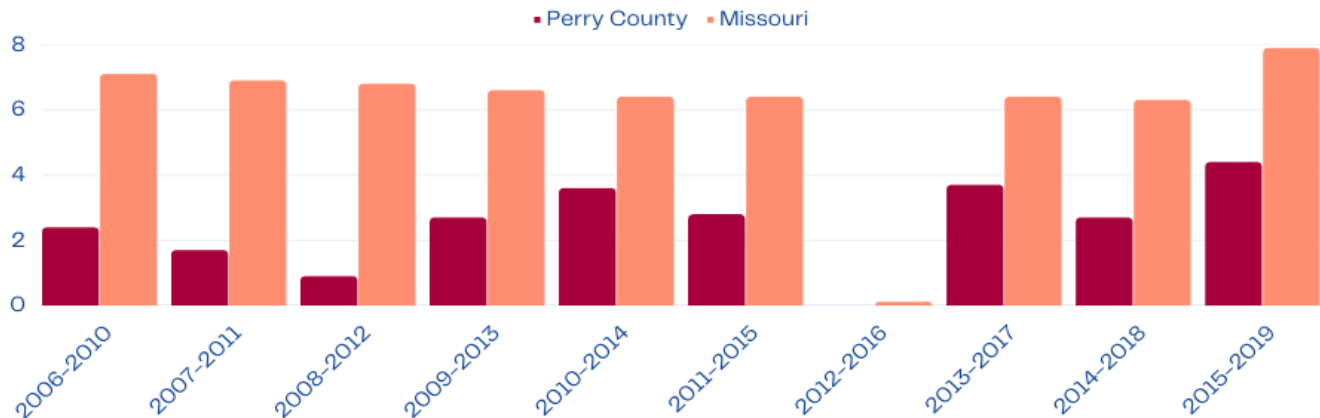


Source: DHSS, Death MICA, 2015-2019

INFANT MORTALITY

The Centers for Disease Control and Prevention define infant mortality as the death of an infant before their first birthday. Rates are expressed as the number of infant deaths for every 1,000 live births. Figure 11.5 illustrates the infant deaths per 1,000 live births in Perry County and Missouri from 2006 to 2019. The County maintained a lower infant mortality rate than the State during all data periods.

Figure 11.5: Infant Mortality, Rates per 1,000 live births – Perry County & Missouri, 2006-2019



Source: Kids Count Data Center, Family and Community Trust

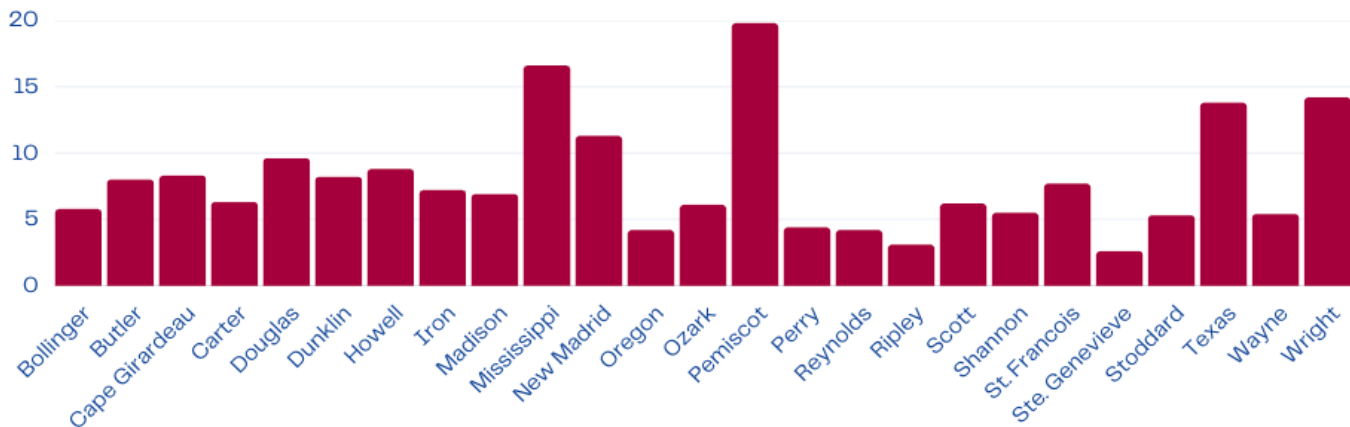
In the 2020 Missouri Child Fatality Review Program’s annual report, it was noted 65% of the infant sleep-related deaths were due to suffocation and 50% were known to have occurred while the infant was sleeping in adult bed. Table 11.3 compares sleep-related infant mortality and sudden infant death syndrome (SIDS) by number of events for 2016 and 2020 for Missouri only. Of the sleep-related infant deaths in Missouri in 2020, 7 were due to SIDS. Figure 11.6 compares the infant mortality rate for counties within the Southeast Missouri Region.

Table 11.5: Sleep-Related Deaths –Missouri, 2016 & 2020

Cause	2016	2020	% Change
SIDS	9	7	29%
Suffocation	71	65	8%
Undetermined	28	24	14%

Source: Missouri Department of Social Services, Child Fatality Review Program, 2020 Annual Report

Figure 11.6: Infant Mortality, Rates per 1,000 Live Births – Southeast Missouri Region, 2019

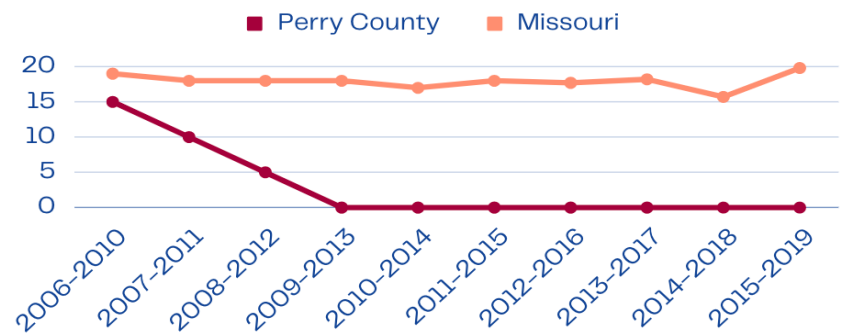


Source: Kids Count Data Center, Family and Community Trust

CHILD & ADOLESCENT DEATHS

Child deaths are defined as any death in a child between ages 1 and 14. Figure 11.7 shows the trend of child deaths for Perry County and the State from 2006-2019. Similar to other data indicators, several years are combined together in order to have reliable rates for comparison. Perry County has maintained an extremely low rate since 2009 compared to the State. Table 11.4 shows the highest causes of death for children aged 1 through 14.

Figure 11.7: Child Deaths, Age 1 to 14, Rates per 100,000 – Perry County & Missouri, 2009-2019



Source: Kids Count Data Center, Family and Community Trust

Adolescent deaths are defined as those in children age 15 through 17 years. Between 2016 and 2019, Perry County only had one adolescent death so the rate is unreliable for comparison with the State. Table 11.5 shows the highest causes of death for adolescents age 15 through 17. Violent deaths are the leading cause of death among adolescents in both the Southeast Missouri Region and Missouri. According to the Missouri Department of Health and Senior Services, violent deaths are defined as “deaths from homicides, suicides, motor vehicle crashes, and other accidents.

Table 11.6: Child Deaths, Age 1 to 14, Rates per 100,000 –Southeast Missouri Region & Missouri, 2009-2019

Cause	Southeast MO Region	Missouri
All Causes	19.7	15.9
All Accidents	10.1	6.3
Motor Vehicle Accidents	5.7	2.9
Cancer	2.9	2.3
Homicide	2.1	1.9
Birth Defects	*1.4*	1.5

Source: DHSS, Death MICA

Note: Age groups denoted with asterisks (*) are unreliable due to the low number of deaths

Table 11.7: Adolescent Deaths, Age 15 to 17, Rates per 100,000 –Southeast Missouri Region & Missouri, 2009-2019

Cause	Southeast MO Region	Missouri
All Causes	58.9	50.9
All Accidents	33.3	20.1
Motor Vehicle Accidents	26.3	14.6
Suicide	*7.2*	10.6
Homicide	*3.2*	8.6
Cancer	*1.4*	2.5

Source: DHSS, Death MICA

Note: Age groups denoted with asterisks (*) are unreliable due to the low number of deaths

KEY TAKEAWAYS

- Overall life expectancy at birth for a person in Perry County was 78.8 years in 2019. This is very similar to the State's average life expectancy of 77.4.
- Of Perry County's top 8 causes of death, Perry County had higher rates of death caused by heart disease, chronic lower respiratory disease, Alzheimer's, stroke, and kidney disease.
- Although Perry County had a slightly lower rate of death from cancer than the State in 2019, there are some types of cancer in which the County had higher rates than the State, such as colon cancer.
- The County consistently maintained a lower infant mortality rate than the State during all data periods examined (2006-2019). Perry County also had a lower infant mortality rate compared to the majority of counties in Southeast Missouri in 2019.

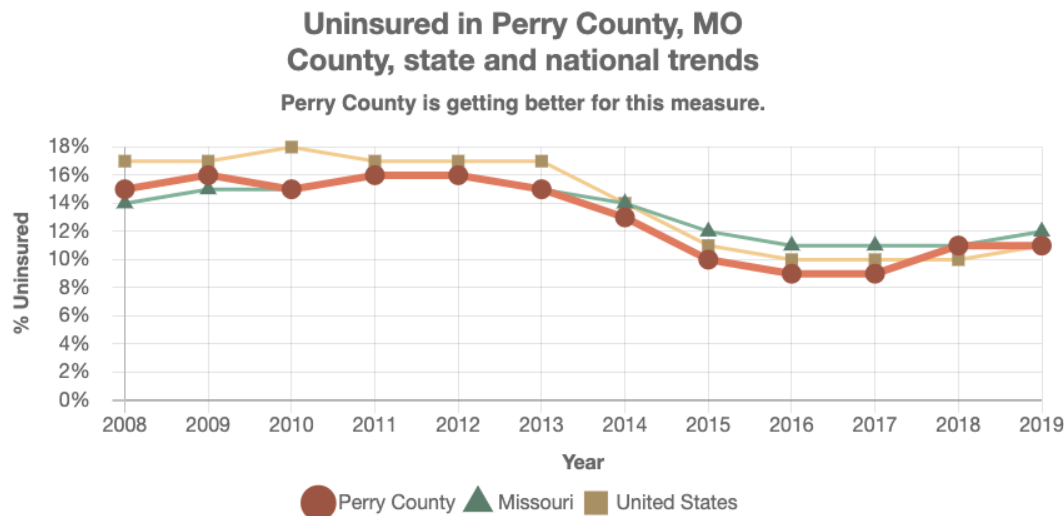
HEALTH SYSTEM INDICATORS

ACCESS TO HEALTH CARE

Access to health care is a broad topic that includes access to primary care, specialists, and emergency treatment. Lack of access to care is an important indicator because lack of access is a barrier to good health. There are several factors that contribute to health care access: the supply of and easy access to health care facilities and physicians, the rate of the uninsured population among residents, financial hardships, transportation barriers, cultural competency, and insurance coverage limitations. Access to care also requires individuals have comprehensive medical insurance coverage and for healthcare providers in their area to accept their insurance.

The County Health Rankings and Roadmaps, created by the Robert Wood Johnson Foundation and the University of Wisconsin's Population Health Institute, define the uninsured population as the estimated percent of the population under age 65 that has no health insurance coverage. Using 2019 data from the U.S. Census Bureau, they determined Perry County had 11% of its population under age 65 who were uninsured, while Missouri had 12% and the U.S. had 11%. Figure 12.1 shows the trend, from 2008-2019, of the percent of the population in the County, State, and Nation that have been uninsured.

Figure 12.1: Uninsured Population by Percentage – Perry County, Missouri & U.S., 2008-2019



Source: County Health Rankings 2021, BRFSS 2017 data

The Centers for Medicare & Medicaid Services reported that a total of 4,421 persons in Perry County were receiving Medicare benefits during 2021. The total number of persons receiving Medicare in Perry County is shown in Table 12.1

According to the Missouri Department of Health and Human Services, Missouri had 1,087,237 residents eligible for MO

Table 12.1: Medicare Enrollment – Perry County & Missouri, 2021

	Persons Over 65 Receiving Medicare	Total Persons Receiving Medicare
Perry County	3,757	4,421
Missouri	1,066,256	1,256,218

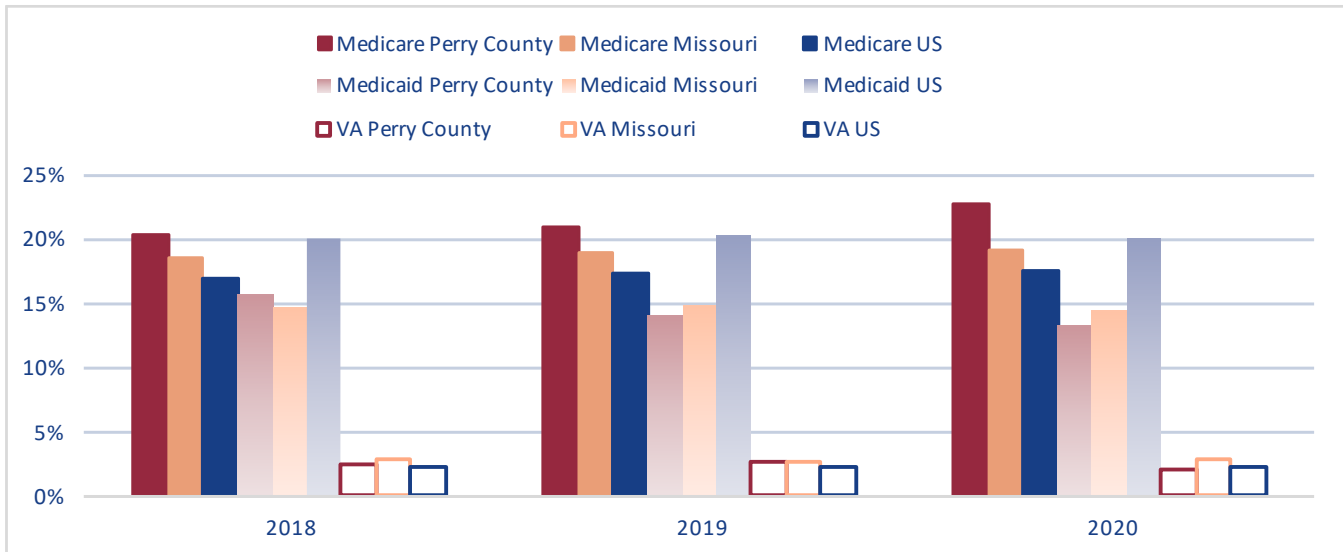
Source: Centers for Medicare & Medicaid Services, Medicare Monthly Enrollment

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HealthNet in 2016. Perry County had 3,108 residents eligible for MO HealthNet in that same year (16.17% of the county population). Of the 3,108 residents that were eligible, only 2,767 were enrolled leaving a gap of 10.96% that were eligible, but not enrolled in the program.

Figure 12.2 indicates the percentage of the population for Perry County, Missouri, and the U.S. that are covered alone or in combination by a public insurance program from 2018 to 2020.

Figure 12.2: Public Health Insurance Coverage by Percentage – Perry County, Missouri & U.S., 2018-2020

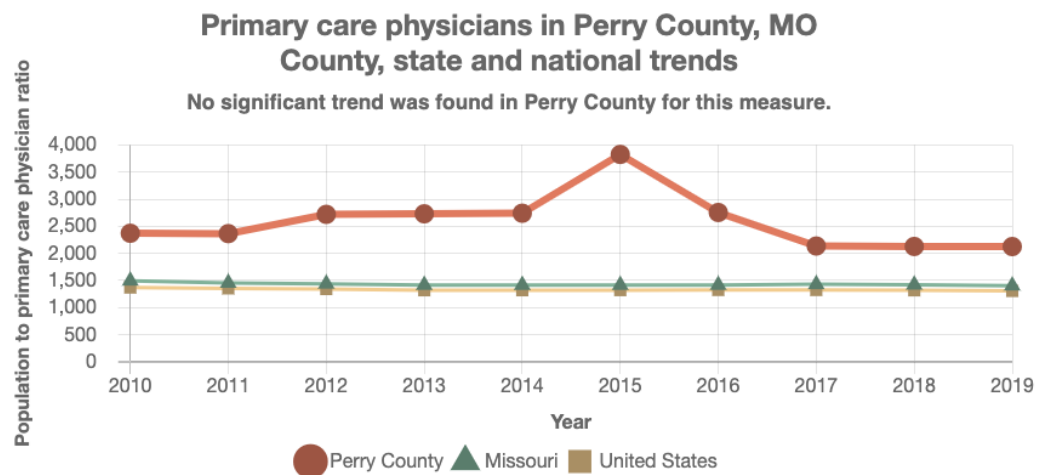


Source: U.S. Census Bureau, 2014-2018 American Community Survey 5-Year Estimates, 2015-2019 American Community Survey 5-Year Estimates, 2016-2020 American Community Survey 5-Year Estimates

HEALTH CARE PROVIDERS

According to the County Health Rankings and Roadmaps, Perry County's population to primary care physician ratio was 2,130 to 1 in 2019. The American Medical Association considers primary care physicians to be those with General Family Medicine MD's and DO's, General Practice JD's and DO's, General Internal Medicine MD's and General Pediatrics MD's. This ratio is roughly 1.5 times that of Missouri's during the same time frame (1,400 to 1). The U.S. ratio at this time was 1,307 to 1. According to 2019 data, Perry County had a less favorable ratio of population to primary care physicians compared to the State and the U.S. Figure 12.3 shows the population to primary care physician ratio over these three jurisdictions from 2010-2019.

Figure 12.3: Population to Primary Care Physician Ratio – Perry County, Missouri & U.S., 2010-2019



Notes:

The data in this table reflect the average population served by a single primary care physician.

Source: County Health Rankings 2021, Area Health Resources Files (AHRF) 2020-2021

PERRY COUNTY, MO

Despite the ratio of population to primary care physicians, data from a survey of 200 individuals, conducted by Perry County Health System along with the National Rural Health Resource Center, showed 97% of respondents felt they had a doctor they could utilize.

Perry County has a 25-bed critical access hospital which, per the Missouri Department of Health and Senior Services, this designation is given to eligible rural hospitals by the Centers for Medicare and Medicaid Services (CMS) to reduce the financial vulnerability of rural hospitals and improve access to healthcare by keeping essential services in rural communities.

Perry County also has one Federally Qualified Health Center (FQHC). FQHCs are defined as community-based health care providers that receive funds from the Health Resources and Services Administration (HRSA) Health Center Program to provide primary care services in underserved areas. Per HRSA, these centers must meet a stringent set of requirements, including providing care on a sliding fee scale based on ability to pay and operating under a governing board that includes patients.

Additionally, Perry County has a county outreach clinic, held by the Perry County Health Department, that occurs once per month in the Eastern portion of the county in Altenburg. This clinic provides basic services such as immunizations and blood pressure checks.

Finally, Perry County is served by four pharmacies. Two of these offer home delivery services and two offer mail delivery services. These services are of particular importance for rural and aging residents.

MENTAL HEALTH PROVIDERS

The County Health Rankings define a mental health provider as “mental health providers including psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists and advance practice nurses specializing in mental health care.” Perry County’s population to mental health provider ratio was 1,280 to 1 in 2021. Although this ratio is lower than the population to primary care physician ratio, this ratio was measured two years later and therefore, is not directly comparable. Perry County’s ratio is roughly 2.8 times higher than Missouri’s at 460 to 1.

Health Professional Shortage Area (HPSA) designations are used to identify areas and population groups within the United States that are experiencing a shortage of health professionals. To not be classified as a HPSA, the population to mental health provider ratio must be at least 30,000 to 1. Perry County is significantly below this guideline, but it is still above the rest of Missouri. This is validated by the experience from a recent survey, with almost 200 respondents, conducted by Perry County Health System along with the National Rural Health Resource Center which showed only 40% of respondents felt they had a mental health care specialist they could utilize. There are three mental health provider organizations who service Perry County.

DENTAL HEALTH PROVIDERS

According to the County Health Rankings and Roadmaps, Perry County’s population to dentist ratio was 2,133 to 1 in 2020. This ratio is 1.3 times that of Missouri’s during that same time frame (1,650 to 1). At that time the U.S. ratio was 1,399 to 1. Figure 12.4 shows the population to dentist ratio for all of the above jurisdictions from 2010 to 2020.

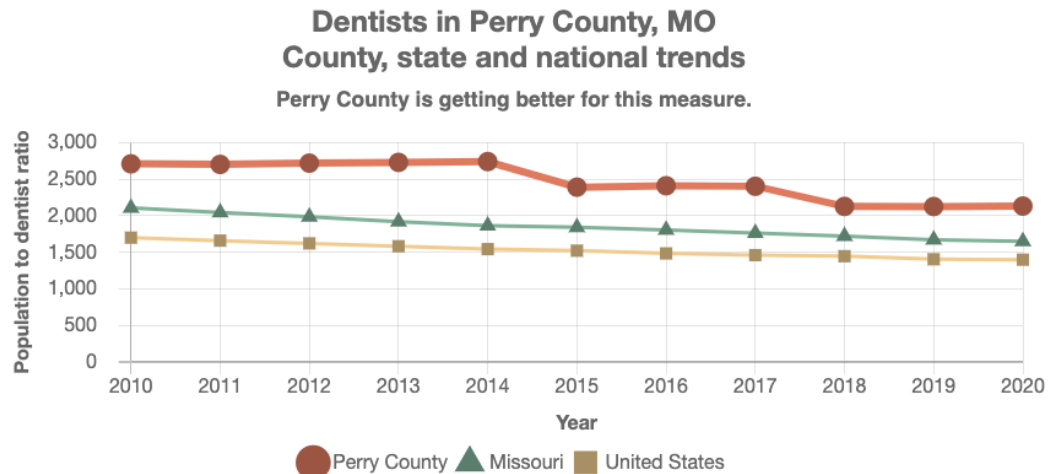
2022 COMMUNITY HEALTH NEEDS ASSESSMENT

A recent survey, with almost 200 respondents, conducted by Perry County Health System along with the National Rural Health Resource Center provides additional information on this measure. In the survey, the majority of respondents (94%) felt they had a dentist they could utilize.

Dentists are also taken into consideration in

the designation of a Health Professional Shortage Area (HPSA). To not be classified as a HPSA, the population to dental health provider ratio must be at least 30,000 to 1. Perry County is significantly below this guideline.

Figure 12.4: Population to Dentist Ratio – Perry County, Missouri & U.S., 2010-2020



Notes:

The data in this table reflect the average population served by a single dentist.

Source: County Health Rankings 2021, Area Health Resources Files (AHRF) 2020-2021

EMERGENCY SERVICES

Emergency transportation for medical care is provided by one ambulance service and one air evacuation service. The ambulance service includes two Advanced Life Support units at the station and one on-call unit.

Perry County has three Urgent Care facilities to serve residents. The American College of Emergency Physicians defines these facilities as walk-in clinics focused on the delivery of medical care for minor illnesses and injuries in an ambulatory medical facility outside of a traditional hospital-based or freestanding emergency department (ED).

Other emergency services include five volunteer fire departments: City of Perryville, Perry County Rural Fire Department, Cities of Frohna and Altenburg Fire Department, East Perry Rural Fire Department, and Biehle Fire Department. The City of Perryville and Perry County Rural Fire Departments each staff 45 individuals; Frohna and Altenburg are served by 25 individuals; East Perry is served by 11 individuals; and Biehle Fire Department is served by 16 volunteers. Additionally, there is a station located at Lake Perry that is a part of the Rural County Fire Protection Association.

LONG-TERM CARE FACILITIES

Long-term care facilities fall into one of three categories: 1) Residential Care Facilities which provide long-term care to adults or children in a residential setting rather than inside the patient's home 2) Assisted Living Facilities which provide supervision or assistance with activities of daily living and care coordination 3) Skilled Nursing Facilities / Nursing Homes / Convalescent Homes which are residential homes for individuals who require constant nursing care and have significant deficiencies with activities of daily living. Perry County has seven long-term care or assisted living facilities.

TRANSPORTATION

According to the American Community Survey, 4.4% of households in Perry County did not have a motor vehicle in 2020. This is lower than the percentage of Missouri households (6.6%) and U.S. households (8.5%). This is a significant indicator since households without a motor vehicle may be less likely or able to access employment opportunities, health care, healthy food options, and physical activity opportunities.

In 2020 and 2021, a transportation task force consisting of various community organizations was created to explore the need for expanded local public transportation services. In a survey of 89 individuals, 22% stated they did not have reliable transportation with 13% reporting they relied on a family member or friend to drive them and 9% reporting they walked wherever they needed to go. Transportation was needed by most for health-related appointments (73%) followed by access to the grocery store (55%). Access to counseling/social services, employment, and recreational and social activities was also cited by 30% or more of respondents.

To aid in the barrier of access to healthcare, MO HealthNet has a Non-Emergency Medical Transportation (NEMT) program. The program serves those who do not have access to free appropriate transportation to and from scheduled MO HealthNet-covered services. Depending on the location, the NEMT program may use public transportation, vans, taxis, ambulances, or even airplanes to get individuals to their health care appointment. It may also provide assistance with an individual's gas expenses. This transportation must be approved in advance and specifically for appointments with a health care provider who accepts MO HealthNet or MO HealthNet Managed Care and the health care service being provided must be a covered service.

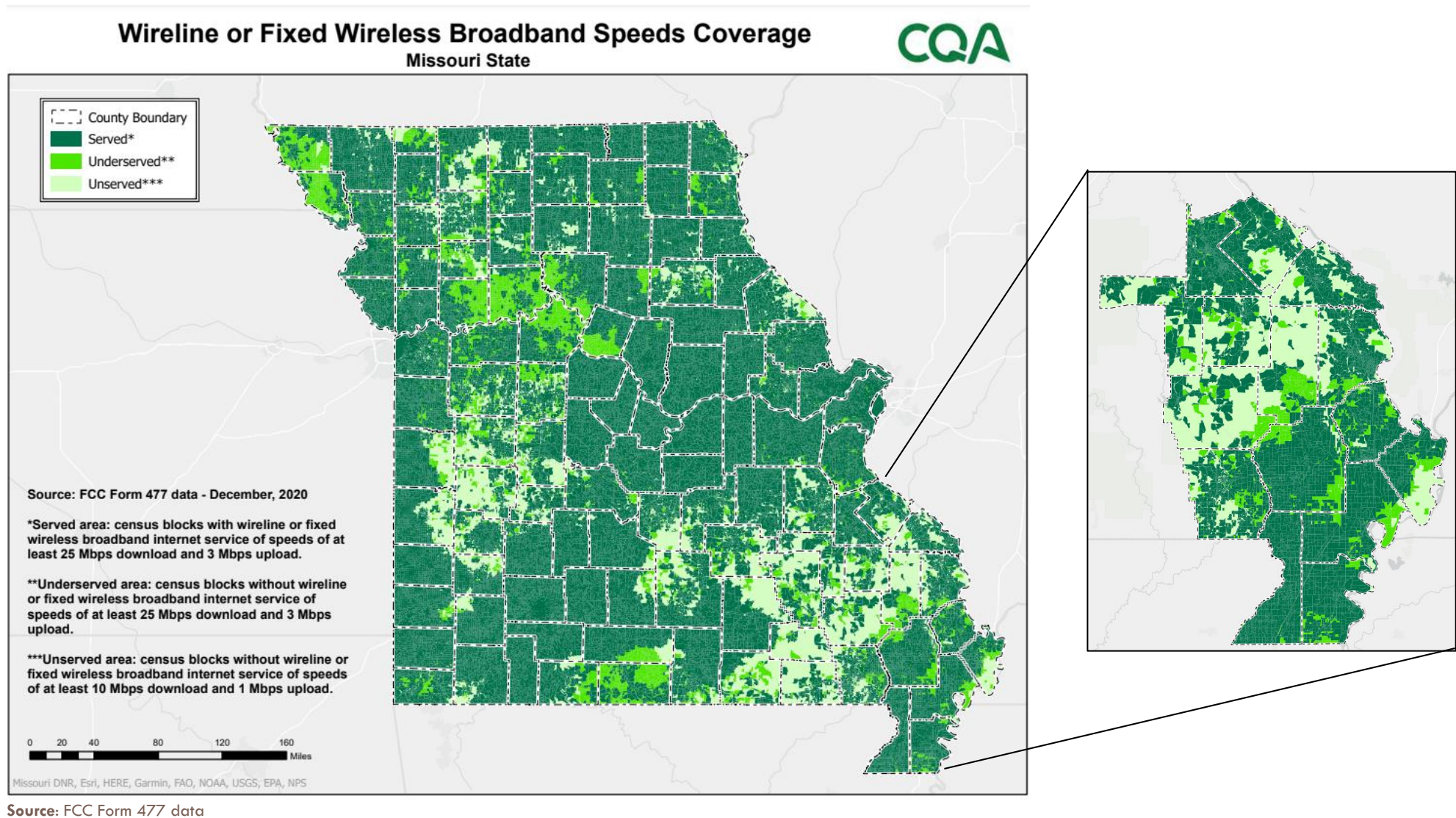
Additional transportation is provided by Southeast Missouri Transportation Service, Cape Transit Authority, and the Perry County Health System Courtesy Car.

TELEHEALTH

In a survey conducted by Perry County Health System along with the National Rural Health Resource Center, Perry County residents' thoughts on telehealth services was assessed. 39.4% of residents said they would be likely or very likely to use telehealth services. An additional 21.8% said they were undecided. When commenting on the biggest challenges to using telehealth services, the primary obstacles were internet connection and preference for in-person appointments. Despite preference for in-person appointments, respondents did provide preference for the type of telehealth programs that would be preferred. The majority of respondents suggested telehealth be used for mental/behavioral health services and remote patient monitoring for chronic conditions.

In order to access telehealth services, internet connectivity is vital. The Missouri Department of Economic Development is focused on addressing the issue of lack of access to broadband services. The maps in Figure 12.5 show broadband coverage throughout Missouri as well as Southeast Missouri. Broadband access in Perry County is lacking, with large areas of the county classified as unserved. An unserved area is defined as "census blocks without wireline or fixed wireless broadband internet service of speeds of at least 10 Mbps download and 1 Mbps upload."

Figure 12.5: Broadband Coverage – Missouri, 2020



KEY TAKEAWAYS

- Perry County's population to provider ratio for primary care, mental health, and dental is higher than the State resulting in less providers compared to the population. Of these ratios, mental health has the biggest ratio gap, being 2.8 times higher than the State's. This is followed by primary care physicians (1.5 times higher) and dental providers (1.3 times higher). A recent community survey reinforced this gap with resident's reporting they did not have a mental health provider they could utilize while alternatively reporting they felt they had a primary care provider and dental health provider they could utilize.
- Although more Perry County households have a motor vehicle to access employment health care, healthy food options, and physical activity opportunities compared to the State or the U.S. overall, local surveys show there may still be a need for more local transportation services.
- One of the primary obstacles of residents to telehealth services is internet connectivity, with large areas of the county classified as unserved areas for broadband by the Missouri Department of Economic Development.

PRIORITIZATION OF NEEDS

To identify top health priorities of Perry County residents, significant findings were reviewed from three major sources – community surveys and focus groups, evidence-based data tools with built in prioritization of community issues and areas of focus, and data collection from various evidence-based sources. A brief summary from each of these resources is provided below along with the determined health priorities for Perry County, MO.

SURVEY/FOCUS GROUP SUMMARIES

Surveys and focus groups containing the perceived needs and priorities of local residents, physicians, and community partners were used to supplement, support, and reinforce potential priorities that were found through epidemiological and statistical methods.

Table 13.1: Population Survey of Priority Issues, Rank Order – Perry County, Missouri, 2022

POPULATION SURVEY

Respondents to the population survey identified personal views on what health related issues they felt were important to them as individuals. Survey participants were asked to select the three most pressing concerns in the community that impact health. Table 13.1 shows the identified priority issues in order and the percentage of respondents who identified the listed health topic as a priority.

	Percent
1. Mental health services	49.22%
2. Substance abuse services (i.e. smoking, vaping, illicit drugs, alcohol)	36.27%
3. Prescription drug affordability	26.94%
4. Access to health care/other services	25.91%
5. Obesity	21.76%
6. Chronic diseases (diabetes, heart disease, chronic lung condition, cancer)	19.17%
7. Financial struggles	16.58%
8. Availability of community resources (i.e. nutrition programs, housing assistance, food pantries, etc.)	10.88%
9. Healthy behaviors / lifestyles	10.36%
10. Safe and affordable housing	9.33%

PHYSICIAN SURVEY

Physicians affiliated with Perry County Health System were also asked to complete a survey where they reviewed a list of 25 health concerns and were asked to rank the top 5 in order of what they professionally identify as the most important community health needs. The top 11 needs identified can be found in Table 13.2.

Table 13.2: Physician Survey of Priority of Community Needs, Rank Order from Most Important to Fifth Most Important

	Most Important	Second	Third	Fourth	Fifth	Total Identified
Counseling/Mental Health Care	7	3	1	0	1	12
Adult Obesity	3	4	1	1	2	11
Childhood Obesity	1	3	2	2	0	8
Nutrition	0	0	2	1	2	5
Diabetes	1	1	2	0	0	4
Youth Substance Use	1	0	1	0	2	4
Tobacco Use	0	0	1	2	1	4
Heart Disease	1	1	0	1	0	3
ADHD	0	1	1	1	0	3
Adult Substance Use	0	1	0	1	1	3

COMMUNITY PARTNER FOCUS GROUPS

Work groups of community partners were gathered on two different occasions to identify community needs. The first work group identified Mental Health, Housing, and Youth Substance Use as high priorities. Another work group, with some of the same individuals, gathered a few months later to review statistical data and community survey responses. After this review, Mental Health and Housing were identified as the top two issues for this work group to focus future efforts.

EVIDENCE-BASED DATA TOOLS WITH HEALTH PRIORITY RANKINGS

Additionally, evidence-based data tools were used to compare the identified county priorities to the statistical data and local survey results.

MISSOURI INFORMATION FOR COMMUNITY ASSESSMENT

The Missouri Information for Community Assessment (MICA) is an interactive system, available on the Missouri Department of Health and Senior Service's website, that allows the user to create and download health data based on selected variables. The website's Priority MICA offers a Prioritization of Selected Diseases and Conditions option that is a structured process to determine the priority health needs by each County or State. The Priority MICA was used as part of this County assessment process.

All age groups, races, sexes, diseases, and criteria were selected in order to determine priorities. Average community level of support and importance of criteria were selected. Therefore, no additional weights were given to any particular condition as well.

1. Chronic Obstructive Pulmonary Disease (COPD)
2. Heart Disease
3. Motor Vehicle Accidents
4. Alcohol- and Substance-Related
5. Pneumonia and Influenza
6. Lung Cancer
7. Alzheimer's/Dementia/Senility
8. Arthritis/Lupus
9. Diabetes
10. Suicide and Self-Inflicted Injury

DATA COLLECTION FROM EVIDENCE-BASED SOURCES

COUNTY HEALTH RANKINGS: HEALTH OUTCOMES AND HEALTH FACTORS

The County Health Rankings and Roadmaps program is a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute. The Rankings are based on a model of population health that emphasizes the many factors that, if improved, could help make communities healthier places to live, learn, work, and play. The annual County Health Rankings measure vital health factors, including high school graduation rates, obesity, smoking, unemployment, access to healthy foods, the quality of air and water, income, and teen births, in nearly every county in America. The annual Rankings provide a revealing snapshot of how health is influenced by where we live, learn, work, and play. They provide a starting point for change in communities. Health outcomes in the County Health Rankings represent how healthy

2022 COMMUNITY HEALTH NEEDS ASSESSMENT

a county is and measure two types of health outcomes: how long people live (length of life) and how healthy people feel while alive. Health factors represent what influences the health of a county and measure four types of health factors: health behaviors, clinical care, social and economic, and physical environment factors. In turn, each of these factors is based on several measures.

According to the 2022 County Health Rankings, Perry County ranked 15th among the healthiest counties in Missouri out of the 115 counties/jurisdictions. With 1 being the best ranking a county can get, Perry County ranks better than almost 87% of jurisdictions across the State. Perry County ranked in the higher middle range of counties in Missouri at 34th for health factors out of the 115 counties/jurisdictions. Additional measures are ranked and listed under each category. The overall rank of Perry County for each category and sub-measure can be seen below in Table 13.3 and Table 13.4.

Table 13.3: Health Outcome Rankings by Category – Perry County, Missouri, 2022

Category/Measure	Ranking (out of 115)
OVERALL	15
Length of Life	25
Quality of Life	13

Source: County Health Rankings and Roadmaps

Table 13.4: Health Factor Rankings by Category – Perry County, Missouri, 2022

Category/Measure	Ranking (out of 115)
OVERALL	34
Health Behaviors	27
Clinical Care	29
Social & Economic Factors	35
Physical Environment	82

Source: County Health Rankings and Roadmaps

Table 13.5 compares Perry County's ranking for health outcomes and health factors within the County Health Rankings program for the last five years. While health outcomes have fluctuated without major change over this period, health factors that contribute to health have become increasingly worse.

Table 13.5: County Health Rankings by Overall Category and Year– Perry County, Missouri, 2018- 2022

Year	Health Outcomes	Health Factors
2018	6	19
2019	11	21
2020	15	29
2021	17	26
2022	15	34

Source: County Health Rankings and Roadmaps

The County Health Rankings and Roadmaps website also identifies areas of strength and areas to explore further as a potential health issue for each jurisdiction. The areas identified for Perry County are below.

AREAS OF STRENGTH:

Food Environment Index
Alcohol-Impaired Driving Deaths
Income Inequality
Children in Single-Parent Households

AREAS TO EXPLORE:

Adult Smoking
Adult Obesity
Preventable Hospital Stays
High School Completion
Driving Alone to Work

TOP PRIORITIES

Based on the information available, below are the top priorities identified for Perry County, MO along with statistical and survey data that support each topic as a priority issue.

MENTAL HEALTH HEART DISEASE TOBACCO/SUBSTANCE USE

MENTAL HEALTH

- In a 2018 survey, a larger proportion of Perry County students in grades 6 through 12 have seriously considered suicide (19.2%) as compared to students of Missouri (14.1%). This survey also shows an increased percentage of students in the county who attempted suicide compared to students across the State.
- Perry County's population to provider ratio for primary care, mental health, and dental is higher than the State resulting in less providers compared to the population. Of these ratios, mental health has the biggest ratio gap, being 2.8 times higher than the State's.
- Top priority listed in the community survey, focus group, and among physicians.
- Ranked as one of the top recognized community needs by Perry County School District 32.

HEART DISEASE

- #1 leading cause of death for Perry County.
- The percent of adults with heart disease is greater in Perry County than the State or Nation.
- Of Perry County's top 8 causes of death, Perry County had higher rates of death caused by heart disease, chronic lower respiratory disease, Alzheimer's, stroke, and kidney disease.
- Identified as the 2nd leading condition of concern by Priority MICA.
- Listed as one of the top concerns for physicians.
- Chronic disease, including heart disease, is ranked number 6 by community members.
- Perry County also has lower rates of physical activity (28.18) compared to the State (34.79).
- 33% of County residents report no leisure time physical activity. The number of residents, 20 years of age and older, who are physically inactive has increased since 2017.
- Nutrition is listed as the 4th leading concern among local physicians.

TOBACCO/SUBSTANCE USE

- The prevalence rate for current smokers in Perry County (23%) is higher than Missouri (20%), but lower than the BRFSS Southeast Regional average (26%).
- Perry County has higher rates of smoking during pregnancy (15.84%) compared to the State (11.94%).

- Rate of preterm births in Perry County went from being below the State rate in 2017 to above the State rate in 2020. 2020 rates of preterm births were 12.38 per 100 live births for Perry County compared to the 10.98 per 100 live births for the State.
- Lung Cancer is the top cancer that affects Perry County citizens the most out of all cancers.
- In 2018, a survey of students in Grades 6-12 showed rates of substance use for Perry County youth was higher than the State for alcohol, e-cigarettes, marijuana, cigarettes or chew, and hookah use. Perry County youth use rates were lower than the State for prescription medications, over the counter medications, inhalants, and synthetic drugs.
- The number of drug incidents in Perry County has increased over the past two years and is now higher than the State (8.48 incidents per 1,000 Perry County residents as compared to 5.69 incidents per 1,000 Missouri residents).
- Identified as the 4th leading condition of concern by Priority MICA.

OTHER KEY ISSUES THAT SHOULD CONTINUE TO BE AREAS OF FOCUS IN THE COMMUNITY:

- Obesity
- High School graduation rates
- Access to affordable housing
- Environmental factors such as outdoor air quality and radon levels
- Increases in crime, particularly aggravated assault and child abuse and neglect
- Colon cancer
- Alzheimer's Disease and Dementia care

Perry County Health System (PCHS) and Perry County Health Department (PCHD) will not focus directly on the other key issues listed above due to limited resources and/or programs already in place in the community that are addressing these specific needs. In addition, other community organizations are more appropriate to address certain needs such as high school graduation rates and increases in crime. Even though these needs are not listed as our top priority areas of focus, they will most likely be impacted indirectly through our work with our identified priority needs. More specifically, obesity will be addressed while focusing on heart disease.

Further, PCHS and PCHD have some programs in place addressing a few of the needs mentioned. For instance, PCHD has an environmental department that provides education to the community.

PCHS also has a Community Champion whose role is to serve as a liaison between the hospital team and community throughout chosen health improvement related program activities. One such improvement program the Community Champion is working on with various community leaders is access to affordable housing.

Additionally, PCHS has established a Cancer Fund to provide various cancer screenings to residents who may otherwise be unable to afford these potential life-saving measures. By providing these funds, PCHS can help those in need get the appropriate screenings for Colon Cancer. PCHS also offered the community free Fecal Occult Blood screening kits at a recent Health Fair in Perry County as a screening for Colon Cancer.

Lastly, PCHS has a very defined focus already on Alzheimer's Disease and Dementia care through a group therapy program offered, Cognitive Stimulation Therapy (CST). CST is an evidence-based intervention for people with mild to moderate dementia. PCHS has been offering CST and providing CST training throughout the U.S. for over eight years. Evidence shows that CST can be as effective, and in some cases, more effective, than medications in treating the symptoms of dementia, without any reported side effects. Most noted are improvements in memory, concentration, language, and verbal skills. The directors of this program are currently developing an innovative virtual software to deliver Cognitive Stimulation Therapy remotely as well.

IMPLEMENTATION STRATEGY FOR TOP PRIORITIES

MENTAL HEALTH

- Establish a Community Health Worker to be a resource liaison within the community.
- Through the Community Health Worker as well as a PCHS Licensed Clinical Social Worker (LCSW), provide education to the providers at PCHS. With the alarming percentage of adolescents seriously considering suicide, a process needs to be established to identify and support these students when they come in for physicals and other appointments.
- Have the PCHS Community Health Worker and LCSW provide education and support to the school systems in Perry County. This can be done through professional development days and other various educational opportunities. PCHS will also establish a program to have one of their LCSWs available to go into the schools and provide services to students.
- The PCHS Community Champion and other members of the leadership team will continue to address the affordable and available housing issues that is affecting the mental health of Perry County residents. PCHS will be very involved and sit on the Housing Planning Committee to develop this area.

HEART DISEASE

- Promote and increase awareness amongst our providers of various heart disease programs offered through Perry County Health Department to share with patients.
 - Self-Monitoring Blood Pressure Program
 - Chronic Disease Self-Management Program
 - Walk with Ease Program
- Create a process for PCHD to follow up with PCHS providers who have patients in the heart disease programs.
- Promote and share resources and education available through organizations in the community, such as University of Missouri Extension Center, regarding healthy recipes, cooking, nutrition, gardening, activities, and more.

TOBACCO/SUBSTANCE USE

- Assist in the development of a drug court in Perry County. A drug court's goal is long-term treatment versus punishment. Participants are supervised and monitored and must abstain from substance use and fulfill the legal responsibilities of the offenses they committed. According to the National Drug

Court Resource Center, “ultimately, drug courts reduce crime and affect real, positive change in people’s lives.”

- Determine a representative from PCHS to join the Coalition for Heroin and Opioid Prevention (CHOP) group.
- Promote and refer patients to programs available through PCHD such as:
 - Baby and Me Tobacco Free Program
 - Medication Drop Box