# 2022-2025 Community Health Needs Assessment

MAURY REGIONAL MEDICAL CENTER MARSHALL MEDICAL CENTER WAYNE MEDICAL CENTER





## Table of Contents

Executive Summary	4
About Maury Regional Health and our Previous CHNA	4
CHNA Purpose	5
CHNA Process	7
Significant Health Needs	8
Acknowledgements	9
Report Availability and Comment	9
Defining Our Community	10
Overview	10
Population	11
Age and Gender Distribution	11
Race and Ethnic Distribution	12
Language Spoken at Home	15
Health Equity and Social Drivers of Health	16
Overview	16
Disparity	16
Rural versus Urban	
Income, Poverty, and Employment	
Educational Attainment	19
Housing and Homelessness	20
Transportation	22
Food Environment	22
Physical & Social Environment	23
Access to Healthcare in Our Community	25
Overview	25
Health Insurance Coverage	25
Health Professional Shortage Areas and Medically Underserved Areas	27
Local Clinics	
Inpatient Facilities	
Post-Acute Care Facilities	35
Behavioral Health Facilities	

Health Status	
Overview	
General Health and Chronic Conditions	
Maternal, Infant and Child Health	
Senior Health	
Behavioral Health and Substance Misuse	
Preventive Care	41
Leading Causes of Death	42
Cancer	43
Coronavirus (COVID-19)	46
Appendix A: Evaluation of Impact for 2019-2022 Implementation Plans	
Maury Regional Medical Center	
Maury Regional Medical Center Marshall Medical Center	
	57
Marshall Medical Center	57
Marshall Medical Center Wayne Medical Center	57 63 69
Marshall Medical Center Wayne Medical Center Appendix B: CHNA Methods	
Marshall Medical Center Wayne Medical Center Appendix B: CHNA Methods Quantitative Data and Data Limitations/Gaps	
Marshall Medical Center Wayne Medical Center Appendix B: CHNA Methods Quantitative Data and Data Limitations/Gaps Qualitative Data / Community Voice	
Marshall Medical Center Wayne Medical Center Appendix B: CHNA Methods Quantitative Data and Data Limitations/Gaps Qualitative Data / Community Voice Written Comments on Most Recently Adopted CHNA and Implementation Strategy	
Marshall Medical Center Wayne Medical Center Appendix B: CHNA Methods Quantitative Data and Data Limitations/Gaps Qualitative Data / Community Voice Written Comments on Most Recently Adopted CHNA and Implementation Strategy Appendix C: Themes from Community Input	

## **Executive Summary**

## About Maury Regional Health and our Previous CHNA

In 1953, Maury Regional Medical Center was built to bring a new modern hospital to southern Middle Tennessee. In the early 1990s, the state of Tennessee experienced a rapidly changing healthcare environment leading to the addition of Marshall Medical Center, Wayne Medical Center and Lewis Health Center and the creation of Maury Regional Health (MRH).

MRH is a not-for-profit regional health system serving southern Middle Tennessee through three hospitals, a number of clinics including federally qualified health centers (FQHC)s and rural health clinics (RHCs), urgent care, surgery centers, outpatient facilities, and a physician practice network. The <u>Maury</u> <u>Regional Medical Group</u> includes physicians for both primary and specialty services and provides care by appointment and on a walk-in basis, offering a sliding fee schedule for financially eligible patients, at multiple locations in Maury, Lewis, Marshall and Wayne counties. MRH is the largest health care provider between Nashville, Tennessee and Huntsville, Alabama, with approximately 3,000 employees throughout the system. For more information visit <u>http://www.mauryregional.com</u>.

<u>Maury Regional Medical Center</u> in Columbia serves as the flagship hospital for the system. Founded in 1953, the facility has grown to include 255 beds and a growing medical staff of more than 200 physicians. The facility has been compared to some of the most prestigious medical centers in the nation and has consistently been recognized for performance on publicly reported quality measures. The medical center offers a wide range of advanced services including an accredited heart program, neonatal intensive care and cancer center.

<u>Marshall Medical Center</u> in Lewisburg offers a full range of health care services including a 24-hour emergency department, inpatient care, surgical services, diagnostic imaging, therapy services, sleep center and a physician specialist clinic. Marshall Medical Center is designated as a critical access hospital (CAH) with 25 inpatient beds. In addition, Marshall Medical Center offers several Rural Health Clinics (RHCs), which are provider practices that offer care in rural areas categorized as health professional shortage areas, largely based on the population to clinical provider ratio.

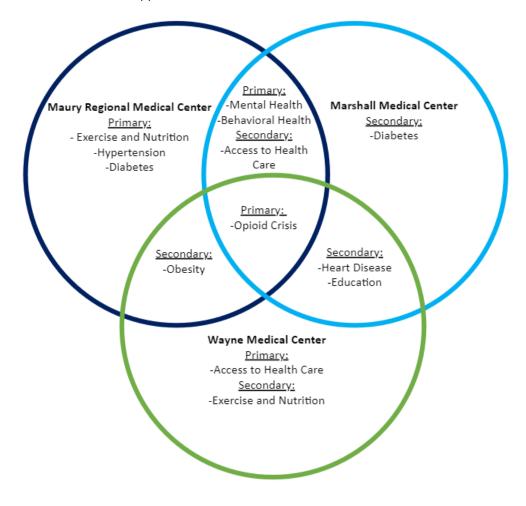
<u>Wayne Medical Center</u> in Waynesboro is a 25-bed community hospital offering 24-hour emergency department, inpatient care, surgical services, endoscopy, physical, occupational and speech therapy, sleep center, diagnostic imaging and a physician specialist clinic.

For this study, MRH's defined community is comprised of the six counties of Giles, Lawrence, Lewis, Marshall, Maury, and Wayne. This geography spans urban, suburban, and rural areas and has an estimated population of 248,188.

Since we issued our last community health needs assessment (CHNA) three years ago, MRH has worked alongside community partners to address many of the significant concerns identified in 2019 (the

implementation plans covered July 1, 2019 to June 30, 2022). However, resources from some of the goals and strategies developed for these priority areas were redirected or halted due to the COVID-19 pandemic.

An evaluation of the impact of our prior Implementation Strategy activities addressing the key areas illustrated below is detailed in Appendix A.



## **CHNA** Purpose

MRH is committed to providing innovative care by combining convenient and affordable access with skilled and compassionate patient care. MRH has maintained as its mission, vision and values the delivery of clinical excellence, superior patient experience and individual respect and equity.

**MISSION** - Clinical Excellence. Compassionate Care. Always.

**VISION** - To be the independent premier choice for health and wellness by delivering a superior patient experience.

#### VALUES

- W Wholeness: Wellness-centered care of mind, body and spirit for our patients and health care team.
- E- Empathy: Understanding the feelings of others as we walk with them on their path to wellness.
- C Community: Creating relationships, connections and trust.
- A Advocacy: Defending the rights of all to be heard.
- R Respect: Treating everyone with dignity and respect.
- E Equity: Providing each individual a fair opportunity to achieve their full potential.

MRH completed this Community Health Needs Assessment (CHNA) to update our understanding of the needs of community members living in the six counties and the conditions influencing their well-being. The county health councils have supported identification of the priority needs. Additionally, MRH will assemble a three-year plan to enhance community health.

MRH has conducted the CHNA to further the efforts of our Mission, Vision, and Values and to meet the requirements of the Patient Protection and Affordable Care Act of 2010 (H.R. 3590) for not-for-profit hospitals by:

- Defining the community served
- Assessing the health needs of our community by collecting and evaluating quantitative data for multiple indicators of demographics, socioeconomic status, health status, health behaviors, and social drivers of health
- Obtaining input regarding local health needs from community members, public health experts and other persons representing the broad interests of medically underserved, low-income, and minority populations
- Completing a health needs prioritization
- Evaluating the impact of the actions that were taken to address the significant health needs identified in the hospital facility's prior CHNA(s)
- Describing the process and methodologies used
- Making the CHNA results publicly available online

"There are free community resources that are available to help people stay healthy, but more collaboration and communication [is needed] between the health system and the non-medical side, more proactive planning."

- Community Stakeholder

## **CHNA** Process

We engaged Premier, Inc., to partner with us in completing the CHNA and convened a CHNA Advisory Group, comprised of health system leadership, with diverse experience and perspectives key to providing insight, context, guidance, and making decisions that supported the completion of the CHNA. We collected both quantitative and qualitative data which were used to identify the largest community issue areas and then prioritize the significant health needs for which MRH has prepared an Implementation Strategy to address.

Quantitatively, we reviewed a broad range of publicly available data across economic, environmental, behavioral, clinical, and social elements that contribute to health needs and identified top health and health related needs in the community.

Qualitatively, experienced community leaders from approximately 18 organizations representing local, rural, medically underserved, low-income, and minority perspectives provided input into the development of our CHNA. Another 247 community members residing in the six counties documented their opinions and concerns in an online survey.

Multiple sources were utilized to inform this CHNA:



Additional documentation on the CHNA Methodology is available in Appendix B.

## Significant Health Needs

This CHNA was prepared as we transition from the peak of the pandemic which gravely impacted our community physically, psychosocially, and economically. Notably, research revealed that many of the health issues identified in our previous CHNAs remain the same: access, chronic illness (diabetes and hypertension), and challenges related to diet and nutrition, poor mental health, and substance misuse worsened. Alongside these issues, common across the U.S., are concerns related specifically to the rural status of the community: geographical disparity and provider shortages, transportation, and lack of economic development.

Defined community: Giles, Lawrence, Lewis,	Providers: Shortages of Primary Care and				
Marshall, Maury, and Wayne Counties	Specialists				
<b>Population:</b> 248,188; incorporated areas, 51.6%;	Preventive Care: Screenings and COVID-19				
White Non-Hispanic, 80.6%	vaccinations are low				
• •	Top conditions for hospitalization: Respiratory,				
% Uninsured age 0-64: 12.0%	Circulatory, and Maternal/Infant				
Median Household Income: \$57,409	Behavioral Health: High numbers for depression,				
Families Below Poverty: 11.7%	poor mental health, suicide, and smoking				
<b>% Homeowners:</b> 73.2%	Life expectancy: age 75				
% Households with a Vehicle: 95.0%	Leading causes of death: Heart disease, cancer and COVID-19				
% Food Insecure: 12.9%					

#### Our Community at a Glance

Informed by primary and secondary data collected, a prioritization of needs was completed using these criteria 1) publicly available quantitative health status data for the six counties (quantification of the size of the issue), 2) frequency of issues mentioned within interviews from knowledgeable leaders of health care organizations and expert community based organization leaders, 3) how important an issue was to six-county residents (ranking from the community survey), 4) community need assessment priorities defined by the county health departments, and 5) priorities documented in our previous 2019 CHNAs.

Based upon this methodology, the following five significant health needs were identified and the MRH Board of Trustees approved these priorities on June 29, 2023:



The prioritization model used to determine these issue areas is detailed further in Appendix D.

## Acknowledgements

This CHNA includes a comprehensive quantitative and qualitative assessment of critical factors that affect overall health and wellness in our community. Our findings represent work completed by our MRH team, strategic advisors, and community partners. We would like to recognize our partners for their commitment to developing a CHNA that best identifies the needs of our community and positions MRH to support the promotion of health care equity in the future:

- **Premier, Inc.**, a nationally recognized healthcare improvement organization that specializes in population health and helping hospitals improve the health of their communities. Consultants from Premier served as strategic advisors to our team and helped facilitate the CHNA process.
- MRH leaders, staff, and physicians, local government and other county officials, other health facilities, and area community-based service organizations, that provided input through interviews, meetings, and surveys, including the following:
- Cedar Recovery Addiction Treatment
- Crossroads to Home Coalition
- Giles, Lawrence, and Wayne Departments of Health
- Iglesia Una Esperanza Viva
- Lewis County Department of Health
- Marshall County Joint Economic and Community Development Board
- Maury County District 9 Commissioner
- Maury County Department of Health
- Maury County School District
- Maury Regional Foundation

- Maury Regional Health Administrators
- Maury Regional Health Mobile Medical Unit
- Maury Regional Medical Group
- Pinewood Springs Mental Health Hospital
- South Central Tennessee Area on Aging
- State of Tennessee Department of Health
- United Way of Maury County
- Wayne County Joint Economic and Community Development Board

## Report Availability and Comment

The 2022-2025 CHNA and associated Implementation Strategy documents will be made available on the MRH website at <u>https://www.mauryregional.com/community-health-events/population-health/community-health-needs-assessment</u>.

Your feedback on these reports is welcome. Address written comments or requests for a copy of these documents via email to <u>CHNAFeedback@mauryregional.com</u> or mail us at:

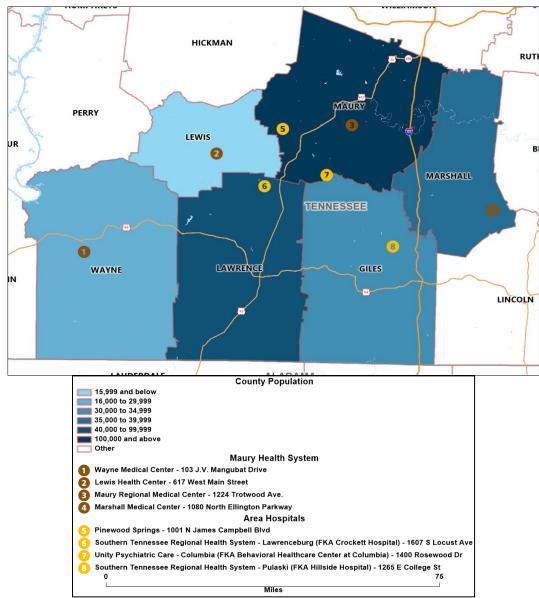
Maury Regional Medical Center Attention: Alisa Sentz CHNA Feedback 1224 Trotwood Avenue Columbia, Tennessee 38401

## **Defining Our Community**

## Overview

For this study, MRH's community is defined as the six counties in southern middle Tennessee including Giles, Lawrence, Lewis, Marshall, Maury, and Wayne. The map (Figure 1) provided below illustrates these six counties and where MRH has a physical presence.

- These six contiguous counties equate to more than 88% of MRH's inpatient discharges from three medical centers in Columbia, Lewisburg & Waynesboro.
- The community is highly rural, but located between nearby metropolitan areas Nashville, TN and Huntsville, AL.



## Figure 1. Map of Defined Communities

## Population

The total six-county population is estimated to be 248,188 and about 43% of the population resides in Maury County (Table 1). Although this geography accounts for 3.5% of Tennessee's total population, the five-year growth rate of these six counties (5.6%) is projected to be higher compared to the State of Tennessee (3.8%). Maury County is projected to have the largest growth, followed by Marshall County. Anecdotally, Wayne County may have higher than forecast growth due to COVID-19 pandemic motivating relocations to the less expensive waterfront community.

County	Cities	Population	% 6 County Population	% 5-Year Growth	
Giles	Ardmore, Elkton, Goodspring, Lynnville, Minor Hill, Prospect, Pulaski	30,628	12.3%	2.3%	
Lawrence	Ethridge, Five Points, Lawrenceburg, Leoma, Loretto, Saint Joseph, Summertown, Westpoint	45,138	18.2%	3.6%	
Lewis	Hohenwald	12,921	5.2%	3.6%	
Marshall	Belfast, Chapel Hill, Cornersville, Lewisburg	35,503	14.3%	5.3%	
Maury	Columbia, Culleoka, Hampshire, Mount Pleasant, Santa Fe, Williamsport	107,707	43.4%	8.5%	
Wayne	Clifton, Collinwood, Cypress Inn, Iron City, Lutts, Waynesboro	16,291	6.6%	0.6%	
6 Counties		248,188	100.0%	5.6%	
Tennessee		7,047,561		3.8%	
U.S.		334,500,069		2.1%	

Table 1. List of Cities and Estimated	Total Population in Defined	Communities 2023
	rotari opulation in Denneu	communics, 2025

Data Source: Environics Analytics, 2023

## Age and Gender Distribution

Age and gender profiles help us understand who lives in our community and inform planning for needed health services. Usually, younger populations need more preventive services and health education, while older populations are more likely to have chronic conditions (diabetes, hypertension, cancer, etc.) and need health services in higher acuity settings.

- An estimated 49.1% of our six-county residents are male and 50.9% are female (Table 2).
- Our community is slightly older, 19.3% of the population aged 65+, compared to Tennessee, 18.2%. This gap could be widening as the age 65+ cohort is projected to be the fastest growing in the community, 18.1%, over the next five years (Table 3). This growth will likely create a demand for cancer care, chronic disease programs, and geriatric related services (internal

medicine, cardiovascular services, endocrinology, gastroenterology, neurosciences, oncology, orthopedics, ophthalmology, physical medicine and rehabilitation, pulmonary medicine, rheumatology, and urology).

- The age 15-17 and 18-44 cohorts represent 36.8% of the community's total population. This suggests that the elective sub-specialty care and obstetrics and gynecology will continue to be needed (Table 2).
- The age 0-14 cohort represents 18.4% of the total defined community's population; therefore, pediatric services will also be needed (Table 2).

2023 Population by Age										
County	0-14	15-17	18-44	45-64	65+	Total				
Giles	16.8%	3.7%	30.7%	26.7%	22.1%	30,628				
Lawrence	20.0%	4.2%	31.6%	24.8%	19.4%	45,138				
Lewis	17.6%	3.8%	30.3%	25.6%	22.6%	12,921				
Marshall	18.8%	3.9%	33.3%	26.1%	17.8%	35,503				
Maury	19.0%	3.8%	34.0%	24.9%	18.3%	107,707				
Wayne	12.4%	3.1%	35.5%	27.9%	21.1%	16,291				
Tatal Mala						40.10/				
Total Male						49.1%				
Total Female						50.9%				
6 Counties	18.4%	3.8%	33.0%	25.5%	19.3%	248,188				
Tennessee	17.9%	3.8%	35.0%	25.1%	18.2%	7,047,561				
U.S.	18.0%	3.8%	35.6%	24.7%	17.9%	334,500,069				

#### Table 2. Estimated Population by Age Group and Gender, 2023

Data Source: Environics Analytics, 2023

#### Table 3. Population Growth Projection by Age Group, 2023 – 2028

% Population Growth 2023 - 2028											
County	0-14	15-17	18-44	45-64	65+	Total					
Giles	0.6%	1.2%	2.7%	-5.6%	12.6%	2.3%					
Lawrence	0.2%	5.5%	5.1%	-4.3%	14.0%	3.6%					
Lewis	1.2%	1.2%	4.4%	-4.3%	13.7%	3.6%					
Marshall	2.0%	6.8%	3.8%	-1.1%	20.2%	5.3%					
Maury	6.2%	13.3%	5.1%	3.7%	22.8%	8.5%					
Wayne	-5.8%	-1.8%	-0.5%	-3.3%	11.6%	0.8%					
6 Counties	3.0%	7.9%	4.2%	-0.5%	18.1%	5.6%					
Tennessee	0.6%	5.3%	1.7%	-0.2%	16.0%	3.8%					
U.S.	-1.6%	2.9%	0.1%	-0.7%	13.8%	2.1%					

Data Source: Environics Analytics, 2023

## Race and Ethnic Distribution

The composition of our community's race and ethnicity helps us understand the need for healthcare services as well as cultural factors that influence how care is delivered. Studies have shown that Hispanics and African Americans have inequitably high incidence rates of diabetes, heart disease, and obesity requiring services such as cardiovascular, endocrinology, gastroenterology, and orthopedics.

- The largest population is White Non-Hispanic, 80.6%. The next largest populations are Black Non-Hispanic, 7.5%, Hispanics, 6.0%, and other non-Hispanics, 4.8%. Asian Pacific Islander Non-Hispanics and American Indian Non-Hispanics combined are about 1.0% (Table 4).
- While the Hispanic and Black Non-Hispanic population percentages are small compared to the state, the five-year projected growth of each (Black, 5.8% and Hispanic, 26.3%) is higher (TN Black, 2.5% and TN Hispanic, 19.5%) (Table 5).

	2023 Total Population by Race and Ethnicity											
County	White Non- Hispanic	Black Non- Hispanic	Hispanic/ Latino	Other Non- Hispanic	Asian Pacific Islander Non- Hispanic	American Indian Non- Hispanic	Total					
Giles	80.8%	9.8%	3.0%	5.3%	0.5%	0.6%	30,628					
Lawrence	90.2%	1.4%	3.0%	4.7%	0.4%	0.2%	45,138					
Lewis	89.6%	1.6%	2.7%	5.3%	0.4%	0.3%	12,921					
Marshall	81.3%	6.2%	7.5%	4.3%	0.4%	0.3%	35,503					
Maury	74.1%	10.9%	9.5%	5.2%	1.1%	0.2%	107,707					
Wayne	88.8%	5.5%	2.7%	2.6%	0.3%	0.1%	16,291					
6 Counties	80.6%	7.5%	6.0%	4.8%	0.7%	0.3%	248,188					
Tennessee	69.5%	15.5%	7.7%	4.9%	2.1%	0.3%	7,047,561					
U.S.	<b>56.0%</b>	12.1%	19.9%	5.0%	6.3%	0.7%	334,500,069					

#### Table 4. Estimated Population by Race and Ethnicity, 2023

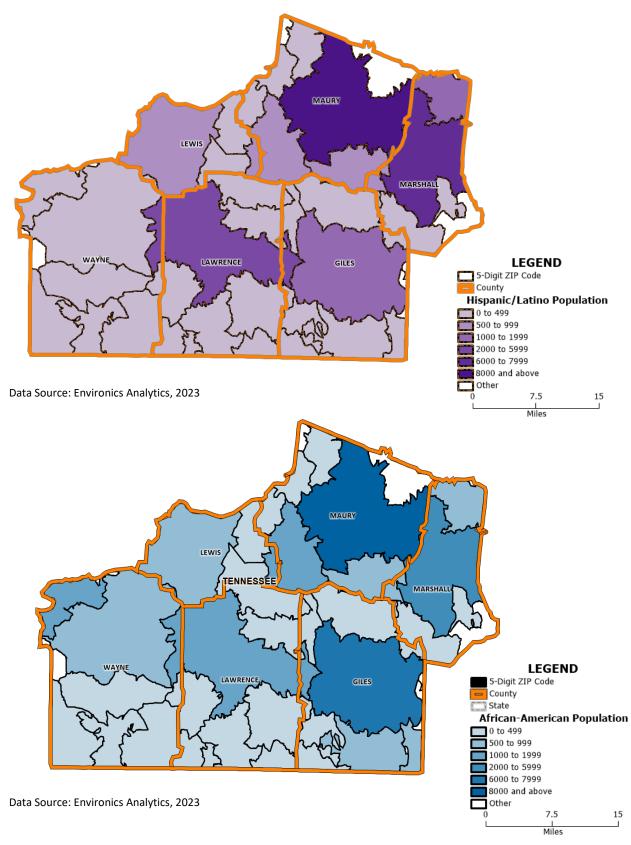
Data Source: Environics Analytics, 2023

#### Table 5. Population Growth Projection by Race and Ethnicity, 2023 – 2028

· ·	% Population Growth by Race and Ethnicity 2023 – 2028											
County	White Non- Hispanic	Black Non- Hispanic	Hispanic/ Latino	Latino Hispanic Hi		American Indian Non- Hispanic	Total					
Giles	-0.2%	4.4%	32.7%	15.0%	82.5%	55.0%	2.3%					
Lawrence	1.5%	-13.7%	30.8%	28.3%	15.1%	19.0%	3.6%					
Lewis	0.3%	18.2%	10.8%	52.0%	-18.5%	22.2%	3.6%					
Marshall	3.2%	13.2%	26.3%	-3.4%	-13.1%	27.6%	5.3%					
Maury	5.3%	5.6%	25.9%	27.2%	33.1%	-12.3%	8.5%					
Wayne	-0.3%	4.5%	21.7%	-3.3%	58.1%	-12.5%	0.6%					
6 Counties	2.9%	5.8%	26.3%	22.1%	31.3%	18.1%	5.6%					
Tennessee	0.4%	2.5%	19.5%	25.9%	12.9%	25.1%	3.8%					
U.S.	-3.1%	3.1%	11.3%	13.2%	8.0%	11.6%	2.1%					

Data Source: Environics Analytics, 2023

Hispanic/Latino populations represent our community's largest ethnic cohort, and published demographic data indicate this population is concentrated in the central areas of Maury, Marshall and Lawrence Counties, while there are large African American populations living in the central areas of Maury and Giles Counties (Figure 2). This trend is important to understand because cultural preferences can influence health outcomes and national studies point to poorer outcomes for these ethnic cohorts. Figure 2. Map of Estimated Population by Hispanic/Latino and African American Non-Hispanic Cohorts, CY2023



## Language Spoken at Home

A person that is unable to communicate with physicians or healthcare providers in their language of choice is less likely to seek primary preventative care, have follow-up visits, and adhere to healthcare treatment plans. A language barrier may prevent access to much needed transportation, medical, and social services as well as limit employment and education opportunities.

While most residents of the community self-report English as the language spoken most frequently at home, other members of the population could experience negative consequences from challenges with access and use of healthcare services. So, it is important that our healthcare providers and social service organizations are able to help non-English speaking community members read and understand health and health related information (e.g., after visit instructions, treatment plans, how to communicate with providers so that patients can ask follow-up questions).

- More than 95% speak English at home (Table 6).
- Of those that speak another language at home, Spanish, 3.3%, was the most frequently mentioned.

	2023 Population Age 5+ by Language										
County	English Only	Asian/Pacific Island	Indo-European	Spanish	Other Language						
Giles	97.3%	0.1%	0.7%	1.9%	0.0%						
Lawrence	95.2%	0.1%	3.3%	1.5%	0.0%						
Lewis	95.8%	0.2%	2.2%	1.7%	0.1%						
Marshall	94.6%	0.2%	0.6%	4.5%	0.1%						
Maury	94.1%	0.7%	0.5%	0.7%	0.1%						
Wayne	98.3%	0.4%	0.4%	0.9%	0.0%						
6 Counties	95.2%	0.4%	1.1%	3.3%	0.1%						
Tennessee	<b>92.6%</b>	1.1%	1.3%	4.3%	0.7%						
U.S.	78.3%	3.5%	3.7%	13.4%	1.2%						

#### Table 6. Estimated Population Age 5+, by Language Spoken at Home, 2023

Data Source: Environics Analytics, 2023

"While small, there is a growing Spanish speaking population with challenges accessing the health system, that could see improved health from cultural and language assistance (verbal and written)."

- Community Stakeholder

## Health Equity and Social Drivers of Health

## Overview

In 2022, a team of actuaries concluded that health inequities account for approximately \$320 billion in U.S. annual health care spending. If unaddressed, this figure could grow to \$1 trillion or more by 2040. On an individual basis, this cost is estimated to increase from \$1,000 today to at least \$3,000 annually.<sup>1</sup> This is not sustainable and new systems must be planned to address inequities by improving access to prevention and clinical care that result in improved health outcomes. While these influences are complicated to improve, working to address them in partnership with community-based organizations and residents is necessary so that everyone can achieve their full potential for health and well-being.

For our CHNA, we define **health equity** as "the absence of unfair, avoidable or remediable differences among groups of people, whether those groups are defined socially, economically, demographically, or geographically or by other dimensions of inequality (e.g. sex, gender, ethnicity, disability, or sexual orientation)".<sup>2</sup> **Social drivers of health** are "the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life". This means that it is important to recognize that multiple factors affect health and that there is a direct relationship between people and their environments.

The selection of indicators described on the following pages illustrate the daily challenges our community faces, and the impact these factors have on health status. This information will help us define appropriate interventions for elevating the health status of our communities and population.

## Disparity

To find the areas of highest need in our six-county community, we reviewed the University of Wisconsin School of Medicine and Public Health's Area Deprivation Index (ADI) v3.2. Research conducted for the ADI concluded that "Living in a disadvantaged neighborhood has been linked to a number of healthcare outcomes, including higher rates of diabetes and cardiovascular disease, increased utilization of health services, and earlier death." There are many dimensions of disparity (race, ethnicity, gender, age, socioeconomic status, geographic location, etc.), but the ADI includes factors for the theoretical domains of income, education, employment, and housing quality and combines them into a single value.<sup>3</sup>

<sup>&</sup>lt;sup>1</sup> Deloitte Insights. (2022, June 22). US health care can't afford health inequities.

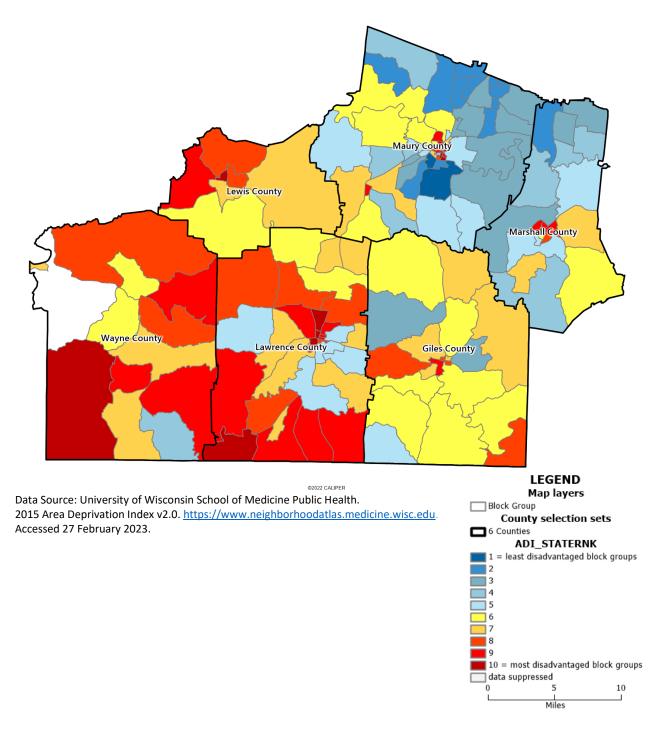
https://www2.deloitte.com/us/en/insights/industry/health-care/economic-cost-of-health-disparities.html.

<sup>&</sup>lt;sup>2</sup> World Health Organization. *Health equity overview*. <u>https://www.who.int/health-topics/health-equity#tab=tab\_1</u>. Accessed 1 June 2023.

<sup>&</sup>lt;sup>3</sup> Kind AJH, Buckingham W. Making Neighborhood Disadvantage Metrics Accessible: The Neighborhood Atlas. New England Journal of Medicine, 2018. 378: 2456-2458. DOI: 10.1056/NEJMp1802313. PMCID: PMC6051533. AND University of Wisconsin School of Medicine Public Health. 2015 Area Deprivation Index v2.0. <u>https://www.neighborhoodatlas.medicine.wisc.edu/</u> Accessed 27 February 2023.

The greatest areas of need were identified in Wayne and Lawrence (Figure 3), but each of the other four counties (Giles, Lewis, Marshall, and Maury) also show highly disadvantaged neighborhoods.

Figure 3. Area Deprivation Index Map, 2020



## Rural versus Urban

Studies from the National Institutes of Health, part of the U.S. Department of Health and Human Services, have found rural Americans are more likely to die prematurely from the nation's leading causes of death (e.g., heart disease, cancer, lung disease, and stroke). Rural residents also have higher rates of obesity and diabetes and more often die from car crashes, suicide, and drug overdoses. In addition, there are unique challenges living in rural communities with the consolidation of resources and services in larger population centers sometimes making affordable and convenient transportation a barrier to getting care. Shrinking and aging populations in rural communities can challenge the existence of hospitals and health facilities.<sup>4</sup>

- All six counties have a larger percentage of the population living outside cities or towns (incorporated areas), compared to the state of Tennessee, 35.9% (Table 7).
- Lewis County has the most population living outside incorporated areas, 70.9%.
- Maury County has the least population living outside incorporated areas, 37.5%.

Indicator	Giles	Lawrence	Lewis	Marshall	Maury	Wayne	6 Counties	TN	u.s.
% Inside Incorporated Areas	36.4%	37.3%	29.2%	44.9%	62.5%	36.1%	48.4%	64.1%	75.2%
% Outside Incorporated Areas	63.6%	62.7%	70.9%	55.2%	37.5%	63.9%	51.6%	35.9%	24.8%

Table 7. Percentage of the population living in incorporated areas (cities or towns), 2020

Data Source: US Census Bureau, Decennial Census. 2020.

Indicates statistic is larger than the State statistic by more than five percent

Indicates statistic is within five percent of the State statistic

Indicates statistic is smaller than the State statistic by more than five percent

"The community is dealing with inequality and disparities, especially in the more rural areas of the six counties where resources are particularly limited."

- Community Stakeholder

## Income, Poverty, and Employment

Household income and income distribution are important to understanding a community's level of access to healthcare services. Typically, economically challenged communities lack sufficient health

<sup>&</sup>lt;sup>4</sup> National Institutes of Health, part of the U.S. Department of Health and Human Services. (2022, March). Health in Rural America. News in Health. https://newsinhealth.nih.gov/2022/03/health-rural-america.

insurance coverage and may not always receive enough preventative healthcare nor other necessary programs and resources for health and wellness.

- In the six-county community, only Maury and Marshall have a higher median household income compared to the Tennessee average, \$62,829 (Table 8). The median income is lowest in Lewis County, \$45,369, and highest in Maury County, \$74,756.
- The combined six-county percent of families living below federal poverty level (FPL), 11.7%, is higher compared to the Tennessee average, 7.1%. Also, the community's percent of families with children living below FPL is higher, 7.5%, compared to Tennessee, 5.2%.
- The six-county unemployment rate, 3.0%, is about the same as the Tennessee average, 2.9%, but differs by county from a low of 1.8% in Maury County to a high of 4.3% in Lawrence County.

Indicator	Giles	Lawrence	Lewis	Marshall	Maury	Wayne	6 Counties	Ę	U.S.
Median Household Income	\$57,013	\$49,229	\$45,369	\$64,116	\$74,756	\$53,970	\$57,409	\$62,829	\$73,336
Families, Below Poverty	10.2%	13.8%	14.6%	13.3%	7.3%	11.2%	11.7%	7.1%	6.1%
Families, Below Poverty with Children	5.5%	9.7%	9.9%	7.7%	4.7%	7.7%	7.5%	5.2%	4.4%
Civilian - Unemployed (Age 16+)	3.0%	4.3%	2.2%	3.8%	1.8%	2.7%	3.0%	2.9%	3.0%
Family Households with Single Father	3.5%	3.3%	3.4%	3.9%	3.2%	4.1%	3.6%	3.3%	3.6%
Family Households with Single Mother	9.4%	8.7%	9.8%	10.0%	10.4%	6.8%	9.2%	10.8%	10.7%

## Table 8. Income, Poverty, and Employment, 2023

Data Source: Environics Analytics, 2023

Indicates statistic is more favorable than the State statistic by more than five percent

Indicates statistic is within five percent of the State statistic

Indicates statistic is less favorable than the State statistic by more than five percent

## **Educational Attainment**

Education is an important indicator impacting the level at which a person can read and understand complicated health and clinical information. Even if data reveals a population that should not have issues with reading written materials supplied by their healthcare provider, it is important to recognize that there are still differences among individuals and harm could be done by assuming everyone has the same literacy level. Therefore, it is good practice to identify diverse and alternative ways to communicate with community members specifically to ensure understanding and engagement in healthcare issues and treatment plans to achieve better health outcomes.

- In the six-county community, educational attainment is higher compared to Tennessee for 'some high school', high school diploma, and 'some college' (Table 9).
- However, there is variation among the counties among achievement of an 'associate's degree or some college' or 'bachelor's and greater'. Completion of at least a bachelor's degree in each of the six counties is lower compared to Tennessee, 28.3%.

#### Table 9. Percentage of Population by Educational Attainment, 2023

Indicator	Giles	Lawrence	Lewis	Marshall	Maury	Wayne	6 Counties	Ł	U.S.
Some High School, No Diploma or Less	13.0%	15.9%	16.9%	12.9%	11.1%	19.2%	14.8%	7.7%	6.6%
High School Diploma (or GED)	44.7%	44.0%	44.3%	40.1%	35.0%	45.2%	42.2%	31.7%	26.9%
Associate's Degree or Some College	24.4%	26.3%	28.7%	30.9%	29.5%	25.1%	27.5%	27.9%	28.7%
Bachelor's and Greater	17.9%	13.8%	10.1%	16.2%	24.4%	10.5%	15.5%	28.3%	32.9%

Data Source: Environics Analytics, 2023

Indicates statistic is more favorable than the State statistic by more than five percent

Indicates statistic is within five percent of the State statistic

Indicates statistic is less favorable than the State statistic by more than five percent

"Early education is essential to lifelong health choices and influencing older family members' (parents and grandparents) health behaviors."

- Community Stakeholder

## Housing and Homelessness

The lack of adequate housing can negatively impact a person's physical and mental state and can contribute to multiple health problems and injuries. Unhoused individuals are more susceptible to certain diseases, have greater difficulty getting healthcare, and can be harder to treat. Notably, the COVID-19 pandemic in 2020 created job losses and housing insecurity that has continued, creating deeper issues for people of lower socioeconomic status and new concerns for others such as an increasing number of unsheltered families and unhoused seniors. Additionally, this community is seeing home prices increase as metropolitan areas such as Nashville drive house hunters south.

- A larger percentage of each of the six counties are homeowners, combined 73.2%, compared to Tennessee, 66.5% (Table 10).
- Currently, none of the counties are reporting a severe housing cost burden (more than 30% of monthly income on rent and housing) higher compared to Tennessee, 11.9.
- The National Alliance to End Homelessness reported a smaller rate of homeless per 10,000 people in the Central Tennessee Continuum of Care (CoC), 3.0, compared to 15.0 in Tennessee, and 18.0 nationally. Although only a small percentage of the community is reported to be unhoused, between 2018 and 2022 the CoC homeless population increased by 44% (Figure 4). Not shown in Figure 4 is the state growth trend between 2018 and 2022, a 34% increase.<sup>5</sup>

<sup>&</sup>lt;sup>5</sup> National Alliance to End Homelessness. State of Homelessness: State and Continuum of Care (CoC) Dashboards. <u>https://endhomelessness.org/homelessness-in-america/homelessness-statistics/state-of-homelessness-dashboards</u>. Accessed 1 June 2023.

#### Table 10. Homeowners and Housing, 2022

Indicator	Giles	Lawrence	Lewis	Marshall	Maury	Wayne	6 Counties	TN	U.S.
Percent Homeowners	70.4	75.2	78.4	73.1	71.8	78.6	73.2	66.5	64.4
Percent Severe Housing Cost Burden	9.1	10.9	8.8	11.2	9.8	7.4	9.9	11.9	14.2
Percent Severe Housing Problems	10.0	13.5	8.4	11.9	12.8	13.6	12.3	13.9	17.3
Percent Inadequate Facilities	1.3	2.8	1.2	0.7	0.7	0.7	1.2	0.9	N/A

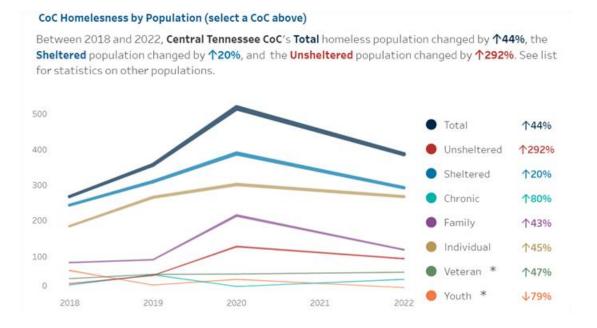
Data Source: Robert Wood Johnson County Health Rankings, 2022.

Indicates statistic is more favorable than the State statistic by more than five percent

Indicates statistic is within five percent of the State statistic

Indicates statistic is less favorable than the State statistic by more than five percent

#### Figure 4. Central Tennessee Continuum of Care (CoC), State of Unhoused by Population, 2008-2022



Data Source: National Alliance to End Homelessness, State of Homelessness: State and Continuum of Care (CoC) Dashboards.

"The biggest crisis issue is the homeless community and a whole new wave of people [with housing insecurity] due to increased costs in housing."

- Community Stakeholder

## Transportation

Reliable transportation is important to meet basic daily needs such as arriving at work on time, visiting the grocery store, and traveling to a medical or social service appointment. This is especially important in the Middle Tennessee community, where convenient and accessible options are limited due to the six counties' large geographic region and rural status. In addition, our community has a shortage of healthcare providers, limited healthy food sites, and too few local employment opportunities, resulting in our community members having to travel to fulfill these basic needs.

- Our data review shows that a range of 2.3% to 7.4% of our six-county households lack a motor vehicle (Table 11). However, this does not mean that the vehicle owned is safe, reliable or can meet the daily needs of multiple family members traveling in different directions, for different purposes.
- Also, less than 1% of residents aged 16 years and older rely on public transportation at all.

While more metropolitan areas rely upon Uber and Lyft, ride services are not consistently reliable in our rural counties. The South Central Area Transit Services (SCATS) does provide multi-county public transport services starting and ending in various county locations (our six counties included); however, they are limited to specific fixed routes. This leaves volunteer assisted transportation to fill in the gap, mainly for underserved populations (senior citizens and others that may not own a vehicle).

Indicator	Giles	Lawrence	Lewis	Marshall	Maury	Wayne	6 Counties	NL	U.S.
Public Transport (Age 16+)	0.0%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.6%	4.7%
Households with No Vehicles	4.2%	7.4%	5.8%	3.3%	2.3%	6.9%	5.0%	5.6%	8.5%

#### Table 11. Transportation, 2023

Data Source: Environics Analytics, 2023

Indicates statistic is more favorable than the State statistic by more than five percent

Indicates statistic is within five percent of the State statistic

Indicates statistic is less favorable than the State statistic by more than five percent

## Food Environment

Routine hunger can lead to undernourishment and malnutrition, impacting both short and long-term health issues. Food insecurity can also accelerate the development of new diseases or worsen existing diseases. A high concentration of corner stores, liquor stores, and fast-food chains promote unhealthy or less healthy options. Households that are low-income typically also lack "food security". Surprisingly, food insecurity can co-exist with obesity if foods high in fat and sugar, but low in nutritional quality are what is affordable and frequently eaten. The COVID-19 pandemic increased food insecurity for many in the six counties and despite the great work done by community-based organizations such as the Second

Harvest Food Bank of Middle Tennessee, The People's Table, and the South Central Human Resource Agency, many in our community continue to face food insecurity.

- The six-county average 'Food Environment Index' (a measure that combines the percentage of the population that is low-income and has low access to a grocery store and the percentage of the food insecure population) is better, 7.6, compared to Tennessee, 6.2. However, Lewis County is worse, 6.0 (Table 12).
- While the percent of the overall community that has experienced food insecurity, 12.9%, is better than Tennessee, 13.3%, three of the six counties are worse (Lawrence, 15.3%; Lewis, 16.0%; and Wayne, 15.9%).
- Except for Maury County, 85.2, a possible benefit of this community's rural status is that there is a lower rate per 100,000 population of fast-food restaurants compared to Tennessee, 78.0.
- However, there is a higher rate of liquor stores per 100,000 population in Giles, 16.5, Lawrence, 11.3, and Maury, 12.9, compared to the state, 9.5.

#### Lawrence Counties Marshall Wayne Lewis Giles Maury U.S. Z Indicator õ Food Environment Index (0=worst, 10=best) 7.7 7.7 6.0 7.4 8.0 6.8 7.6 6.2 7.8 % Food Insecure 13.7 15.3 16.0 10.7 15.9 12.9 10.9 13.2 13.3 % Limited Access to Healthy Foods 4.8 1.6 17.0 9.0 7.8 8.9 7.0 8.9 6.1 # grocery stores per 100k population 14.1 18.8 13.2 15.9 23.8 8.7 10.9 18.5 12.9 # liquor stores per 100k population 16.5 11.3 N/A N/A 12.9 N/A 9.7 9.5 10.5 78.0 75.9 # fast food restaurants, per 100k population 63.6 72.5 67.9 85.2 71.5 61.2 18.5

#### Table 12. Food Environment, 2020 and 2022

Data Sources: Robert Wood Johnson County Health Rankings, 2022. CaresEngagement; US Census Bureau, County Business Patterns, 2020.

Indicates statistic is more favorable than the State statistic by more than five percent

Indicates statistic is within five percent of the State statistic

Indicates statistic is less favorable than the State statistic by more than five percent

## Physical & Social Environment

Access to healthy food, green space, and sites for safe physical activity impacts our quality of life, years of healthy life lived, and long-term health prospects. None of the other social drivers of health community issues can be fully understood in isolation of the environment we live in; unfortunately, the social and physical environments may be the most difficult to change. In summary, where our community lives influences how well they live.

The state's most current outdoor recreation plan, Tennessee 2020, prepared by the Tennessee Department of Environment reported that 24 counties in the state of Tennessee have neither a municipal nor a county parks and recreation department able to provide a range of opportunities as

required by a diverse population.<sup>6</sup> Lewis County was on this list. However, the availability of these spaces in the other five counties does not mean that residents are benefiting from using the sites nor view them as well maintained or safe.

- Each of the six counties have a lower percentage of the population with access to exercise opportunities, and a combined average of 42.6%, compared to the state, 62.2% (Table 13).
- Average daily air quality is better or about the same for all counties compared to the state. However, a water quality issue in Wayne County was reported.
- The internet indicators, specific for the uninsured population, vary by county. Compared to the state averages, high speed internet is worse, cellular data plan is worse except for Marshall and Maury, and household internet percentages are about the same or better.
- The social association rate measures the number of membership associations per 10,000 population reflecting that people voluntarily belonging to groups and social support networks are less likely to have increased morbidity and early mortality. Unfortunately, the six-county rate, 9.9, is lower, TN 11.1.
- The crime and injury indicators appear to be most favorable in Maury and Marshall.

Indicator	Giles	Lawrence	Lewis	Marshall	Maury	Wayne	6 Counties	TN	U.S.
Average Daily PM2.5	8.1	6.9	7.5	8.0	7.0	7.7	7.5	8.0	7.5
Presence of Water Violation	No	No	No	No	No	Yes	N/A	N/A	N/A
% with Access to Exercise Opportunities	39.4%	39.8%	13.4%	37.7%	49.9%	42.4%	42.6%	62.2%	79.8%
% Uninsured with household internet	82.4%	82.4%	82.4%	91.1%	91.1%	82.4%	87.2%	83.4%	86.7%
% Uninsured with cellular data plan	66.9%	66.9%	66.9%	86.3%	86.3%	66.9%	78.1%	76.0%	79.0%
% Uninsured with high speed internet	41.4%	41.4%	41.4%	57.9%	57.9%	41.4%	50.9%	62.7%	65.3%
Social Association Rate	9.8	10.6	9.8	8.1	10.6	7.8	9.9	11.1	9.2
Violent Crime Rate (per 100k)	311.2	462.4	484.4	512.3	452.9	297.0	437.0	620.8	386.5
Homicide Rate (per 100k)	N/A	6.3	N/A	N/A	4.6	N/A	3.2	8.4	5.9
Firearm Fatalities Rate (per 100k)	23.1	20.6	36.3	14.9	15.0	15.7	18.2	18.8	12.4
Motor Vehicle Mortality Rate (per 100k)	29.8	13.8	23.7	16.5	14.7	24.0	17.7	15.8	11.6
Injury Death Rate (per 100k)	124.3	100.1	126.9	93.5	83.0	92.7	95.6	99.6	75.9

#### Table 13. Physical and Social Environment, and Safety, 2021 and 2022

Data Sources: Robert Wood Johnson County Health Rankings, 2022. U.S. Census Bureau, 2021. American Community Survey, 2021.

Indicates statistic is more favorable than the State statistic by more than five percent

Indicates statistic is within five percent of the State statistic

Indicates statistic is less favorable than the State statistic by more than five percent

<sup>&</sup>lt;sup>6</sup> Tennessee Department of Environment and Conservation. *Tennessee 2020 (Outdoor Recreation) Plan*. <u>https://www.tn.gov/environment/program-areas/res-recreation-educational-services/res-tennessee-2020-plan.html</u>. Accessed 1 June 2023.

## Access to Healthcare in Our Community

## Overview

Access to comprehensive, coordinated, high quality health care services is essential for promoting and maintaining health, preventing and managing disease, reducing the possibility of premature death, and achieving health equity. Barriers to getting needed health services are many and include a lack of insurance, a lack of a primary care physician or medical home, and distance from conveniently accessible providers. Although telemedicine technologies (and updated payment models) have recently accelerated progress towards this goal, access still varies person to person and has not been consistently nor equitably achieved.

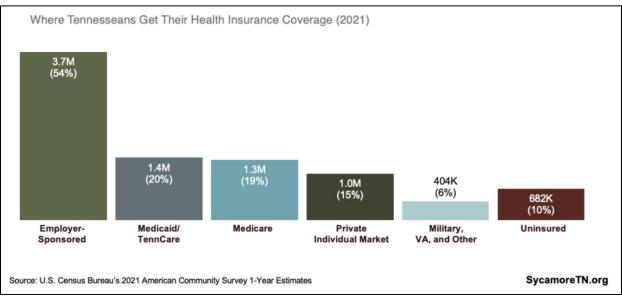
The next few pages describe many of the factors that impact access for our community: health insurance coverage, the availability of physicians, the presence of health centers across the broad continuum of care (inpatient acute hospitals, post-acute facilities, ambulatory clinics, etc.).

## Health Insurance Coverage

Health insurance coverage is a key component to accessing primary care, specialty care, medications, and other clinical services that keep a person well or keep an illness from worsening. A sizable portion of the population obtains job-based health insurance, but many others rely on governmental programs (Medicaid, Children's Health Insurance Program, and Medicare). The 2010 Patient Protection and Affordable Care Act (ACA) offered Medicaid expansion to states, however Tennessee opted to not expand its Medicaid program (TennCare). Unfortunately, insurance coverage alone does not guarantee access to high quality, affordable healthcare services. Further complicating coverage is that the typical offering of plan networks and service coverage can be confusing to persons with lower levels of education or health literacy.

- A Sycamore Institute report on Health Insurance Coverage in Tennessee found 54% of Tennesseans received employer sponsored health insurance, in 2021. Another 39% had governmental based insurance through TennCare (Medicaid) or Medicare (Figure 5).<sup>7</sup>
- This Health Insurance Coverage in Tennessee report also discovered that despite the COVID-19 pandemic, Tennessee's percentage of the population (all ages) that was uninsured held steady in 2021 (Figure 6).
- Tennessee's percentage of uninsured adults aged 0-64, 11%, is slightly higher than the national statistic, 10.0%. The residents of the six-counties range between 11.2% (Marshall and Maury Counties) to 13.1% (Lawrence, Lewis, and Wayne Counties) (Table 14).

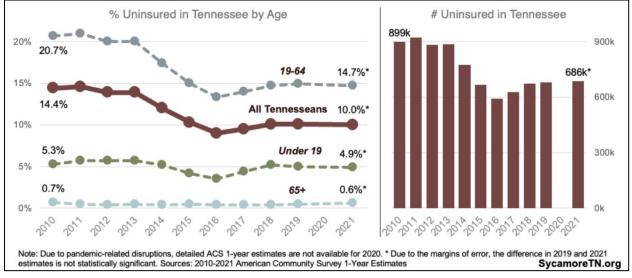
<sup>&</sup>lt;sup>7</sup> The Sycamore Institute. *2021 Census Data on Health Insurance Coverage in Tennessee*. <u>https://www.sycamoreinstitutetn.org/2021-health-insurance-coverage-in-tennessee/</u>. Accessed 12 June 2023.



#### Figure 5. Health insurance status in Tennessee, 2021

Data Source: The Sycamore Institute. 2021 Census Data on Health Insurance Coverage in Tennessee.

#### Figure 6. Tennessee Uninsured Rate Trend, 2010-2021



Data Source: The Sycamore Institute. 2021 Census Data on Health Insurance Coverage in Tennessee.

"One major improvement to impact the health of our community is health insurance, but 350,000 people in Tennessee are expected to fall off TennCare [this Spring, when the pandemic-related public health emergency Medicaid expansion ends]."

- Community Stakeholder

Indicator	Giles	Lawrence	Lewis	Marshall	Maury	Wayne	6 Counties	Ę	U.S.
Percentage of the age 0-64 population that is uninsured	13.0	13.1	13.1	11.2	11.2	13.1	12.0	11.0	10.0
Uninsured age 0-64 population by age group:									
Age 0-18	16.6	16.6	16.6	22.6	22.6	16.6	19.9	12.0	15.0
Age 19-34	28.0	28.0	28.0	30.8	30.8	28.0	29.6	37.0	38.0
Age 35-49	27.7	27.7	27.7	23.5	23.5	27.7	25.4	29.0	26.0
Age 50-64	27.7	27.7	27.7	23.0	23.0	27.7	25.1	22.0	20.0
Uninsured age 0-64 population by race/ethnicity:									
Spanish/Hispanic/Latino origin	3.6	3.6	3.6	35.1	35.1	3.6	21.0	10.0	29.0
White Non-Latino	85.5	85.5	85.5	55.6	55.6	85.5	69.0	66.0	47.0
Black Non-Latino	1.8	1.8	1.8	4.5	4.5	1.8	3.3	21.0	16.0
Asian / Native-Hawaiian / Pac Islander	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.0	4.0
American Indian / Alaska Native	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0	2.0
Multi-racial or other	9.1	9.1	9.1	3.7	3.7	9.1	6.1	2.0	3.0
Uninsured age 0-64 population by other attributes:									
Percentage with a disability	13.6	13.6	13.6	10.4	10.4	13.6	11.8	13.0	9.0
Percentage with a full-time worker in family	73.6	73.6	73.6	83.5	83.5	73.6	79.0	74.0	79.0
Percentage who speak English	91.6	91.6	91.6	80.0	80.0	91.6	85.2	95.0	87.0

#### Table 14. Percentage of the population that is uninsured and select attributes, 2021

Indicates statistic is more favorable than the State statistic by more than five percent

Indicates statistic is more revenable than the state statistic by more indicates statistic is within five percent of the State statistic

Indicates statistic is writin in the percent of the state statistic

# Health Professional Shortage Areas and Medically Underserved Areas

Access to care not only requires health insurance coverage, but enough providers to care for a population. So, the ratio of the population to primary care physicians is essential for preventive and primary care, and as may be needed, referrals to appropriate specialty care physicians.

**Health Professional Shortage Area** (HPSA) is defined by the federal government as an area, facility, or population group with a shortage of primary care physicians expressed by a population-to-primary care physician ratio greater than 3,500:1. Primary care includes the following specialties: family practice, general practice, internal medicine, pediatrics, obstetrics/gynecology, and general geriatrics. Other factors considered include the poverty rate, infant mortality rate, fertility rate, and indicators of scarce capacity to meet area need.

**Medically Underserved Area** (MUA) is defined as an area, facility, or population group with an Index of Medical Underservice (IMU) less than or equal to 62 out of 100. The IMU is calculated by taking into consideration the ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with an income below the federal poverty level, and the percentage of people aged 65 or older. These factors are converted to weighted values and then summed to obtain an IMU score for a particular area.

- All six counties are designated as a HPSA (Figure 7), and all except Maury County are documented to be a MUA (Figure 8). Much of this defined community is rural and does not have enough primary care providers.
- Additional indicators (Table 15) show that there is a lower ratio of primary care physicians, other primary care providers, and mental health providers compared to Tennessee.
- With the exception of Lewis and Marshall Counties, the data show the ratio of dentists is higher compared to the state. However, even where there are enough dentists, it is important to remember not all accept TennCare, Medicare, or uninsured patients.
- The preventable hospitalization rate (a predictor of hospital stays that could have been avoided had there been early and sufficient primary care to effectively manage people in the outpatient setting) varies by county, but is worse for the combined six counties, 4,609 per 100,000 population compared to the state, 4,331 per 100,000 population.

Indicator	Giles	Lawrence	Lewis	Marshall	Maury	Wayne	6 Counties	Ł	U.S.
Primary Care Physicians Rate	33.9	38.5	16.3	14.5	53.9	30.0	39.5	71.4	76.5
Mental Health Provider Rate	47.4	24.8	32.4	22.8	67.3	6.1	44.9	168.4	281.9
Dentist Rate	64.3	96.8	48.5	51.4	226.9	72.6	138.7	55.7	71.5
Other Primary Care Provider Rate	115.1	130.5	40.4	91.4	132.5	90.8	116.6	155.7	115.1
Preventable Hospitalization Rate (per 100,000 Medicare enrollees)	5,056	5,054	5,743	4,447	4,076	4,989	4,609	4,331	3,767
Preventable Hosp. Rate (AIAN)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3,911	5,454
Preventable Hosp. Rate (Asian)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2,599	2,218
Preventable Hosp. Rate (Black)	4,249	2,878	N/A	4,275	5,534	N/A	N/A	5,819	5,987
Preventable Hosp. Rate (Hispanic)	N/A	N/A	N/A	N/A	1,890	N/A	N/A	3,878	3,773
Preventable Hosp. Rate (white)	5,153	5,086	N/A	4,449	3,962	N/A	N/A	4,142	3,544

#### Table 15. Provider to Population and Preventable Hospitalization Rates, 2022

Data Source: Robert Wood Johnson County Health Rankings, 2022.

Indicates statistic is more favorable than the State statistic by more than five percent

Indicates statistic is within five percent of the State statistic

Indicates statistic is less favorable than the State statistic by more than five percent

"I've heard there are [provider] shortages in neurology, orthopedic surgery, urology, and mental health and addiction care."

- Community Stakeholder

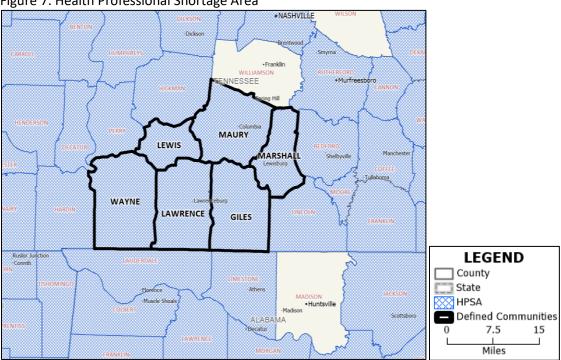


Figure 7. Health Professional Shortage Area



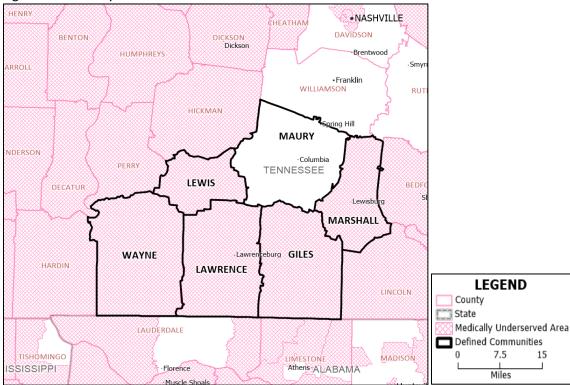


Figure 8: Medically Underserved Area

Data Source: Health Resources & Services Administration. Find Shortage Areas, 2023.

## Local Clinics

Having a stable medical home and/or usual source of care is an important contributor to health and well-being, since these resources can enhance access to primary preventative care, alleviate health issues during a medical event, and improve overall continuity of care. Maury Regional Health (MRH) operates numerous clinics across the community, including <u>federally qualified health centers</u> (FQHCs) that provide care to many uninsured and underinsured residents. Alternative sites of care such as rural health clinics (RHCs) and urgent care clinics (UCCs) also play a role in ensuring that the community can obtain needed care.

- There are 60 sites of care across the six counties and approximately 63% of the clinics are located in Maury and Marshall (Table 16).
- There are numerous RHCs and UCCs, many of which are managed by MRH or Fast Pace.
- MRH operates FQHCs in Lewis, Marshall, Maury, and Wayne. There are also FQHCs operated by Mercy Health Services in Marshall and Lifespan in Wayne.
- The 2021 FQHC data collected from the Uniform Data System (UDS) includes Maury statistics for multiple locations in Lewis, Marshall, Maury, and Wayne Counties and Mercy statistics for two locations in Marshall and Williamson Counties (Table 17).<sup>8</sup>
- There were a combined 39,018 patients seen at a FQHC and although the demographic profiles vary, more than half served were patients at or below 200% of poverty and a quarter at or below 100% of poverty.
- The majority of the visits were for medical services followed by dental services, and many were diagnosed with chronic conditions such as hypertension and diabetes.

County	Federally Qualified Health Center Service Site	Rural Health Clinic	Urgent Care Clinic	Total Clinics	% Distribution
Giles		3	2	5	8.3%
Lawrence		4	3	7	11.7%
Lewis	1	3	1	5	8.3%
Marshall	15	2	2	19	31.7%
Maury	3	8	8	19	31.7%
Wayne	2	2	1	5	8.3%
Six Counties	21	22	17	60	100.0%

#### Table 16. Local clinics by type, 2023

Data Source: Definitive Health, 2023.

<sup>&</sup>lt;sup>8</sup> Health Resources & Services Administration. *Health Center Program Uniform Data System (UDS) Data Overview*. <u>https://data.hrsa.gov/tools/data-reporting/program-data</u>. Accessed 4 April 2023.

FQHC Patients and Services	Maury Regional Hospital	Mercy Health Services, Inc.	TN
Total Patients	26,112	12,906	437,128
Children (< 18 years old)	13.0%	46.5%	21.7%
Adult (18 - 64)	54.3%	48.5%	65.7%
Older Adults (age 65 and over)	32.7%	5.0%	12.6%
Cost			
Health Center Service Grant Expenditures	\$1,281,107	\$1,155,173	\$91,350,958
Total Cost	\$16,250,839	\$11,370,385	\$355,111,507
Total Cost Per Patient	\$622	\$881	\$812
Patient Demographics			
Best Served in another language	0.4%	25.9%	11.0%
Racial and/or Ethnic Minority	12.1%	48.7%	43.8%
Hispanic/Latino Ethnicity	2.5%	35.2%	14.0%
Black/African American	8.5%	11.7%	29.5%
Asian	0.4%	2.0%	0.7%
American Indian/Alaska Native	0.1%	0.5%	0.3%
Native Hawaiian / Other Pacific Islander	-	0.3%	0.2%
More than one race	0.9%	1.0%	3.4%
Patients at or below 200% of poverty	52.0%	66.7%	86.0%
Patients at or below 100% of poverty	21.6%	24.1%	66.9%
Uninsured	8.1%	21.3%	30.1%
Medicaid/CHIP	19.1%	40.0%	31.1%
Medicare	26.2%	5.9%	13.3%
Other Third Party	46.6%	32.9%	25.5%

## Table 17. FQHC Patient Demographics and Services. Uniform Data System, 2021

## Table 17. continued from prior page

FQHC Patients and Services	Maury Regional Hospital	Mercy Health Services, Inc.	TN
Services			
Medical	100.0%	84.3%	89.6%
Dental	-	-	7.3%
Mental Health	2.4%	29.7%	13.8%
Substance Abuse	0.0%	1.6%	2.0%
Vision	0.0%	· ·	0.5%
Enabling	0.0%	4.3%	11.1%
Clinical Conditions			
Hypertension	67.5%	25.3%	42.3%
Diabetes	19.5%	11.8%	17.4%
Asthma	3.3%	5.5%	4.0%
HIV	0.1%	-	0.5%
Prenatal Patients	78	50	6,781
Prenatal Patients who Delivered	18	-	3,721
First Prenatal Visit in 1st Trimester	100.0%	56.0%	62.8%
Low Birth Weight	-	0.0%	10.3%
Cervical Cancer Screening	30.3%	27.5%	44.9%
Adolescent Weight Screening and Follow Up	92.4%	14.3%	76.6%
Adult Weight Screening and Follow Up	94.4%	26.8%	76.6%
Adults Screened for Tobacco Use and Receiving Cessation Intervention	95.5%	77.2%	84.6%
Colorectal Cancer Screening	52.8%	28.2%	35.5%
Childhood Immunization	33.1%	44.7%	29.8%
Depression Screening	90.1%	27.8%	77.7%
Dental Sealants	-	-	70.9%
Statin Therapy for the Prevention and Treatment of Cardiovascular Disease	66.8%	67.4%	77.7%
Heart Attack/Stroke Treatment (Aspirin Therapy for Ischemic Vascular Disease)	86.0%	75.9%	82.2%
Blood Pressure Control (Hypertensive Patients with Blood Pressure < 140/90)	75.4%	51.8%	60.2%
Uncontrolled Diabetes > 9%	19.7%	28.0%	31.0%
HIV Linkage to Care	-	-	77.0%
Breast Cancer Screening	68.3%	39.9%	46.7%
Depression Remission	0.0%	0.0%	19.3%
HIV Screening	1.7%	2.7%	23.0%

Source: Health Resources and Services Administration. Health Center Program Uniform Data System Data, 2021.

Maury statistics reported for multiple locations in Lewis, Marshall, Maury, and Wayne Counties.

Mercy reported for locations in Marshall and Williamson Counties.

Indicates statistic is larger than the State statistic by more than five percent

Indicates statistic is within five percent of the State statistic

Indicates statistic is smaller than the State statistic by more than five percent

## **Inpatient Facilities**

Inpatient care is much more expensive than treatment in the outpatient setting. Also, the best prevention and wellness efforts may still require hospitalization on occasion. For this reason, the six counties are served by Maury Regional Health (MRH), the largest health system between Nashville and Huntsville. MRH's largest inpatient acute care hospital is based in Maury, but also operates a critical access hospital in Marshall, and a 25-bed facility in Wayne. Southern Tennessee Regional Health System also operates community hospitals in Giles and Lawrence. While patients may also opt to seek care in Nashville or Huntsville, MRH's facilities provide high quality and excellent care across the continuum.

- The six counties are reported to have 475 acute care beds, or 1.9 beds per 1,000 population (Table 18). This is lower compared to Tennessee, 2.7, and to the national average, 2.4.
- In 2022, Maury Regional Health's three hospitals reported 11,560 discharges for residents of the six counties (community discharges from other hospitals were not available). Overall, 51.6% of these discharges were related to four conditions 1) respiratory, 2) circulatory, 3) pregnancy/childbirth, and 4) newborn/perinatal (Table 19).
  - These were the same top four categories reported from all inpatient discharges in the state of Tennessee (per the most recent available 2021 hospital discharge data).
  - Possibly due to existing patterns of Wayne County residents seeking pregnancy and childbirth care in North Alabama hospitals, Wayne reported musculoskeletal and connective tissue 3<sup>rd</sup> and kidney/urinary tract 4<sup>th</sup>.
- Also in 2022, six county residents generated 55,022 visits in the emergency departments (EDs) of MRH hospitals (community ED visits from other hospitals were not available) (Table 20).
  - Compared to the state averages, six county resident MRH emergency department use was higher among persons aged 65 and older and lower for persons aged 0-64 years.
  - Six county residents also use the MRH emergency department less frequently for minor issues and more frequently for severe life-threatening concerns.

#### Table 18. Licensed Acute Care Hospital Beds per 1,000 population, 2021

Hospital Name	Hospital Type	City	County	# of Staffed Beds	Acute Care Beds per 1,000 Population
Marshall Medical Center	Critical Access	Lewisburg	Marshall	25	
Maury Regional Medical Center	Short Term Acute	Columbia	Maury	255	
Southern Tennessee Regional Health System, Lawrenceburg	Short Term Acute	Lawrenceburg	Lawrence	89	Not Available
Southern Tennessee Regional Health System, Pulaski	Short Term Acute	Pulaski	Giles	81	
Wayne Medical Center	Short Term Acute	Waynesboro	Wayne	25	
6 Counties		•	* 	475	1.9
Tennessee				18,995	2.7
U.S.				787,967	2.4

Data Sources: Definitive Health, 2023. KFF Hospital Beds per 1,000 Population, 2021.

"Area hospitals don't just provide care, they are some of our largest employers."

- Community Stakeholder

Major Diagnostic Category (MDC) Group	Giles Rank	Lawrence Rank	Lewis Rank	Marshall Rank	Maury Rank	Wayne Rank	6 Counties	TN
Respiratory System	12.4%	10.1%	13.2%	16.9%	13.2%	19.5%	13.7%	11.4%
Circulatory System	15.0%	15.3%	11.9%	12.5%	11.8%	13.9%	12.9%	12.5%
Pregnancy, Childbirth And Puerperium	12.9%	14.1%	13.0%	11.6%	13.6%	5.6%	12.6%	10.4%
Newborn And Other Neonates (Perinatal Period)	12.8%	13.9%	13.1%	11.1%	13.3%	5.6%	12.4%	9.7%
Infectious and Parasitic DDs	9.3%	7.8%	11.0%	8.7%	9.1%	7.0%	8.8%	8.8%
Digestive System	6.8%	8.1%	7.2%	7.0%	7.2%	6.5%	7.2%	6.5%
Musculoskeletal System And Connective Tissue	5.2%	7.4%	7.1%	7.5%	5.8%	9.1%	6.6%	6.8%
Kidney And Urinary Tract	6.5%	5.2%	4.2%	6.0%	6.1%	9.0%	6.1%	4.2%
Nervous System	4.7%	4.0%	5.6%	4.3%	5.3%	4.9%	4.9%	7.3%
Endocrine, Nutritional And Metabolic System	2.5%	2.8%	3.4%	3.4%	4.2%	5.0%	3.7%	3.5%
Factors Influencing Health Status	1.7%	2.2%	2.5%	3.7%	2.9%	4.3%	2.9%	1.1%
Hepatobiliary System And Pancreas	2.9%	3.4%	2.4%	2.3%	2.0%	3.0%	2.4%	2.7%
Skin, Subcutaneous Tissue And Breast	2.1%	1.4%	1.7%	2.0%	1.7%	2.5%	1.8%	1.5%
Injuries, Poison And Toxic Effect of Drugs	1.3%	1.0%	0.8%	1.1%	0.9%	1.5%	1.0%	1.5%
Blood and Blood Forming Organs and	1.20/	1.00/	0.40/	0.40/	0.6%	0.00/	0.70/	1.10/
Immunological Disorders	1.3%	1.3%	0.4%	0.4%	0.6%	0.9%	0.7%	1.1%
Female Reproductive System	0.5%	0.3%	0.8%	0.1%	0.2%	0.2%	0.3%	0.6%
Mental Diseases and Disorders	0.2%	0.1%	0.5%	0.1%	0.2%	0.1%	0.2%	7.0%
Myeloproliferative DDs (Poorly Differentiated Neoplasms)	0.1%	0.4%	0.3%	0.0%	0.2%	0.1%	0.2%	0.8%
Male Reproductive System	0.3%	0.3%	0.0%	0.1%	0.1%	0.1%	0.1%	0.2%
Ear, Nose, Mouth And Throat	0.1%	0.0%	0.3%	0.2%	0.1%	0.2%	0.1%	0.6%
Eye	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Multiple Significant Trauma	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%
Burns	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Alcohol/Drug Use or Induced Mental Disorders	*	*	*	*	*	*	*	*
Human Immunodeficiency Virus Infection	*	*	*	*	*	*	*	*
Ungroupable	1.6%	0.7%	0.8%	1.2%	1.5%	1.0%	1.3%	1.2%
Total Inpatient Discharges from MRH Hospitals	1,096	1,761	764	1,679	5,291	969	11,560	13,184
Total from all TN Hospitals								859,958

## Table 19. Inpatient Discharges Rank Ordered by Medical Diagnostic Category (MDC), 2021

Data Sources: MRH inpatient discharges for MRMC, MMC, and WMC, 2022. TN Hospital Association Health Information Network, 2021. \*To ensure individual privacy and that no one is identifiable from information within this dataset, counts were removed.

Indicates the MDC with the largest number of discharges

Indicates the MDC with the 2nd largest number of discharges

Indicates the MDC with the 3rd largest number of discharges

Indicates the MDC with the 4th largest number of discharges

Emergency Department Visits	Giles	Lawrence	Lewis	Marshall	Maury	Wayne	6 Counties	TN
Utilization by Age Group								
0-17 Years Old	8.9%	10.5%	10.7%	16.2%	13.8%	14.3%	13.7%	18.2%
18-64 Years Old	56.3%	56.8%	55.3%	62.1%	59.6%	54.0%	59.1%	65.0%
65 and Older	34.9%	32.7%	34.0%	21.7%	26.6%	31.7%	27.2%	16.7%
Utilization by Acuity Level								
% Minor	0.2%	0.2%	0.1%	0.8%	0.4%	0.3%	0.4%	2.4%
% Low / Moderate	4.6%	4.2%	4.1%	12.5%	7.2%	10.0%	8.2%	8.3%
% Moderate	19.5%	19.8%	20.5%	37.3%	26.7%	27.6%	28.0%	32.8%
% Urgent (Severe Without Life Threat)	33.2%	36.0%	32.0%	26.2%	31.8%	30.8%	30.8%	35.8%
% Emergent (Severe With Life Threat )	42.5%	39.8%	43.4%	23.2%	34.0%	31.3%	32.6%	18.4%
Total ED Visits from MRH Hospitals	<b>2,611</b>	4,670	2,748	12,844	27,417	4,732	55,022	62,351
Total from all TN Hospitals								2,468,083

#### Table 20. Emergency Room Utilization, by Visit Level, 2021

Data Sources: Maury Regional Health ER Visits for MRMC, MMC, and WMC, 2022. Tennessee Hospital Association Health Information Network, 2021.

## Post-Acute Care Facilities

Accessing high quality, post-acute care services including skilled nursing, home health, rehabilitation services, and long-term care is a challenge across the country and especially in rural geographies. Seniors age 65+ are most impacted since Medicare is the primary payer for the four traditional post-acute care settings: long-term acute care hospitals, inpatient rehabilitation facilities, skilled nursing facilities (SNFs), and home health agencies.

- The are a total of 22 skilled nursing facilities (SNFs) in the community, but the numbers range among the counties from a high of 7 in Maury to a low of 1 in Lewis (Table 21).
- While the 'CMS Quality Star Ratings' may vary over the quarterly reporting periods, there is a larger number of SNFs reported to be of higher quality (ratings of 4 or 5 stars) located within Lawrence County, 50.0%, compared to the other counties.
- However, there are also low scoring (ratings of 1 or 2) SNFs in each county.
- No rehabilitation facilities nor long-term care hospitals are located in the six counties, but residents can access these services regionally in TN (Franklin or Nashville) and in Huntsville, AL.

County	1 Star (Low Score)	2 Stars	3 Stars	4 Stars	5 Stars (High Score)	Score Not Available	Total SNFs	Percent 4 or 5 Stars
Giles	1		1	1		1	4	25.0%
Lawrence	1			1	1	1	4	50.0%
Lewis	1						1	0.0%
Marshall		1	1			1	3	0.0%
Maury	1		3	1	1	1	7	28.6%
Wayne	1					2	3	0.0%
6 Counties	5	1	5	3	2	6	22	22.7%

#### Table 21. Skilled Nursing Facility Count, by CMS Quality Star Rating, 2023

Data Source: CMS Nursing Home Compare via Definitive Health as of January 2023.

## Behavioral Health Facilities

Health has historically been defined quite narrowly, but modern holistic views now recognize that health is a combination of physical, mental, social, and emotional well-being. The COVID-19 pandemic revealed both need and understanding that mental health influences physical health and vice versa, therefore both should be thought of as essential services on a continuum of care for persons of all ages.

- There are two psychiatric inpatient hospitals in the six counties (Table 22).
- Maury Regional Health and partner HCA Healthcare's TriStar Health operate Pinewood Springs that serves both adult and adolescent patients.
- Unity Psychiatric Care hospital offers comprehensive inpatient care for seniors 55 and older, including those struggling with behavioral issues linked to dementia.

Hospital Name	Hospital Type	City	County	# of Staffed Beds
Pinewood Springs	Inpatient Psychiatric	Columbia	Maury	60
Unity Psychiatric Care - Columbia	Inpatient Psychiatric	Columbia	Maury	16
Data Causa Dafinitina Unaltha 2022				

#### Table 22. Psychiatric Hospitals, 2023

Data Source: Definitive Health, 2023.

## **Health Status**

## Overview

Studies, including those mentioned earlier in our CHNA, show that communities that are socioeconomically disadvantaged (often lacking in basic resources such as access to healthy food, safe places to exercise, and geographically convenient clinics) have unhealthy behaviors and the worst health outcomes. Our six-county composition as a rural geography with provider shortages, limited economic development and common social and environmental challenges result in opportunities to continue to progress health equity for all residents and improve the overall health status of our community. The data indicators that follow illustrate these opportunities.

## General Health and Chronic Conditions

The Center for Disease Control and Prevention (CDC) has documented that chronic diseases are the leading cause of death and disability in the United States and drivers of the nation's \$4.1 trillion in annual health care costs. They estimate that 6 in 10 adults in the U.S. have at least one chronic disease and 4 in 10 adults have two or more. The CDC has identified four lifestyle risk factors that increase risk for chronic conditions: (1) tobacco use, (2) poor nutrition, (3) lack of physical activity, and (4) excessive

alcohol use.<sup>9</sup> So, healthier choices can potentially prevent or lessen the chronic disease impact, which if left undiagnosed or unmanaged can reduce quality of life.

One source of data reviewed is the Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is a telephone survey that collects self-reported data about U.S. residents (adults and children) regarding their health-related risk behaviors, chronic health conditions, and use of preventive services. Data is collected for all 50 states and some states like Tennessee also collect information by county.

- Our community recognizes their own health challenges and when surveyed, rated their health as either fair or poor, 16.5%, worse than the Tennessee average, 15.6%. Of all six counties, only Maury's rate, 14.5%, was better compared to the state (Table 23).
- The percentage of surveyed residents that reported being physically inactive, 32.6%, was worse compared to the state, 29.0%. However, residents reported about the same, 35.2%, compared to the state, 35.2%, for sleeping less than seven hours.
- Surveyed residents were diagnosed in higher percentages compared to the state for arthritis, 28.0%, chronic kidney disease, 2.8%, coronary heart disease, 6.5%, and obesity, 38.5%.
- Lower percentages of diagnosed diabetes and stroke were reported, compared to the state.
- The remainder of the conditions surveyed were about the same as the Tennessee average, chronic obstructive pulmonary disease (ranged from highest Lewis 10.1% to lowest Maury 7.1%) and asthma (Lewis was highest, 11.1%, and Maury was lowest, 10.2%).

Indicator	Giles	Lawrence	Lewis	Marshall	Maury	Wayne	6 Counties	TN	U.S.
Self-Reported Health Status									
Fair or poor self-rated health status	17.0	18.4	19.2	17.2	14.5	19.1	16.5	15.6	13.7
Physical health not good for >=14 days	11.6	12.7	13.1	11.8	10.1	12.6	11.3	10.1	9.4
No leisure-time physical activity	26.0	27.7	28.6	26.5	24.2	28.7	25.9	23.3	22.9
% Physically Inactive	32.0	35.3	34.6	32.8	30.9	35.3	32.6	29.0	25.9
Sleeping less than 7 hours	34.8	35.8	36.2	38.0	33.9	35.9	35.2	36.3	33.3
Self-Reported Chronic Conditions									
Arthritis	28.7	28.8	30.1	28.6	26.8	28.7	28.0	26.4	21.3
Chronic kidney disease	2.9	3.0	3.1	2.9	2.7	3.0	2.8	2.4	2.7
Chronic obstructive pulmonary disease	8.5	9.8	10.1	8.7	7.1	9.8	8.3	8.5	5.6
Coronary heart disease	6.8	7.2	7.4	6.7	5.9	7.4	6.5	4.3	5.5
Current asthma	10.8	11.0	11.1	10.7	10.2	10.5	10.6	10.2	9.2
Diagnosed diabetes	11.6	11.7	12.0	11.4	10.8	12.0	11.3	14.7	9.7
Stroke	3.3	3.5	3.6	3.3	2.9	3.6	3.2	4.2	2.8
Obesity	38.0	38.4	38.8	36.2	39.3	38.6	38.5	35.5	32.0

## Table 23. Self-Reported Health Status for Adults, 2020

Data Sources: Behavioral Risk Factor Surveillance System (BRFSS), 2020. Robert Wood Johnson County Health Rankings, 2022. Indicators for Adults Aged >=18 years. Indicates statistic is more favorable than the State statistic by more than five percent

Indicates statistic is more ravorable than the state statistic by m

<sup>&</sup>lt;sup>9</sup> The Center for Disease Control and Prevention. *National Center for Chronic Disease Prevention and Health Promotion*. <u>www.cdc.gov/chronicdisease/about/index.htm</u>. Accessed 12 June 2023.

# Maternal, Infant and Child Health

The health status and choices a mother makes during pregnancy can affect not only her own health, but the long-term well-being of her baby. For this reason, infant health begins before birth and nutrition, vitamins, and early, routine prenatal care are important. Health inequities influenced by socioeconomic status and race exist in risk factors related to pregnancy, such as hypertension, anemia, and gestational diabetes.

In 2020, the CDC reported U.S. maternal mortality rates (deaths) were up from 2019. Rates for non-Hispanic Black women were significantly higher than rates for non-Hispanic White and Hispanic women. Also, there was an increase in mortality rates correlated with the increase in average maternal age.<sup>10</sup> The following indicators show that there is still opportunity to improve maternal and infant, as well as child health status in the six counties.

- The community fertility rate, 65.7, was higher compared to the state average, 58.4.
- However, several maternal health indicators compare less favorably to the state, teen birth rate, 29.6, (TN 27.2), percentage of live births that are preterm, 12.3, (TN 10.9), and infant mortality rate, 6.1, (TN 7.0) (Table 24).
- The child mortality rate was worse in Lawrence, 66.1, and Wayne, 107.8, (TN 61.0).
- Wayne and Lewis also had worse statistics of children living in poverty and with food insecurity.

Indicator	Giles	Lawrence	Lewis	Marshall	Maury	Wayne	6 Counties	L	U.S.
Live Births	289	584	136	402	1,287	153	775	78,685	N/A
Fertility Rate per 1k Females Ages 15-44	56.7	73.8	65.5	60.7	66.3	66.1	65.7	58.4	N/A
Teen Birth Rate per 1k Females Ages 15-19	31.2	32.0	42.4	27.4	27.6	28.0	29.6	27.2	19.3
Percentage of Live Births that are Preterm	15.6	13.0	14.0	10.7	11.6	12.4	12.3	10.9	N/A
Percentage of Live Births with Low Birth Weight	11.1	9.2	7.4	8.7	8.9	11.8	9.2	8.9	N/A
Infant Mortality Rate (per 1,000 live births)	N/A	9.1	N/A	9.0	6.5	N/A	6.1	7.0	5.7
Child Mortality Rate (per 100,000 under age 18)	40.4	66.1	N/A	56.9	58.4	107.8	57.8	61.0	48.1
% Children in Poverty	19.1	18.7	20.7	15.6	12.5	24.2	15.9	18.4	15.7
Children receiving assistance - TANF	1.1	0.9	11.0	14.0	0.7	13.0	3.8	1.5	N/A
Children receiving assistance - SNAP	23.7	20.5	23.2	20.3	18.0	26.1	20.1	24.0	N/A
Infants & Children receiving benefits - WIC	35.4	34.8	42.3	31.8	19.4	42.6	28.3	31.7	N/A
Children <18 with food insecurity	15.6	17.4	19.9	14.7	11.1	19.3	14.2	15.6	N/A
Regulated child care spaces	1,061	1,474	467	787	2,991	335	7,115	3,157	N/A

## Table 24. Select Health Status Indicators for Women, Infant, and Children, 2019, 2020, and 2022

Data Source: TN State Birth Statistics, 2020. Robert Wood Johnson County Health Rankings, 2022. Annie E. Casey Foundation. Kids County Data Center, 2019,2022. Indicates statistic is more favorable than the State statistic by more than five percent

Indicates statistic is within five percent of the State statistic

<sup>&</sup>lt;sup>10</sup> The Center for Disease Control and Prevention. National Center for Health Statistics. <u>https://www.cdc.gov/nchs/data/hestat/maternal-mortality/2020/maternal-mortality-rates-2020.htm</u>. Accessed 12 June 2023.

## Senior Health

In the United States, more than 10,000 people turn age 65 every day and are living longer. Our sixcounty community is slightly older, 19.3% of the population is aged 65+, compared to both the Tennessee average, 18.2% and the national average, 17.9. The community is also expected to increase as the aged 65+ cohort is projected to be the fastest growing in the community, 18.1%, over the next five years (Table 3). Major health problems common to senior populations are chronic conditions that frequently require complex inpatient care and/or comprehensive outpatient management. Age-related health challenges include cardiovascular disease, cancer, and Alzheimer's disease. Frequently seniors must also face socioeconomic challenges (poverty, food insecurity, social isolation, housing insecurity, and health insurance gaps). It is also important to recognize that the pursuit of a high-quality life differs person to person and personal choices must be considered in overall senior health and wellness.

- The senior health indicators show improvement opportunity among all counties, compared to the state of Tennessee. However, Wayne County fared the worst.
- Seniors in the six-counties had a higher rate of preventable hospitalizations, 4,609, compared to Tennessee, 4,331, with the exception of Maury, 4,076 (Table 25).
- In aggregate, the six counties performed worse on percent 60+ cost-burdened homeowner, 20.8, (TN 18.0). However, the indicators were about the same as the state for percent 60+ below poverty level, 11.5, (TN 12.0), and percent 65+ without a vehicle, 2.2, (TN 2.2).
- Giles and Lawrence had the highest percentages of Medicare Enrollees with four or more chronic conditions, 47.0 and 48.0, respectively, (TN 42.0).

Indicator	Giles	Lawrence	Lewis	Marshall	Maury	Wayne	6 Counties	Ę	U.S.
Preventable Hospitalization Rate (per 100,000 Medicare enrollees)	5,056	5,054	5,743	4,447	4,076	4,989	4,609	4,331	3,767
Percent 60+ Cost-Burdened Homeowner	15.0	19.0	15.0	22.0	24.0	21.0	20.8	18.0	N/A
Percent 60+ Below Poverty Level	11.0	12.0	17.0	18.0	8.0	14.0	11.5	12.0	N/A
Percent 60+ with a disability	34.0	35.0	30.0	35.0	30.0	41.0	33.0	38.0	N/A
Percent 65+ without a Vehicle	1.4	2.9	2.6	1.1	2.1	4.3	2.2	2.2	N/A
Medicare Enrollees (2022)	5,591	7,323	2,466	5,235	14,651	2,900	38,166	1,047,188	N/A
Percentage of Medicare Enrollees with 4+ Chronic Conditions	47.0	48.0	37.0	40.0	40.0	42.0	42.5	42.0	N/A

## Table 25. Health Status for Seniors, 2022

Data Sources: Tennessee Commission on Aging and Disability, 2022. Robert Wood Johnson County Health Rankings, 2022

Indicates statistic is more favorable than the State statistic by more than five percent

Indicates statistic is within five percent of the State statistic

"Not everyone is aware there's a lot of free community resources for seniors – transportation, health screenings, fall prevention programs, etc."

- Community Stakeholder

## Behavioral Health and Substance Misuse

As noted previously in our report, mental health influences physical health and vice versa. For this reason, behavioral health (care of mental health and substance use disorders, life stressors and crises, and stress-related physical symptoms) must be considered a vital part of overall health and wellness. However, traditional health insurance does not consistently cover mental health, infrequently covers addiction services (for alcohol, and drug misuse including tobacco and vaping) and paying out of pocket for these services can be enormously expensive. These challenges are worsened in underserved communities where individuals are faced with economic and social disparities, limited available resources, and where there may be a greater stigma related to recognizing a problem and asking for help. Additionally, the 2020 COVID-19 pandemic and the related economic recession negatively affected people already suffering from mental illness and substance use disorders and created a new population in distress.

- Adults living in the six counties self-reported their mental health as worse than the state for mental health "not good", 17.6, (TN 16.8), and depression, 27.1, (TN 24.5) (Table 26).
- With the exception of Wayne County, other mental health indicators were more favorable, risk for severe depression, 40.6, (TN 52.4), frequent suicidal ideation, 36.0, (TN 51.3), positive for post-traumatic stress disorder (PTSD), 21.7, (TN 27.7), and identifying as trauma survivors, 93.8, (TN 111.7).
- The percent of adults smoking, 23.2, is higher compared to the state, 19.6. However, the population binge drinking, 15.2, is about the same compared to Tennessee, 15.6.
- Compared to the state averages, Maury has a higher opioid dispensing rate, 91.4, (TN 68.5), Marshall has a higher rate of inpatient stays involving a drug overdose, 128.0, (TN 101.0), and Lawrence has a higher rate of outpatient stays involving a drug overdose, 318.0, (TN 262.6).

Indicator	Giles	Lawrence	Lewis	Marshall	Maury	Wayne	6 Counties	N	U.S.
Mental Health									
Mental health not good for >=14 days, among	17.8	18.6	19.1	18.0	16.7	17.9	17.6	16.8	13.9
adults aged >=18 years									
Depression among adults aged >=18 years	27.0	28.4	28.7	27.2	26.4	26.4	27.1	24.5	18.5
Risk for Severe Depression Rate per 100k	40.4	29.9	*	35.6	48.6	60.6	40.6	52.4	47.2
Frequent Suicidal Ideation Rate per 100k	25.7	27.7	*	32.6	41.5	78.8	36.0	51.3	50.1
Positive for PTSD Rate per 100k	25.7	19.2	*	20.8	23.1	30.3	21.7	27.7	22.7
Rate Identifying as Trauma Survivors per 100k	88.2	100.2	60.8	50.4	100.4	163.6	93.8	111.7	92.4
Rate of Pyschotic-Like Experience Risk per 100k	*	64.0	43.4	17.8	24.7	30.3	29.1	31.9	25.6
Suicide Rate, Age-Adjusted per 100k	23.3	22.3	32.8	18.0	16.5	13.8	19.3	16.8	13.8
Social Association Rate per 10k	9.8	10.6	9.8	8.1	10.6	7.8	9.9	11.1	9.2
Substance Misuse									
Binge drinking among adults aged >=18 years	15.1	14.8	15.1	15.2	15.4	15.7	15.2	15.6	16.7
Current smoking among adults aged >=18 years	23.9	25.9	27.0	24.0	20.5	27.2	23.2	19.6	14.6
Opioid dispensing rate per 100k	43.7	37.0	33.7	54.3	91.4	62.0	65.4	68.5	43.3
Fatal overdose death rate per 100k	35.0	39.0	*	55.0	53.0	*	42.3	57.0	N/A
Inpatient stays involving drug overdose per 100k	71.0	98.0	105.0	128.0	97.0	70.0	97.1	101.0	N/A
Outpatient visits involving drug overdose per 100k	182.0	318.0	290.0	263.0	281.0	117.0	262.6	286.0	N/A

#### Table 26. Mental Health and Substance Misuse, 2020 and 2022

Data Sources: BRFSS, 2020. Mental Health America County and State Data Map Dashboard, 2022. CDC Opioid Dispensing Maps, 2020. Tennessee Department of Health, 2020. \*MHA works to ensure that no one individual is identifiable from information within this dataset. For all conditions, counties were excluded if fewer than 5 with a "positive" result.

Indicates statistic is more favorable than the State statistic by more than five percent

Indicates statistic is within five percent of the State statistic

Indicates statistic is less favorable than the State statistic by more than five percent

## **Preventive Care**

The Patient Protection and Affordable Care Act (ACA), signed into law in 2010, mandated that preventive care services be available at minimal to no charge when insured persons visit a medical provider. Many are not aware of these services and do not pursue immunizations and vaccines that prevent infections nor screenings for chronic conditions (high blood pressure, high cholesterol, pap smears for women, and prostate tests for men). There are numerous other community residents that do not have coverage for these services and can be directed to low or no cost settings in our community where these preventive services can be obtained (such as federally qualified health centers and County Health Departments). Preventive services reduce the risk for disease, disability and early death and lower the cost of care avoiding the progression of more serious conditions. Ensuring residents are educated about the importance of preventive care is necessary to improve the health of our community.

- Adult residents in our community have visited the doctor/had a checkup in the past year at a rate similar to the state, 73.9, (TN 73.5) (Table 27).
- However, the rate of visits to a dentist/dental clinic were lower compared to the state, 56.0, except for Maury, 61.2, which was about the same as the state average, 59.4.
- Residents obtained cervical cancer screenings at rates more favorable to the state, 78.1, but mammography rates were less favorable to the state average, 76.4.

• Among the six counties, the percent of Medicare enrollees having received their annual flu vaccination varies, but Lewis, 38.0, and Wayne, 43.0, are much lower than the state, 50.3.

Indicator	Giles	Lawrence	Lewis	Marshall	Maury	Wayne	6 Counties	NT	U.S.
Visits to doctor/checkup in the past year, age >=18 years	73.4	74.1	73.8	73.5	74.5	71.9	73.9	73.5	73.0
Visits to dentist or dental clinic, adults aged >=18 years	54.9	49.2	50.5	54.3	61.2	50.4	56.0	59.4	64.5
Cervical cancer screening, adult women aged 21-65 years	82.5	80.7	80.3	82.2	83.9	80.4	N/A	78.1	83.7
Mammography use among women aged 50-74 years	71.2	71.6	68.7	71.6	73.6	67.7	N/A	76.4	77.8
% Medicare enrollees, annual flu vaccination	50.0	48.0	38.0	50.0	54.0	43.0	50.3	50.0	48.0
% Vaccinated (AIAN)	*	*	*	*	*	*	N/A	42.0	40.0
% Vaccinated (Asian)	*	*	*	*	44.0	*	N/A	47.0	49.0
% Vaccinated (Black)	39.0	32.0	*	33.0	42.0	*	N/A	38.0	35.0
% Vaccinated (Hispanic)	56.0	30.0	*	26.0	37.0	*	N/A	37.0	35.0
% Vaccinated (white)	51.0	48.0	*	51.0	55.0	*	N/A	52.0	50.0
Older adult men aged >=65 years who are up to date on a core set of clinical preventive services: Flu shot past year, PPV shot ever, Colorectal cancer screening	39.4	38.2	37.5	40.7	49.5	38.3	43.3	Not Avail	44.0
Older adult women aged >=65 years who are up to date on a core set of clinical preventive services: Flu shot past year, PPV shot ever, Colorectal cancer screening, and Mammogram past 2 years	36.7	35.8	33.7	36.7	39.7	36.9	37.6	Not Avail	37.4

#### Table 27: Preventive care services, 2020 and 2022

Data Sources: Behavioral Risk Factor Surveillance System (BRFSS), 2020. Robert Wood Johnson County Health Rankings, 2022

\*To ensure that no one individual is identifiable from information within this dataset small counts were removed.

Indicates statistic is more favorable than the State statistic by more than five percent

Indicates statistic is within five percent of the State statistic

Indicates statistic is less favorable than the State statistic by more than five percent

# Leading Causes of Death

A key indicator of community health includes mortality rate (a measure of the frequency of occurrence of death) which is influenced by a wide variety of factors such as socioeconomic status, social drivers of health, community violence, and timely access to health care. The CDC reported between 2020 and 2021, the age-adjusted death rate for the total U.S. population increased 5.3%, and life expectancy decreased 0.6 year. Also, in 2021 heart disease was the leading cause of death, followed by cancer and COVID-19.<sup>11</sup>

 The Robert Wood Johnson County Health Rankings data documented the community average life expectancy at 75.0 years, about the same as Tennessee, 75.3 years. However, both the sixcounty average and the state statistic were lower compared to the national average, 78.5 years (Table 28). The premature age-adjusted death rate was worst in Lewis (556.5), followed by Lawrence (556.5), Giles (533.1), and Wayne (514.0) compared to the state, 481.3.

<sup>&</sup>lt;sup>11</sup> The Center for Disease Control and Prevention. NCHS Data Brief No. 456, December 2022. *Mortality in the United States,* 2021. <u>https://www.cdc.gov/nchs/products/databriefs/db456.htm</u>. Accessed 12 June 2023.

In Tennessee, the top five age-adjusted causes of death in the state were reported to be heart disease, followed by malignant neoplasms (cancer), accidents, COVID-19, and cerebrovascular disease (stroke). For our six counties, heart disease remained the top cause of death, followed by cancer. The third most frequent cause of death was due to COVID-19. Due to population size, available data for Lewis and Wayne were pre-pandemic and not age-adjusted, but likely these two counties experienced the same trend, and their third leading cause of death was COVID-19. (Table 29).

#### Table 28: Life Expectancy and Premature Death Rate, 2022

Indicator	Giles	Lawrence	Lewis	Marshall	Maury	Wayne	6 Counties	TN	u.s.
Life Expectancy	74.0	73.5	73.2	74.9	76.2	75.3	75.0	75.3	78.5
Premature Age-adjusted Death Rate (per 100k)	533.1	556.5	574.1	484.0	418.0	514.0	481.3	478.4	358.7

Data Sources: Robert Wood Johnson County Health Rankings, 2022.

Indicates statistic is more favorable than the State statistic by more than five percent

Indicates statistic is within five percent of the State statistic

Indicates statistic is less favorable than the State statistic by more than five percent

#### Table 29: Mortality Rates for Leading Causes of Death, 2020

		Giles	La	wrence	*	Lewis	M	arshall	N	Maury	* \	Nayne	Ter	inessee
		Age-												
		Adjusted												
Cause	Rank	Rate												
DISEASES OF HEART	1	281.1	1	281.5	1	N/A	1	260.8	1	165.4	1	N/A	1	196.2
MALIGNANT NEOPLASMS	2	188.2	2	196.9	2	N/A	2	203.0	2	144.5	2	N/A	2	149.7
ACCIDENTS AND ADVERSE EFFECTS	4	80.1	7	70.0	4	N/A	4	68.0	6	60.2	5	N/A	3	104.3
COVID-19	3	98.9	3	102.6		N/A	3	76.2	3	86.2		N/A	4	57.4
CEREBROVASCULAR DISEASE	7	44.3	6	52.7	5	N/A	6	44.6	7	33.9	4	N/A	5	54.1
CHRONIC LOWER RESPIRATORY DISEASES	5	52.4	4	84.5	3	N/A	5	60.2	4	57.9	3	N/A	6	49.9
ALZHEIMER'S DISEASE	6	53.9	5	86.9	9	N/A	7	38.4	5	56.7	6	N/A	7	44.6
DIABETES MELLITUS	8	41.2	8	34.3	7	N/A	8	**	8	28.2	8	N/A	8	40.2
CHRONIC LIVER DISEASE AND CIRRHOSIS						N/A	10	**	10	16.1		N/A	9	26.3
PNEUMONIA AND INFLUENZA			10	22.8	6	N/A			9	19.0	7	N/A	10	14.8
HYPERTENSION AND RENAL DISEASE	9	23.7				N/A						N/A		
SEPTICEMIA	10					N/A					9	N/A		
PARKINSON'S DISEASE			9	30.6		N/A						N/A		
SUICIDE					8	N/A	9	**				N/A		
NEPHRITIS, NEPHROTIC SYN., NEPHROSIS					10	N/A						N/A		
OTHER DISEASES OF RESPIRATORY SYS.						N/A					10	N/A		

Source: Tennessee State Death Statistics for counties with Populations of 20,000 or greater and Tennessee, 2020.

\* The table is populated for "Rank" of total death numbers from 2014-2017, for counties with populations less than 20,000 (Lewis and Wayne).

\*\* Figure is not displayed according to the Tennessee Department of Health guidelines for release of aggregate data to the public.

## Cancer

According to the National Cancer Institute, in 2023, an estimated 1,958,310 new cases of cancer will be diagnosed in the U.S. and 609,820 deaths from cancer are projected. The most common cancers (according to estimated new cases in 2023) are breast (15%), prostate (15%), lung and bronchus (12%), colon and rectum cancer (8%), and other (50%) including but are not limited to melanoma of the skin,

non-Hodgkin lymphoma, leukemia, bladder, kidney, endometrial, pancreatic, thyroid, and liver cancers.<sup>12</sup>

Cancer affects patients as well as their families and is often made worse by chronic conditions such as high blood pressure, obesity, and diabetes. While screening for cancers can be affordable and lifesaving, those without comprehensive health coverage often have difficulty accessing care providers or paying for cancer treatment which can be very expensive. In addition to clinical care of the patient, there is need for psycho-social support for newly diagnosed patients and increased emotional support for patients and families/caregivers too. Cancer identified in the early stages has a higher likelihood of survival making preventive screening and detection essential.

- The six-county cancer incidence rate, per 100,000 population, for "all cancer" and "all races", 490.8, was less favorable compared to the state, 466.5 (Table 30).
  - Giles had the only comparably favorable rate, 439.5.
  - Marshall had the highest unfavorable rate, 522.8, followed by Lewis, 506.8, and Maury, 502.6.
- The community also had comparably less favorable cancer incidence rates of lung and bronchus, 83.6, (72.9), colorectal, 42.1, (TN 40.0), bladder, 23.3, (TN 20.2), kidney, 22.3, (TN 20.1), and non-Hodgkin Lymphoma, 19.1, (TN 17.7).
- The community's age adjusted mortality rate, 178.9, was similar to the state, 170.4.
  - Lawrence had the highest morality rate, 193.0.
  - Giles had the lowest, 169.1.
- Among the various cancer types, lung cancer was consistently worse, 52.5, (TN 47.0) and only Giles had a rate, 46.0, lower compared to the state (Table 31).

"People should not be [prematurely dying] because they fear high costs of medical care and avoided seeking help."

- Community Stakeholder

<sup>&</sup>lt;sup>12</sup> National Cancer Institute. Cancer Statistics Facts: Cancer of Any Site. <u>https://seer.cancer.gov/statfactshttps://seer.cancer.gov/statfacts/html/all.html</u>. Accessed 12 June 2023.

#### Table 30: Cancer Incidence, 2015-2019

Indicator	Giles	Lawrence	Lewis	Marshall	Maury	Wayne	6 Counties	TN	U.S.
Incidence Rates (Per 100,000 Population)									
All Races (Includes Hispanic)	439.5	478.3	506.8	522.8	502.6	461.2	490.8	466.5	449.4
White (Non-Hispanic)	444.6	477.5	514.4	526.7	499.3	474.9	491.7	471.3	466.6
Black (Non-Hispanic)	428.2	380.4	*	554.2	548.7	*	439.4	458.1	453.8
AIAN (Non-Hispanic)	*	*	*	*	*	*	*	176.1	396.3
Asian / Pacific Islander (Non-Hispanic)	*	*	*	*	*	*	*	245.4	295.5
Hispanic (Any Race)	*	*	*	*	338.0	*	146.7	317.0	352.6
Incidence Rates (Per 100,000 Population)									
Lung & bronchus cancer	78.8	85.3	88.1	92.3	81.3	80.7	83.6	72.9	56.3
Breast cancer among females	112.9	122.3	96.2	148.3	130.6	100.1	125.6	123.8	128.1
Cervical cancer among females	*	*	*	*	10.3	*	4.5	8.1	7.7
Colorectal cancer	39.0	42.3	54.9	41.3	41.8	41.3	42.1	40.0	37.7
Prostate cancer	88.0	106.7	142.0	135.5	124.3	108.6	118.1	117.2	109.9
Bladder cancer	17.7	23.9	22.0	23.4	25.6	17.7	23.3	20.2	19.4
Kidney cancer	14.7	21.4	28.2	20.4	24.5	24.4	22.3	20.1	17.3
Leukemia	12.9	13.7	*	15.6	15.8	*	13.2	13.0	14.1
Liver cancer	9.3	5.1	*	10.3	7.6	*	6.8	8.7	8.6
Melanoma	13.9	20.4	*	17.5	16.4	*	15.0	20.9	22.9
Non-Hodgkin Lymphoma	18.8	23.8	*	18.8	19.3	21.2	19.1	17.7	19.0
Pancreatic cancer	12.3	14.1	*	14.8	12.8	*	11.8	12.5	13.2

Data Source: State Cancer Profiles, 2015-2019.

\* Low count records have been suppressed to ensure confidentiality and stability of rate estimates.

Indicates statistic is more favorable than the State statistic by more than five percent

Indicates statistic is within five percent of the State statistic

Indicates statistic is less favorable than the State statistic by more than five percent

#### Table 31: Cancer Mortality, 2015-2019

Indicator	Giles	Lawrence	Lewis	Marshall	Maury	Wayne	6 Counties	Ę	U.S.
Age-Adjusted Mortality (Per 100,000 Population)									
All Races (Includes Hispanic)	169.1	193.0	190.7	183.9	172.6	179.7	178.9	170.4	149.4
White (Non-Hispanic)	166.8	195.3	193.9	189.7	171.2	185.0	179.8	170.9	154.4
Black (Non-Hispanic)	214.6	*	*	154.6	211.7	*	140.5	190.2	174.7
AIAN (Non-Hispanic)	*	*	*	*	*	*	*	51.8	128.2
Asian / Pacific Islander (Non-Hispanic)	*	*	*	*	*	*	*	88.5	94.5
Hispanic (Any Race)	*	*	*	*	*	*	*	79.4	108.2
Age-Adjusted Mortality (Per 100,000 Population)									
Lung cancer	46.0	60.4	62.5	55.2	48.6	54.6	52.5	47.0	35.0
Breast cancer among females	20.3	23.7	*	20.7	17.4	*	17.3	21.6	19.6
Cervical cancer among females	*	*	*	*	*	*	0.0	2.7	2.2
Colorectal cancer	12.6	13.8	*	13.6	15.3	17.5	13.8	14.8	13.1
Prostate cancer	19.0	16.6	*	22.1	17.2	*	16.0	19.5	18.8
Bladder cancer	*	*	*	*	5.4	*	2.3	4.3	4.2
Kidney cancer	*	5.5	*	*	3.9	*	2.7	4.0	3.5
Leukemia	*	7.7	*	*	7.7	*	4.7	6.5	6.0
Liver cancer	*	5.6	*	7.7	6.2	*	4.8	6.9	6.6
Melanoma	*	*	*	*	4.0	*	1.7	2.5	2.1
Non-Hodgkin Lymphoma	*	7.5	*	*	5.9	*	3.9	5.6	5.1
Pancreatic cancer	12.0	10.4	*	10.2	10.8	*	9.5	11.2	11.1

Data Source: State Cancer Profiles, 2015-2019.

\* Low count records have been suppressed to ensure confidentiality and stability of rate estimates.

Indicates statistic is more favorable than the State statistic by more than five percent

Indicates statistic is within five percent of the State statistic

# Coronavirus (COVID-19)

The coronavirus pandemic (COVID-19) revealed long-established racial and socioeconomic inequities and created new and larger populations of residents with a deficit of basic needs (jobs, housing, food, health insurance). Vulnerable communities, those with limited medical and social resources, lower percentages of health insurance, and lower employment rates were also more deeply impacted. Resulting stress impacted physical and mental health that continue to challenge many communities including our six counties. Black, Hispanic and Native American populations as well as individuals with chronic conditions had disproportionately higher severity of illness and/or death rates. COVID-19 remains the fourth biggest cause of death in Tennessee (Table 29).

- Per data analyzed from multiple state and federal health agencies, the COVID-19 cases per 100,000 population range from a low of 2 in Lewis and Marshall to a high of 14 in Giles. The Tennessee statistic is 6.
- Lewis County is highest in test positivity, 22%, (TN 9%) and hospitalizations per 100,000 population, 6, (TN 5).
- However, Wayne is highest for COVID-19 deaths per 100,000, 0.49, (TN 0.06). Overall, the rate is worse, 0.24, compared to the state.
- The percent of the population fully vaccinated in the state, 56%, is lower than the national average, 68%. Only Maury County, 66%, has a higher percentage of COVID-19 vaccinated compared to Tennessee.

Indicators	Giles	Lawrence	Lewis	Marshall	Maury	Wayne	6 Counties	N	U.S.
Cases, Daily Average	4	2	<1	<1	7	<1	N/A	425	19,508
Cases per 100k	14	5	2	2	7	3	6	6	6
Cases, 14-Day Change	155%	Flat	-67%	-70%	-21%	100%	N/A	-40%	-34%
Test Positivity	8%	10%	22%	6%	7%	0%	8%	9%	7%
Hospitalized per 100k	4	4	6	4	6	3	5	5	7
Hospitalized, 14-Day Change	-27%	-33%	-8%	-18%	-8%	-49%	N/A	-32%	-14%
Deaths, Daily Average	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	N/A	4.3	255.3
Deaths per 100k	0.32	0.11	0.19	0.19	0.25	0.49	0.24	0.06	0.08
Percent Fully Vaccinated	40%	38%	36%	44%	66%	42%	51%	56%	68%

## Table 32. COVID-19 Vaccinations, Cases and Death Rates, 2023

Source: The New York Times. Tracking Coronavirus in Tennessee: Latest Map and Case Count. March 23,2023. Multiple state and federal data sources. Indicates statistic is more favorable than the State statistic by more than five percent

Indicates statistic is within five percent of the State statistic

# Appendix A: Evaluation of Impact for 2019-2022 Implementation Plans

Maury Regional Health's (MRH) long-standing commitment to the community is deeply rooted in the organization's mission, vision, and values to serve as a resource for our community and to improve the overall well-being of the region we serve.

## Through our Maury Regional Health Care Foundation,

a 501(c)(3) charitable organization, and the generous support of donors, the Foundation has provided more than \$4 million to expand health care services and fund community outreach programs since its formation in 2006.

Over the past three fiscal years 2020, 2021 and 2022, Maury Regional Health has provided <u>financial assistance</u> and charitable care to the underinsured or uninsured in a total amount of more than \$167,100,000.

In 2019, our three hospitals, Maury Regional Medical Center (MRMC), Marshall Medical Center (MMC), and Wayne Medical Center (WMC) each prepared a community health needs assessment (CHNA) and associated Implementation Strategy. Since we issued these reports three years ago, MRH has worked alongside community partners to address many of the significant concerns identified. However, during this same time the COVID-19 pandemic occurred and resources from some of the goals and strategies developed for these priority areas were redirected or halted. The next pages detail our progress on the 2019-2022 implementation strategies.

## Maury Regional Medical Center

MRMC identified the following priorities as significant areas of health need:

## Primary Priority Areas:

- 1. Exercise, Nutrition, and Mental Health
- 2. Opioid Crisis
- 3. Hypertension and Diabetes

#### Secondary Priority Areas:

- 4. Access to Healthcare
- 5. Obesity

Below, we report the goals, proposed impact from our MRMC 2019 action plan and detail the community improvement activities completed over the past three years.

Priority Health Need 1 & 5:	Exercise and Nutrition, Obesity
Goal:	Improve exercise and nutrition
Impact:	Improved access opportunities surrounding health and wellness, exercise, and nutrition. Resources and funding for food insecurity.

- 1. Maury Regional Health (MRH) offered opportunities to increase healthy living awareness through community education and opportunities for promotion of physical activity, and partnering with local community agencies.
  - Through support of and collaboration with the *Healthier Maury County Committee*, physical activity was promoted through:
    - Walk Across TN Campaign with Healthier Maury Challenges, with almost 700 participants over the past three years.
    - Hiking Challenge with Healthier Maury Challenges, with almost 800 participants over the past three years.
  - The Maury Regional Health Care Foundation supports initiatives to improve the health of the region, including the youth within the community:
    - Healthier Maury County Program Support, 2020: 450 people impacted.
    - Healthier Maury County Program Support, 2022: 548 people impacted.
    - Boys and Girls Club of Maury County Triple Play Health and Wellness Program Support, 2020: 12,000 youth impacted.
    - Boys and Girls Club of Maury County Triple Play Health and Wellness Program Support, 2021: 12,000 youth impacted.
    - 2020, 2021 and 2022 City of Columbia Summer Youth Program Support: impacted youth figure not available.
    - Miracle League of Columbia Program Support for baseball program for children with physical and mental disabilities: impacted youth figure not available.
  - Promoted awareness through community seminars and Health-Feed blog articles with a focus upon nutrition and healthy eating.
  - Continue weight loss surgery program established in 2018. Approximately 55 surgeries
    performed over two years. In 2020, the program was discontinued as Maury Regional
    Health re-evaluated the program based on shifted resources and more immediate
    community needs.
- 2. Provide nourishment to patients experiencing food insecurity, which increased to a larger percentage of the population due to the pandemic.

- The Maury Regional Health Care Foundation supported development of programs focusing on the unique nutritional needs of those in cancer treatment:
  - Dietary consultations for cancer patients: 656 patients impacted over the last three years.
  - Funding provided for food for cancer patients and their caregivers while undergoing treatment.
- The Foundation Family and Friends Nutrition Fund continued its food pantry mission to provide MRMC discharged inpatients with food to take home and meal tickets for personal caregivers of those hospitalized:
  - Food pantry at discharge for patients and families with food insecurities and meal tickets for caregivers while a loved one is in the hospital – 1484 food boxes and 613 meal tickets provided over the past three years.
- In 2022, the 6W nursing unit partnered with the *Family Center of Columbia* to help facilitate the organization's annual Thanksgiving meals, feeding over 500 families this season.
- The Maury Regional Health Mobile Unit, funded by the Maury Regional Health Care Foundation, partnered with multiple agencies to assist with food relief for the underserved in the area.
- 3. Increase the health and wellness of MRH Employees (2<sup>nd</sup> largest employer in Maury County).
  - Weight Watchers at Work:
    - MRMC reimburses employees for a percentage of their costs for participation and a higher percentage for achievement of weight loss goals.
  - On-site employee gym, at Maury Regional Medical Center, since 2012:
    - On average, over 300 employees have used the gym and approximately 125 are high-frequency users.
    - Wellness Oasis Rooms are a recent addition in 2021. New state-of-the-art massage chairs offer employees respite, in a peaceful spa-like setting.
  - Free Biometric Screenings:
    - Maury Regional Health has offered employees free biometric screenings since 2010. Historically, the program offered results-based goals with reduced health insurance premiums incentivized. Success of the program was based on healthy results among the following health factors: Body Mass Index, Blood Pressure, LDL, Cholesterol, Glucose, and Nicotine positive. In 2022, the program was changed from results-based goals to action-based goals.
    - $\circ$  Over fiscal years 2019-2022, 8,366 people were screened.
  - Employee Assistance Programs (EAP):
    - The Covid-19 pandemic revealed that our EAP programs needed to be updated.
       We had long offered traditional EAP services through The Family Therapy Center

but realized that we need to offer different programs to support the modern workforce. In FY22, we developed the Maury Strong Program that models employee wellness under the following four pillars: physical, emotional, spiritual, and financial wellness.

- The new model brought on a vendor partner, *BHS*, to offer critical incident response as well as telephonic, virtual, and traditional counseling services. It also gave us access to financial counselors through SmartPath, network employee discount program through Abenity, and emotional support through the Calm App.
- EAP spending increased threefold from FY19 to FY22.
- Medical and Pharmacy Plan:
  - Modeling our own employees for reduced preventable medical visits, MRMC
     was able to impact approximately 19,444 staff over the 2019-2022 fiscal years.
  - Both medical and prescription costs showed a positive trend reflective of Maury Regional Health's investments in our employees' total well-being.

Priority Health Need 1 & 2:	Mental and Behavioral Health, Opioid Crisis
Goal:	Improve services for mental and behavioral health
Impact:	Improved access to mental health services and establishment of local programs and resources.

- Establish local inpatient and outpatient behavioral health services and establish funding for behavioral health resources. Ongoing evaluation of mental health resources revealed to be essential by the pandemic and continue today to be in high demand:
  - The Maury Regional Health Care Foundation established:
    - July 2021- a new Behavioral Health Fund.
    - July 2021- a Behavioral Health Task Force to create guidelines and develop behavioral health programs and services.
    - o 2022-Behavioral Health Task Force began quarterly meetings.
  - In January 2020, Maury Regional Medical Center in partnership with *HCA Healthcare's Tristar Division* opened a 60-bed behavioral health hospital, Pinewood Springs.
  - Established referral services for opioid and addiction to *Cedar Recovery*, who specializes in medication assisted treatment, behavioral therapy, individualized treatment plans, and opioid withdrawal.
  - Recruited and hired a behavioral health clinical liaison, responsible for the facilitation of patient care across the organization as it relates to behavioral and mental health services, acting as the key information and education resource.

- 2. Evaluate and monitor opioid prescribing in the emergency room. Establish a protocol to address and manage opioid use disorder and withdrawal in the emergency room and inpatient units.
  - Maury Regional Health Opioid Light Committee designed to educate prescribing providers and monitor emergency room opioid prescribing trends. Ongoing evaluation of alternative therapies and best practices.
    - Opioid Light ED subcommittee objective to evaluate order sets in the emergency room for updates to pharmacological and non-pharmacological therapies.
    - Non-opioid medications are used in various capacities across the organization.
  - Narcan Nasal Spray, an opioid antagonist indicated for the treatment of known or suspected opioid overdose, is prescribed to patients who qualify. With improvements in community education efforts and health plan covering costs, there has been an increase in prescriptions to help prevent overdose deaths.
- 3. Increase mental health awareness through community education, including grief support education and support services.
  - Promoted awareness through community seminars and Health-Feed blog articles highlighting mental health, self-care and grief support.
  - Grief Support Group monthly meetings.
- 4. Offer Smoking Cessation education.
  - The Maury Regional Health Care Foundation funded supplies for the Smoking Cessation Classes offered to the community.
- 5. Addition of specialist in pain management.
  - Maury Regional Medical Group (MRMG), Maury Regional Health's network of physician practices that includes both family medicine physicians for primary care services and specialists, recruited a second pain management specialist in November 2020.
- 6. Provide resources to remove opioids and other prescription drugs from households.
  - Maury Regional Medical Center hosts free drug take-back events twice yearly, a community service for the safe disposal of expired, unused, or unneeded prescriptions.

Priority Health Need 3:	Hypertension and Diabetes
Goal:	Improve access to services and education for hypertension and diabetes
Impact:	Expanded access to providers. Improved access to screening, education, and resources.

- 1. Expand cardiology services.
  - Recruitment and hire of cardiology and vascular surgery providers.
- 2. Recruit endocrinology provider.

- In 2021, Maury Regional Medical Group opened MRMG Endocrinology, offering specialty treatment in diabetes, thyroid disorders and other conditions related to the endocrine system.
- 3. Maury Regional Emergency Medical Services (EMS) and *Columbia Fire and Rescue* (CFR) received joint recognition as recipients of the American Heart Association's Mission: Lifeline® EMS Gold Plus Achievement Award for implementing specific quality improvement measures to treat patients who suffer severe heart attacks. The program helps reduce barriers to prompt treatment for heart attacks-starting from when 911 is called to EMS transport and continuing through hospital treatment and discharge.
- 4. Maury Regional Health partnered with *St. Thomas Health*, establishing telehealth stroke consult services, with 663 consults over three years.
- 5. Increased health awareness for diabetes and heart disease through community education:
  - Facilitation of monthly diabetes education group meetings, with approximately 139 participants, from 2019-2022.
  - Facilitation of outpatient diabetes self-management classes, with approximately 159 participants, from 2019-2022.
  - Promoted awareness through community seminars, education, and health fairs on diabetes and heart health.
  - Conducted annual heart campaign to increase awareness and education surrounding heart health.
- 6. Provide diabetes and heart disease resources and screening.
  - The Maury Regional Health Care Foundation provided supplies and education to at risk patients.
    - From 2020-2022, diabetic supplies and education provided.
    - Provided free medication at 9 locations in the Maury Regional Health service care, many for qualifying individuals with diabetes.
    - From 2020-2022, provided blood pressure machines and scales to at-risk patients.
    - $\circ$  Funded supplies for the Smoking Cessation Classes offered to the community.
    - Provided 506 glucometers to patients at risk or newly diagnosed with diabetes.
    - Provided free medication at nine locations in the Maury Regional Health service area, many for qualifying individuals with hypertension.
  - Implemented diabetic eye screenings, launched in primary care practices and screened 547 individuals over three years.
  - Maury Regional Health's Mobile Unit provided free blood pressure monitoring, making routine visits to locations in Maury, Giles, Lawrence, Lewis, Wayne, and Marshall counties. The mobile unit parks at churches, housing developments, and food pantries with a mission of helping patients who otherwise might not seek out care.

- 7. Conducted annual heart campaign to increase awareness and education.
- 8. Provided remote patient monitoring for at risk patients with chronic obstructive pulmonary disease (COPD), heart failure (HF) and diabetes:
  - Approximately 50 patients were enrolled in this grant-funded program in 2020. Due to the COVID-19 pandemic and unprecedented staffing challenges, this chronic disease management program was halted in 2021 to more immediately address the needs of the seriously ill patient population.

Priority Health Need 4:	Access to Healthcare
Goal:	Improve access to health care services
Impact:	Improved access to health care services, including education, resources, and providers.

- 1. Ensure medical staff aligns with the needs of the community in volumes and specialties:
  - Conducted Provider Development Plan studies every three years.
  - Increased primary care and physician specialists to align with healthcare needs.
  - Established 2<sup>nd</sup> urgent care location the Spring Hill, TN area in 2019.
- 2. Continued <u>federally qualified health center</u> (FQHC) efforts offering sliding fee, income-based discounts to patients who qualify. In 2021, MRH served over 26,000 patients at multiple sites:
  - Lewis Health Center, 617 W Main Street, Hohenwald
  - Lewisburg Family Practice, 1090 N Ellington Pkwy, Lewisburg
  - Lewisburg Pediatrics, 1090 N Ellington Pkwy, Lewisburg
  - PrimeCare, 854 W James Campbell Blvd, Columbia
  - Plaza Primary Care, 854 W James Campbell Blvd, Columbia (RHC eff. 10-9-2022)
  - Waynesboro Primary Care, 101 J.V. Mangubat Dr., Waynesboro
- 3. Maury Regional Health operates several rural health clinics (RHCs) in Maury and Marshall County, which are provider practices that offer care in rural areas categorized as health professional shortage areas, largely based on the population to clinical provider ratio. RHCs increase access to primary care in our rural communities:
  - MRMG Primary Care Mt. Pleasant, 200 S. Cross Bridges Road, Mt. Pleasant
  - MRMG Primary Care & Pediatrics, 1222 Trotwood Avenue, Ste 108, Columbia
  - MRMG Primary Care Spring Hill, 5421 Main Street, Spring Hill
  - Maury Regional Urgent Care Columbia, 1218 Trotwood Avenue, Columbia
  - Maury Regional Urgent Care North Columbia, 2478 Nashville Highway, Suite A, Columbia

- 4. Provided 10,659 room-delivery pharmacy encounters over the last three years. Room delivery of medications are offered from in-hospital pharmacy for eligible patients being discharged to enhance medication compliance once they are home.
- 5. Medical Mission at Home: Hosted by Lewis Health Center FQHC to offer medical, dental, vision, and lab services and provide toiletry items and socks to at-risk and underserved populations.
- 6. Established Virtual Transitions of Care Program to offer enhanced communication between patients being discharged and post-acute care facility to which they are being transferred.
  - This program used telehealth to communicate and transfer vital transition of care information, in the patient's room, to the receiving nursing facility beginning in 2020 and ending in 2021, with approximately 850 patients transferred utilizing this program.
  - Due to COVID-19 staffing challenges and the need to adjust resources to meet the most serious and immediate needs of the community, in early 2021, MRH returned to traditional hand-offs between the hospital and post-acute facilities.
- Established Virtual Rapid Response Teleconsultation program to improve care for patients within post-acute care network facilities. Through the duration of this grant funded project, from September 2019 through March 2023, 164 nursing home residents were impacted.
- 8. Expanded urgent care services through a second location in the Spring Hill, TN area in 2019.
- 9. Maury Regional Health has a top-rated staff of paramedics and emergency medical technicians who respond to ambulance calls across Lewis, Maury, and Wayne Counties.
- 10. With the goal of serving all patients, regardless of ability to pay, the Maury Regional Healthcare Foundation funds initiatives that improve access to resources for patients:
  - Cancer Fund: This includes dietary consultations, food, and gas cards.
  - Neonatal Intensive Care Unit (NICU) Fund: Provides car seats for babies at discharge, sleep swaddle sacks, food for the NICU patient pantry.
  - Nurses for Newborns of Maury County: Support for medically fragile newborns to be seen in the home by a registered nurse and books for NICU parents to read to their babies.
  - Operation of The Retreat: A hospitality house for patients undergoing cancer treatments and family members of Intensive Care Unit and NICU patients, enabling them to stay close to treatment/patients without incurring travel and accommodation expenses.
  - Special Needs Fund: Programs funded include clothing for patients at discharge, medication assistance, minor medical equipment, supplies, and transportation/gas cards for at-risk patients.
  - Women's Fund: Provides lymphedema garments, wigs, camisoles, and scarves for breast cancer patients.
  - Provide medication at no cost, to financially eligible individuals, at nine locations in the Maury Regional Health service area.

- 11. Provide free health assessments and vaccinations to underserved populations.
  - The Maury Regional Health Mobile Health Unit, funded by the Maury Regional Healthcare Foundation, provides primary care services to at-risk and underserved populations who lack access or resources to obtain healthcare.
    - The mobile medical unit is a customized 38-foot recreational vehicle fitted with two exam rooms and a laboratory area. The unit routinely visits locations in Maury, Giles, Lawrence, Wayne and Marshall counties, bringing health care services into the community beyond MRH's brick-and mortar facilities.
    - The mobile unit partners with other organizations and service agencies to improve outreach:
      - In FY21, partnered with *St Thomas Mobile Mammography*, to offer free mammograms, for qualifying individuals.
      - Partnered with a local dentist to offer free dental days, to financially eligible individuals. Also, coordinated with the Maury Regional Cancer Center to offer uninsured patients with head and neck cancer immediately needed dental care services.
      - Participated in *Maury County School System* for blood pressure checks and self-harm screening for students.
    - In 2021, the mobile unit began community outreach efforts to address COVID-19 vaccine equity. These efforts complimented the vaccine administration options at traditional clinics.
- 12. The Maury Regional Health Mobile Medical Unit led activities and established partnerships to address the health-related social needs of the community. Over the last three years, this has included:
  - Hosted cooling stations for homeless and underserved in extremely hot weather.
  - Provided cold weather assistance-coats, hats, gloves, Mylar blankets, and sleeping bags.
  - Partnered with *local emergency services, Room in the Inn,* and the Maury Regional Health Care Foundation to offer hotel access to those unhoused during winter and during power outages.
  - Coordinated with multiple agencies to assist with food relief for underserved in the area.
  - In 2022, partnered with *Spring Hill Fire Department and Maury County Schools* to offer Christmas presents for families in need.
- 13. Maury Regional Health's Employer Wellness Program offers employers a health risk assessment service that includes health surveys, biometric screenings that include blood pressure, body mass index, cholesterol, and much more, and aggregate reporting that provides an overall assessment of employee health.

- 14. Expand health care in Lewis County.
  - In 2020, Lewis Health Center Physical Therapy added therapy services specifically designed to benefit patients with Parkinson's disease. This therapy treatment is offered through the LSVT BIG<sup>®</sup> program, and intensive and high-effort therapy regimen designed to help Parkinson's disease patients learn to move more naturally.
  - Outpatient diabetes self-management classes offered in Lewis County.
  - In 2022, Lewis Health Center provided free athletic physicals to 179 youth in Lewis County Middle School and Lewis County High School.
- 15. Establish Courtesy Care Call Program.
  - In 2021, Maury Regional EMS introduced a program designed to help eligible patients better manage their health conditions at home, offering a free in-home visit following hospital discharge. The program provided support for patients who are managing chronic conditions, such as congestive heart failure, chronic obstructive pulmonary disease, and diabetes. There were approximately 57 patient visits through 6/28/2022, with 22 of these being telehealth or telephone visits.
- 16. The arrival of COVID-19 in many ways disrupted hospital operations across the nation. Maury Regional Health was there to provide for the unique needs that would follow.
  - Vaccines and Monoclonal Antibody Infusion Treatments: MRH began offering COVID vaccines to the public in January 2021 and opened a dedicated vaccine clinic in February. In November 2021, MRMG Primary Care and Pediatrics began offering vaccinations to children 5 and older. Monoclonal antibody treatments were also offered with a goal to quickly launch the body's immune response in an effort to mitigate disease severity.
  - Telemedicine Services: Maury Regional Medical Group offered phone and telemedicine visit options, with approximately 22,443 visits over the last three years.
  - The Maury Regional Health Mobile Unit extended its programs and services during the pandemic to include support for COVID prevention:
    - The mobile unit helped the community navigate emerging challenges, distributing hand sanitizer, water, and face masks to those without access and providing support and education about COVID-19.
    - The unit began COVID testing and vaccine operations at multiple locations within the community, including churches, nursing facilities, businesses, parks, and social service agencies.
      - Drive through vaccine sites increased accessibility for those at risk or traditionally underserved.
      - Homebound vaccination visits were made as needed, for those who would have difficulty attending other COVID vaccination events.
      - Over the last three years, approximately 1,576 COVID tests and 3,132
         COVID vaccinations were administered.

# Marshall Medical Center

## MMC identified the following priorities as significant areas of health need:

## Primary Priority Areas:

- 1. Opioid Crisis
- 2. Mental Health
- 3. Behavioral Health

#### Secondary Priority Areas:

- 4. Heart Disease
- 5. Diabetes
- 6. Access to Healthcare
- 7. Lack of Economic Opportunities
- 8. Education

Priority Health Need 1:	Opioid Crisis
Goal:	Initiatives to address the opioid crisis.
Impact:	Improve access to pain management service providers; enhanced evaluation and monitoring of opioid prescribing and evaluation of standard order sets.

- 1. Evaluate and monitor opioid prescribing in the emergency room. Establish a protocol to address and manage opioid use disorder and withdrawal in the emergency room and inpatient units.
  - Maury Regional Health Opioid Light Committee designed to educate prescribing providers and monitor emergency room opioid prescribing trends. Ongoing evaluation of alternative therapies and best practices.
    - Opioid Light ED subcommittee objective to evaluate order sets in the emergency room for updates to pharmacological and non-pharmacological therapies.
    - Non-opioid medications are used in various capacities across the organization.
- 2. Offer pain management services.
  - Maury Regional Medical Group (MRMG), Maury Regional Health's network of physician practices that includes both family medicine physicians for primary care services and specialists, recruited a second pain management specialist, who joined in November 2020 and treated patients at the Lewisburg Family Practice.

Priority Health Need 2 & 3:	Mental and Behavioral Health
Goal:	Improve services for mental and behavioral health.
Impact:	Access to mental and behavioral support through contracted Senior Life Solutions.

- Provide mental and behavioral health support through contracted Senior Life Solutions, an intensive outpatient program that requires that patients have at least 1 mental or behavioral health diagnosis.
  - Senior Life Solutions is an outpatient geriatric behavioral health program based at MMC. Our outpatient program provides one-on-one support and group therapy to help seniors cope with emotional health needs. Therapists develop an individualized plan of care with daily activities and education in a supportive setting.
  - In February 2022, Senior Life Solutions began offering Beyond Tomorrow, a free guidance and support group for individuals aged 65 and older coping with age related issues, including depression and anxiety.
  - In 2020, teletherapy services were introduced to allow this higher risked senior population to receive care while remaining at home in light of COVID-19 safety precautions. Teletherapy services were provided via telephone or computer by a licensed therapist.
  - Community awareness campaigns, including print and social media, are conducted annually to promote these senior focused behavioral health programs.

Priority Health Need 4:	Heart Disease
Goal:	Improve access to services and education.
Impact:	Enhanced education and services.

- Maury Regional Health's Mobile Unit provided free blood pressure monitoring, making routine visits to locations in Maury, Giles, Lawrence, Lewis, Wayne, and Marshall counties. The mobile unit parks at churches, housing developments, and food pantries with a mission of helping patients who otherwise might not seek out care.
- 2. MMC has a wide range of health testing services, including carotid artery studies, EKG, Echocardiogram, and NM stress tests.
- 3. Smoking is a major risk factor for heart disease, so cessation classes were offered for individuals interested in stopping smoking/tobacco use.

- In November of 2019, smoking cessation program conducted at *Walker Die Casting* in Lewisburg, with 12 participants.
- In FY2020 and FY2021, no classes were offered as COVID-19 public health guidelines for social distancing and hospital need to shift resources to more serious and immediate community needs.
- 4. Published Health-Feed blog articles with a focus on health and wellness, including nutrition, management of chronic conditions, and signs and symptoms of heart attack and stroke.
- Health Matters is a quarterly magazine produced by MRH for residents of southern Middle Tennessee. Each edition includes information on a variety of topics such as heart health along with fun, healthy recipes.

Priority Health Need 5:	Diabetes
Goal:	Improve access to services and education.
Impact:	Increased promotion of health awareness for diabetes.

- 1. Provide patient education on the management of diabetes.
  - Facilitated Healthy Eating and Diabetes seminars in partnership with community organizations, such as the *Lions Club*.
  - Maury Regional Health offers a comprehensive eight-hour course recognized by the American Diabetes Association to help individuals living with diabetes. Classes are offered quarterly at MMC.
- 2. Promoted health awareness for diabetes through community education, using Health-Feed blog articles and publications in Health Matters, a quarterly magazine produced by MRH for residents of southern Middle Tennessee.
- 3. Remote patient monitoring for at-risk patients with COPD, HF, and Diabetes.
  - Approximately 50 patients, 40% with diabetes, enrolled in the grant-funded remote patient monitoring program. Due to the COVID-19 pandemic and unprecedented staffing challenges, this chronic disease management program was halted in 2021 to more immediately address the needs of the seriously ill patient population.

Priority Health Need 6:	Access to Healthcare
Goal:	Improve access to health care services.
Impact:	Improved access to primary and specialty care. Improved access to health care services.

- 1. Increase availability of primary care and specialty services.
  - Conduct Provider Development Plan studies every three years, with the goal of addressing the community's evolving needs and provider succession planning.
  - MMC operates several rural health clinics (RHCs) which are provider practices that offer care in rural areas categorized as health professional shortage areas, largely based on the population to clinical provider ratio. RHCs increase access to primary care in rural communities.
  - Recruited new providers to Lewisburg Family Practice, a full-service family medicine practice with providers from Maury Regional Medical Group.
    - The practice is a federally qualified health center (FQHC) site, offering a sliding fee schedule of discounted rates for eligible residents who may otherwise go without primary care and/or a medical home.
    - In December 2019, Lewisburg Family Practice opened a Walk-In Clinic, extending access through same day care for acute illness and injury.
  - Recruitment of providers to Lewisburg Pediatrics, a practice that specializes in health care for children, from newborn to teenagers.
  - MMC continues to operate a Physician Specialist Clinic where physicians who practice in a range of medical specialties can see patients by appointment. The clinic provides space for physicians who specialize in Cardiology, Gastroenterology, Orthopedics, Otolaryngology, Pulmonology, and Urology.
- 2. Establish telehealth stroke services for Marshall Medical Center Emergency Department.
  - Maury Regional Health partnered with *St. Thomas Health*, establishing telehealth stroke consult services, to help address a rural health gap in timely access to stroke care (treatment received in the first 60 minutes is essential to survival). Fifty-two consultations were conducted during the last three years at Marshall Medical Center.
- Improve skilled nursing bed utilization to assist patients in the transition from hospital to home. Over the last three years, MMC has successfully helped 2,459 patients transition to skilled nursing beds from a hospital stay.
- 4. In 2019, MMC added Genius<sup>™</sup> Mammography<sup>™</sup> to its range of imaging services. These exams use advanced breast imaging technology and are clinically proven to significantly increase the detection of breast cancers, while decreasing the number of women asked to return for additional testing. Over the past three years, 6,737 3D mammograms were performed.

- 5. Conduct outreach to underserved and/or at-risk populations.
  - MMC offers free screenings to ensure children are on track for development based on their age. Experienced therapists work with patients to evaluate key milestones, including speech, balance and nutrition, and motor skills.
  - The Maury Regional Health Mobile Health Unit, funded by the Maury Regional Healthcare Foundation, provides primary care services to at-risk and underserved populations who lack access or resources to obtain healthcare.
    - The mobile medical unit is a customized 38-foot recreational vehicle fitted with two exam rooms and a laboratory area. The unit routinely visits locations in Maury, Giles, Lawrence, Wayne and Marshall counties, bringing health care services into the community beyond MRH's brick-and mortar facilities.
  - The Maury Regional Health Care Foundation funds numerous initiatives that improve access to clinical care or to health-related resources for community members undergoing care at Maury Regional Health:
    - Cancer Fund: This includes dietary consultations, food, and gas cards.
    - Neonatal Intensive Care Unit (NICU) Fund: Provides car seats for babies at discharge, sleep swaddle sacks, food for the NICU patient pantry.
    - Nurses for Newborns of Maury County: Support for medically fragile newborns to be seen in the home by a registered nurse and books for NICU parents to read to their babies.
    - Operation of The Retreat: A hospitality house for patients undergoing cancer treatments and family members of Intensive Care Unit and NICU patients, enabling them to stay close to treatment/patients without incurring travel and accommodation expenses.
    - Special Needs Fund: Programs funded include clothing for patients at discharge, medication assistance, minor medical equipment, supplies, and transportation/gas cards for at-risk patients.
    - Women's Fund: Provides lymphedema garments, wigs, camisoles, and scarves for breast cancer patients.
    - Provide medication at no cost at nine locations in the Maury Regional Health service area.
- 6. COVID vaccination offered in Marshall County
  - In 2021, the mobile unit began community outreach efforts to support COVID-19 vaccine equity. These efforts complimented the vaccine administration options at traditional clinics.

- 7. Serve all patients regardless of ability to pay.
  - MRH financial counselors screen patients who are under or uninsured and meet federal poverty levels of eligibility. The intent is to help identify available assistance and support application processes.
- 8. The arrival of COVID-19 disrupted the daily life of people across the nation. Maury Regional Health was there to provide for the unique needs that would follow.
  - Maury Regional Health began offering COVID vaccines to the public in January 2021 and opened a dedicated vaccine clinic in February. In November 2021, Maury Regional Medical Group Primary Care and Pediatrics began offering vaccinations to children 5 and older. For those who qualified, monoclonal antibody treatments were also offered to help prevent severe symptoms of the disease.
  - Telemedicine services improved access to the community. Maury Regional Medical Group offered phone and telemedicine visit options, with approximately 22,443 visits using these options over the last three years. Of these, 1,195 were performed at WMC provider practices.
  - The Maury Regional Health Mobile Unit supported programs and services needed during the pandemic:
    - The unit helped the community navigate emerging challenges, distributing hand sanitizer, water, and face masks to those without access and providing support and education about COVID-19.
    - The unit provided COVID testing and vaccines. Over the last three years, the mobile clinic administered 3,132 COVID vaccinations across the health system's communities and eighty-eight Marshall county residents opted to receive covid testing during this timeframe.

**Priority Health Need 7:** 

Lack of Economic Opportunities

Health Need Not Addressed:

The 2019 prioritization process identified a "lack of economic opportunities" as a priority, but after consideration of the organization's ability to impact this need, this issue was not advanced for implementation. MRH continues to support and partner with the *Marshall County Economic Development Board*, the recognized leader of this specific community need. Also, MMC's CEO is a member of this board, serving as an advisor and providing health care expertise to the board's decision-making process.

Priority Health Need 8:	Education
Goal:	Conduct educational campaigns
Impact:	Improved access to health and wellness using blogs and media.

- 1. Conduct educational community campaigns and offer health education on a variety of topics:
  - Health-Feed blog articles with a focus upon health and wellness, including food and nutrition and the management of chronic diseases.
  - Health Matters is a quarterly magazine produced by MRH for residents of southern Middle Tennessee. Each edition includes information on a wide array of health topics.

# Wayne Medical Center

WMC identified the following priorities as significant areas of health needs:

## Primary Priority Areas:

- 1. Transportation, Access to Healthcare
- 2. Opioid Crisis

## Secondary Priority Areas:

- 3. Education
- 4. Obesity
- 5. Exercise and Nutrition
- 6. Heart Disease

Below, we report the goals, proposed impact from our 2019 action plan and detail the community improvement activities completed over the past three years.

Priority Health Need 1:	Transportation, Access to Healthcare
Goal:	Improve access to health care services.
Impact:	Improved access to primary care and specialists serving the county. Improved access to health care services and resources.

Health Need Not Addressed:

Although transportation was a priority area for the Wayne County community and it is recognized that a lack of transportation directly impacts timely access health care, it was not individually addressed within

the 2019 Implementation Strategy. Wayne residents continue to rely upon the leader of transportation services in our community, the *South Central TN Development District* (SCTDD) which contracts with transit agencies across each of its 13 counties, including Wayne, offering on-demand and rural public transportation services. MRH's role instead has been to focus on increasing access to care by working with patients and external agencies to evaluate and identify opportunities for transportation improvement.

- 1. Recruit providers to Wayne County.
  - Conducted Provider Development Plan studies every three years.
  - Recruit providers to Wayne County.
    - Primary care mid-level provider recruited to serve in Waynesboro and Collinwood Clinics in 2021.
    - Recruitment of an additional primary care physician to Primary Care-Waynesboro in 2022.
    - Addition of cardiology to WMC Specialty Clinic Services since March 2020.
- Maury Regional Health partnered with *St. Thomas Health*, establishing telehealth stroke consult services in the Wayne Medical Center Emergency Department, to help address a rural health gap in timely access to stroke care (treatment received in the first 60 minutes is essential to survival). Seven consultations were requested and conducted during the last three years at Wayne Medical Center.
- 3. In October 2020, WMC added Genius<sup>™</sup> 3D Mammography<sup>™</sup> to its range of imaging services. These exams use advanced breast imaging technology and are clinically proven to significantly increase the detection of breast cancers, while decreasing the number of women asked to return for additional testing needs. Through June 30<sup>th</sup>, 2022, 1,796 3D mammograms were performed.
- 4. Health Fairs Due to COVID-19 public health guidelines for social distancing and hospital need to shift resources to more serious and immediate community needs health fairs were ceased over the last three years.
- 5. Maury Regional Health operated a trained staff of paramedics and emergency medical technicians who respond to ambulance calls across Lewis, Maury, and Wayne counties.
- 6. Reach at-risk and underserved populations.
  - The Maury Regional Health Mobile Health Unit, funded by the Maury Regional Healthcare Foundation, provided primary care services to at-risk and underserved populations, including the unhoused, who lack access or resources to obtain healthcare.
    - The mobile medical unit is a customized 38-foot recreational vehicle fitted with two exam rooms and a laboratory area. The unit routinely visits locations in Maury, Giles, Lawrence, Marshall, and Wayne counties, bringing health care

services into the community and extending community access beyond MRH's brick-and mortar facilities.

- WMC offered free screenings to ensure children are on track for development based on their age. Experienced therapists work with patients to evaluate key milestones, including speech, balance and nutrition, and motor skills.
- *Maury Regional Medical Group's* (MRMG) Waynesboro Primary Care Practice offered income-based discounts as a <u>federally qualified health center</u> (FQHC). FQHC locations operate within federal grant programs to provide community-based and patient-centered primary healthcare regardless of a patient's ability to pay.
- 7. COVID vaccination offered in Wayne County
  - WMC offered free COVID-19 vaccinations to at-risk community members, with approximately 2,449 doses administered to community members and staff.
- 8. Serve all patients, regardless of ability to pay.
  - The Maury Regional Healthcare Foundation funds initiatives that improve access to resources for patients:
    - Cancer Fund: This includes dietary consultations, food, and gas cards.
    - Neonatal Intensive Care Unit (NICU) Fund: Provides car seats for babies at discharge, sleep swaddle sacks, food for the NICU patient pantry.
    - Nurses for Newborns of Maury County: Support for medically fragile newborns to be seen in the home by a registered nurse and books for NICU parents to read to their babies.
    - Operation of The Retreat: A hospitality house for patients undergoing cancer treatments and family members of Intensive Care Unit and NICU patients, enabling them to stay close to treatment/patients without incurring travel and accommodation expenses.
    - Special Needs Fund: Programs funded include clothing for patients at discharge, medication assistance, minor medical equipment, supplies, and transportation/gas cards for at-risk patients.
    - Women's Fund: Provides lymphedema garments, wigs, camisoles, and scarves for breast cancer patients.
    - Provide medication at no cost, to financially eligible persons, at nine locations in the Maury Regional Health service area.
- 9. The arrival of COVID-19 disrupted the daily life of people across the nation. Maury Regional Health's three hospitals were there to provide for the unique needs that would follow.
  - MRH began offering COVID vaccines to the public in January 2021 and opened a dedicated vaccine clinic in February. In November 2021, MRMG Primary Care and Pediatrics began offering vaccinations to children 5 and older. For those who qualified,

monoclonal antibody treatments were also offered to help prevent severe symptoms of the disease.

- Telemedicine services improved access to the community. Maury Regional Medical Group offered phone and telemedicine visit options, with approximately 22,443 visits using these options over the last three years. Of these, 1,195 were performed at WMC provider practices.
- The Maury Regional Health Mobile Unit supported programs and services needed during the pandemic:
  - The unit helped the community navigate emerging challenges, distributing hand sanitizer, water, and face masks to those without access and providing support and education about COVID-19.
  - The unit provided COVID testing and vaccines.

Priority Health Need 2:	Opioid Crisis
Goal:	Initiatives to address the opioid crisis
Impact:	Improved access to pain management service providers; enhanced evaluation and monitoring of opioid prescribing and evaluation of standard order sets.

- 1. Evaluate and monitor opioid prescribing in the emergency room.
  - Maury Regional Health Opioid Light Committee designed to educate prescribing providers and monitor emergency room opioid prescribing trends. Ongoing evaluation of alternative therapies and best practices.
    - Opioid Light ED subcommittee objective to evaluate order sets in the emergency room for updates to pharmacological and non-pharmacological therapies.
    - Non-opioid medications are used in various capacities across the organization.
- 2. Offer Pain Management Services in the Community.
  - Maury Regional Medical Group (MRMG), Maury Regional Health's network of physician practices that includes both family medicine physicians for primary care services and specialists, recruited a second pain management specialist. This specialist served patients at the WMC Specialty Clinic from March 2021 through December 2021.
- 3. Offer opportunity for free disposal of opioids.
  - Due to COVID-19 public health guidelines for social distancing and hospital need to shift resources to more serious and immediate community needs health fairs were ceased over the last three years.

Priority Health Need 3:	Education
Goal:	Conduct educational campaigns.
Impact:	Improved education on health and wellness topics, using varied methods.

- 1. Provide education about heart attack signs/symptoms and early interventions.
  - Free education offered to help community members learn how to recognize signs of heart attack and perform hands-only cardiopulmonary resuscitation (CPR), with 13 participants in the 2021 class.
- 2. Provide education about chronic obstructive pulmonary disease (COPD).
  - In 2019, WMC offered education on COPD risk factors and symptoms. COPD refers to a
    group of diseases that affect the lungs and causes shortness of breath. Early detection
    allows patients to work with their physicians to identify medications and therapies that
    can help them breathe easier.
- 3. Offer health education on a variety of topics.
  - Health-Feed blog articles with a focus upon health and wellness, including nutrition, management of chronic conditions, and signs and symptoms of heart attack and stroke.
  - Health Matters is a quarterly magazine produced by MRH for residents of southern Middle Tennessee. Each edition includes information on an array of health topics along with fun, healthy recipes.
- 4. Provide patient education on the management of diabetes.
  - MRH offers a comprehensive eight-hour course recognized by the American Diabetes Association to help individuals with diabetes. Classes are offered quarterly at WMC.
  - Increased health awareness for diabetes through community education, using Health-Feed blog articles and publications in Health Matters, a quarterly magazine produced by MRH for residents of southern Middle Tennessee.

Priority Health Need 4 & 5:	Exercise and Nutrition, Obesity
Goal:	Establish service/s to address obesity/exercise/nutrition.
Impact:	Improved access to wellness programs and education surrounding nutrition and healthy eating; improved access to food resources.

Actions:

 Launched Wellness Program in 2019. The Wayne Medical Center Therapy Center offered a therapy-based wellness program that is designed to meet the individual needs of those whose physical condition impacts their overall health.

- 2. Promoted awareness through social media articles with a focus upon nutrition and healthy eating.
- 3. Provide nourishment to patients experiencing food insecurity.
  - The Foundation Family and Friends Nutrition fund continued its mission to provide meal tickets for personal caregivers of those hospitalized.

Priority Health Need 6:	Heart Disease
Goal:	Improve education to the community.
Impact:	Educational activities focused on heart disease.

- 1. Provide support to those who want to reduce heart attack risk by stopping smoking/tobacco use.
  - Smoking cessation program offered in FY20, with 12 participants.
- 2. Education to community on heart disease and signs/symptoms.
  - Free education offered to help community members learn how to recognize signs of heart attack and perform hands-only cardiopulmonary resuscitation (CPR), with 13 participants in the 2021 class.
- 3. Maury Regional Health's Mobile Unit provided free blood pressure monitoring, making routine visits to locations in Maury, Giles, Lawrence, Lewis, Wayne, and Marshall counties. The mobile unit parks at churches, housing developments, and food pantries with a mission of helping patients who otherwise might not seek out care.

# Appendix B: CHNA Methods

## Quantitative Data and Data Limitations/Gaps

To refresh our understanding of the overall needs in our six-county community, MRH reviewed quantitative data from national and state sources including a variety of indicators for demographic, socioeconomic status, health status, and social drivers of health. A number of credible data were sourced and include, but are not limited to, Environics Analytics, U.S. Census Bureau's American Community Survey, Behavioral Risk Factor Surveillance System, Health Resources and Services Administration, Robert Wood Johnson County Health Rankings, National Cancer Institute and Centers for Disease Control and Prevention, and the Tennessee Department of Health. Data indicators were compared to state data, as available.

One notable limitation of this study is that data are not always published on an annual basis; meaning that some data estimates are more recent than others creating inconsistency in time periods used for our analysis. Furthermore, for a selection of indicators such as mental health and substance use, data are removed and/or deidentified in compliance with privacy requirements creating challenges for evaluating smaller populations in rural geographies. Similarly, self-reported statistics are estimated to be underreported due to the stigma of these and other health issues. In consideration of these limitations, the process of identifying health needs was based on both the quantitative and qualitative analyses.

## Qualitative Data / Community Voice

While quantitative data helps in creating a profile of the community, it cannot be put into context without input from residents and health experts on their concerns and perceived strengths and weaknesses of community services (including both health care and health related social needs). For this reason, MRH collected feedback through interviews with local stakeholders and a CHNA survey for residents of the six-counties. Local public health experts and representatives of medically underserved, low-income, and minority populations were invited to participate in both interviews and the survey. The information collected in aggregate were used to validate the quantitative data, deepen our understanding of what residents believed to be the most important issues and inform our 2022-2025 CHNA and Implementation Strategies. Themes from community input are documented in Appendix C.

#### Interviews

MRH selected and scheduled interviews, inviting stakeholders to participate based on their representation spanning the rural, underserved, low-income, minority, and senior populations. Premier facilitated a combination of in-person and video conference interviews intended to obtain comment from local leaders and public health experts about our community's health and health related social needs, available services and care gaps.

These health leaders and community advocates represented the broad interests of our community, included Crossroads to Home Coalition, South Central Tennessee Area on Aging, Pinewood Springs,

Cedar Recovery, Maury County District 9 Commissioner, Tennessee Department of Health representatives, and many other local health experts and community advocates who serve as the voice of local residents. A complete list of organizations who participated in the development of our CHNA is provided in the <u>Acknowledgements</u> section of this report.

#### Survey

MRH also administered a survey to gather opinions, in a standardized manner, on health and social issues, location of care and health care barriers, and frequented sources of information and personal communication preferences. The CHNA was administered online, in English, between April 19 and May 19, 2023, via SurveyMonkey. Individuals at least 18 years of age living in the six counties were eligible to respond and a total of 247 responses were received. Respondents represented each of Giles, Lawrence, Lewis, Marshall, Maury, and Wayne Counties and informed our CHNA, the prioritization model, and the development of our community health improvement initiatives.

The 20-question survey instrument is available in Appendix F.

Written Comments on Most Recently Adopted CHNA and Implementation Strategy MRH has not received written comments regarding our 2019 CHNA nor our associated Implementation Strategies.

# Appendix C: Themes from Community Input

For this CHNA, MRH used a community-engagement approach to collect opinion and comment from a diverse group of community leaders and residents to support the comprehensive assessment of the health status of our six counties. Each CHNA participant enhanced our study by providing context and insight into available public data and incorporating knowledge and preferences for community improvement and equity. Both data collection methods are described in Appendix B.

Top Community Issues and Concerns	Interviews (Frequent Mention)	Survey (Rank Ordered)
Health Issues	<ul> <li>Access (insurance, specialists, distance to see a provider)</li> <li>Behavioral health (mental health and substance misuse, especially opioids)</li> <li>Chronic conditions (obesity and diabetes, hypertension/ heart disease)</li> </ul>	<ul> <li>1st Mental health</li> <li>2nd Substance misuse</li> <li>3rd Overweight/obesity</li> </ul>
Health Related Social Needs	<ul> <li>Economic health (jobs, internet)</li> <li>Other basic needs (housing and food security, transportation)</li> </ul>	<ul> <li>1st Affordable housing/less homelessness</li> <li>2nd Economic security</li> <li>3rd Healthcare insurance</li> </ul>

The top community needs mentioned most frequently are summarized below.

Those interviewed were asked about their vision of "a healthy community." They defined "a healthy community" as equitable access to resources, delivering to residents what they feel they need, which requires more collaboration and communication with the acute health providers as well as post-acute providers and social service organizations. A selection of specific comments follow.

"Timely access to high quality care."

"Services in the outlying and more rural areas too."

"People in the community are aware of the things to do to be healthy."

"Cannot have health without economic change [more resources in poorer counties]."

"Healthiness is community [social] connections."

"Completely teamwork [approach]."

"Free preventive resources and fewer emergency situations."

County Department of Health Community Need Assessment priorities communicated during interviews.

- Giles Nicotine use, frequent mental distress, and youth obesity
- Lawrence Substance misuse, adverse childhood experiences (ACEs), and obesity
- Lewis Obesity, mental health, and youth nicotine (smoking and vaping prevention)
- Marshall Behavioral health (substance misuse), obesity, minority health
- Maury Addiction (narcotics, tobacco, and alcohol), mental health, and cardiac physical health
- Wayne Substance misuse, frequent mental distress, and injury prevention

Additional interview discussion themes are summarized below.

- The community itself, "the people, friendly helpful neighbors" were identified to be one of the biggest assets.
- There is recognition of high quality, reliable health resources in the community including, but not limited to MRH, Ascension St. Thomas, Vanderbilt, Maury County First Responders, County Department of Health, and South Central Area Transportation. However, care between these providers is not yet optimally coordinated across the continuum.
- Acknowledgement that no one organization can do this alone, partners are needed, and Maury County has established collaborations.
- There was opinion that what happens nationally or at the state level (policy) can impact the community negatively, with lost public trust in the health system due to the pandemic and a lack of control or voice.
- The community is dealing with inequality and disparities, especially in the more rural areas of the six counties where resources are particularly limited.
- Health and social systems need to meet people where they are, geographically and in the home setting.
- Education is key and early education of school aged children essential to lifelong healthy choices and influencing older family members' (parents and grandparents) health behaviors.

The top five responses for a selection of survey questions and write-in comments (in italics) are summarized below.

Q9: What do you believe are the biggest health issues in the six-counties? (n=210)

- 1. Substance misuse (alcohol, illegal drugs) –by Adults
- 2. Obese/Overweight Adults
- 3. Mental Health Adult distress
- 4. Smoking/vaping by Youth
- 5. Substance misuse (alcohol, illegal drugs) by Youth

"Chronic care self-management."

"No access to medical treatment after hours."

Q11: What do you believe are the social changes that would most improve the health of those living in the six-counties? (n=208)

- 1. Affordable childcare
- 2. Affordable housing/less homelessness
- 3. Healthcare insurance
- 4. Economic security
- 5. Better local jobs

"We don't need more "health insurance" or "places to get healthy food", we need AFFORDABLE health insurance with good coverage and AFFORDABLE healthy foods."

## Q13: What are the biggest concerns that stop you from seeking medical care? (n=199)

- 1. High cost of care
- 2. Cannot get an appointment soon enough or at the right time
- 3. Have other duties (work or childcare) so do not have time
- 4. Do not have a doctor/do not know where to go
- 5. Do not like to go to doctor/past bad experiences

"High priced insurance barely covers anything." "Primary care availability." and "Lack of specialists."

## Q15: Would programs would help you reach your personal health goals? (n=196)

- 1. Physical fitness
- 2. Health nutrition/cooking
- 3. Stress-management
- 4. Screenings (blood pressure, eye check, cancer, etc.)
- 5. General health and wellness

The most frequent write-in comment was for mental health providers, programs and services for children, adults, seniors, and family counseling.

# Appendix D: Prioritization of Significant Health Needs

MRH is focused on improving the health of our community and recognizes that economic opportunities, environmental factors, health care infrastructure, and social networks are all key influencers of health. Through this CHNA, we analyzed publicly available data and obtained input from our community members and leaders to learn what they believe are the major issue areas.

From these issue areas, we identified significant health needs based upon a review of published quantitative health status data specific to our community and qualitative data inputs collected throughout the CHNA process. Our assessment included consideration of the relative size of the issue, how important an issue was to the community, and whether there were existing efforts or partners. The following four criteria were utilized in the prioritization model:

- Magnitude evaluated the quantitative impact of the issue area in comparison to the state statistic for approximately 100 indicators collected from publicly available sources
- **Relevance** assessed the community opinion of the issue areas being a significant health need through a composite score based upon interviews and the CHNA Survey
- Alignment considered whether the issue area was also identified as a County Health Department community health assessment priority
- **Momentum** reviewed if the issue area was a priority in the previous MRH implementation strategy to leverage infrastructure and continue progress on existing interventions and initiatives

The data was scored based upon each of these four criteria and resulted in the final significant health needs for which we will address specific improvement activities. These significant health needs were reviewed and recommended by MRH system and hospital leaders in the context of our organizational mission, our clinical strengths, and partnerships. These final priorities along with selected initiatives and the resulting Implementation Strategy were also reviewed and approved by the Board of Trustees.

- 1. Mental Health
- 2. Substance Misuse
- 3. Chronic Conditions
- 4. Access to Care
- 5. Health Disparity

# Appendix E: Community Resources

Potential community resources to address healthcare disparities were identified through market research and information received from interviews and meetings. Specific resources potentially available to address the identified significant health needs are listed in the table below. This is not intended to be a comprehensive list of every available community resource, so for additional information please refer to these online resources:

- National
  - Find Help <u>https://www.findhelp.org</u>
- Regional
  - o Crossroads to Home Coalition https://www.crossroadstohomecolumbia.com/resources
  - MRH Health Resources <u>https://www.mauryregional.com/community-health-</u> events/health-resources/health-resources
  - My Resource Directory / Tennessee 2-1-1 <u>https://tn211.myresourcedirectory.com</u>
  - South Central Human Resource Agency (SCHRA) <u>https://www.schra.us</u>
  - TN Achieves Student Resource Guides <u>https://tnachieves.org/resources</u>
- County Level
  - Giles County Help Center - <u>https://members.gilescountychamber.com/list/member/giles-county-help-center-</u> <u>pulaski-422</u>
  - Lawrence County Community Assistance Services -<u>https://www.lawrenceburgtn.gov/212/Community-Assistance-Services</u>
  - Maury County Resource Guide <u>https://www.maurycounty-</u> <u>tn.gov/DocumentCenter/View/2118/2021-Maury-County-Resource-Guide</u>
  - Wayne County Resource Guide -<u>https://waynecountychamberofcommerce.wildapricot.org/Resources/Documents/Way</u> ne%20Co%20Resource%20Guide.pdf

Significant Health Need	Community Resources
Mental Health	<ul> <li>Psychiatric Facilities</li> <li>Middle TN Mental Health Institute</li> <li>Pinewood Springs Mental Health and Wellness</li> <li>Unity Psychiatric Care – Columbia</li> <li>General</li> </ul>
	<ul> <li>Catholic Charities of Middle TN - Maury County</li> <li>Mental Health Association of Middle Tennessee</li> <li>Mental Health Cooperative – Columbia</li> </ul>

Significant Health Need	Community Resources
Substance Misuse	Addiction Treatment Facilities <ul> <li>Cedar Recovery</li> <li>Centerstone Tennessee</li> </ul> General
	<ul> <li>Behavioral Health Group – Columbia</li> <li>Bradford Health Services</li> <li>Buffalo Valley Drug &amp; Alcohol Treatment</li> <li>Tennessee Tobacco QuitLine</li> </ul>
	American Diabetes Association
	American Heart Association
	American Lung Association
Chronic Conditions	Healthier Tennessee
	Maury Regional Medical Group
	Support Groups
	MRH Diabetes Support Group     MRH Dediatric Diabetes Support Group
	<ul> <li>MRH Pediatric Diabetes Support Group</li> <li>Providers</li> </ul>
	<ul> <li>County Health Departments</li> <li>Federally Qualified Health Centers (FQHCs)</li> </ul>
	<ul> <li>Lexington Medical Clinic</li> </ul>
	<ul> <li>Lifespan Health- Clifton</li> </ul>
Access to Care	• Primary Care & Hope Clinic
	<ul> <li>Prohealth Community Health Center- Columbia</li> <li>Rural Health Clinics</li> </ul>
	<ul> <li>Rural Health Clinics</li> <li>Insurance</li> </ul>
	• Healthcare.gov
	<ul> <li>TennCare Connect</li> </ul>
	<ul> <li>Tennessee State Health Insurance Assistance Program</li> </ul>
	South Central Tennessee Area Agency on Aging and Disability
Health Disparity	South Central Tennessee Area Transportation Services
	Tennessee Office of Minority Health
	Tennessee Office of Rural Health

# Appendix F: 2023 Maury Community Health Needs Survey Questionnaire

Welcome to the Maury Regional Health's (MRH) community health needs assessment (CHNA) survey. We thank you for answering these questions. We will use your answers to find the health and social issues that are most important to you and others that live in the six-counties (Giles, Lawrence, Lewis, Marshall, Maury and Wayne). Your answers will help inform the community health improvement activities for MRH.

The survey has five sections and we ask that you answer all questions:

- A. Background information questions to help us understand who took the survey
- B. Health and social issues questions to help us understand the big concerns that exist
- C. Health care barriers, use and likes questions to help us understand difficulties using community healthcare services or programs
- D. **Health care information and communication** questions to help us understand where people get information and how they like to communicate

#### A. <u>Background information</u>

This section helps us understand who has taken the survey.

- 1. In which Tennessee County do you live?
  - o Giles
  - o Lawrence
  - o Lewis
  - o Marshall
  - Maury
  - o Wayne
- 2. What is your age group?
  - o **18-24**
  - o **25-34**
  - o **35-44**
  - o **45-54**
  - o **55-64**
  - o **65+**
- 3. What is your gender?
  - Female
  - o Male
  - Other (please specify) \_\_\_\_\_\_
- 4. How do you pay for your health care?
  - Pay cash (no insurance)
  - Health insurance (e.g., private insurance, Blue Cross, Cigna)

- Medicare or Medicare Advantage
- TennCare (Medicaid)
- $\circ$  Other
- 5. Which of the following best represents your race?
  - American Indian or Alaska Native
  - Asian or Pacific Islander
  - Black or African American
  - $\circ$  White
  - Multiple Race or Other (please specify) \_\_\_\_\_
- 6. Are you of Hispanic, Latin, or Spanish origin?
  - o Yes
  - **No**

#### B. Health and social issues in the community

This section asks about the health of people living in the six-counties (Giles, Lawrence, Lewis, Marshall, Maury and Wayne) and what actions would improve the health of its residents.

- 7. Overall, how would you rate your physical health?
  - o Excellent
  - o Very good
  - $\circ \quad \text{Good}$
  - o Fair
  - o Poor

#### 8. Overall, how would you rate your mental health?

- o Excellent
- Very good
- o Good
- o Fair
- o Poor

9. What do you believe are the biggest health issues in the six-counties?

	Not Sure/ No Opinion	Not a Problem	Minor Problem	Major Problem
Access to primary care	0	0	0	0
Access to specialty care	0	0	0	0
Cancer	0	0	0	0

Communicable diseases (COVID,	$\cap$	$\cap$	$\cap$	$\cap$
sexually transmitted infections, etc.)	U		U	U
Dental / Oral health	0	0	0	0
Diabetes	0	0	0	0
Exercise/physical activity	0	0	0	0
Heart disease (including high blood pressure)	0	0	0	0
Mental health – Adult distress	0	0	0	0
Mental health – Youth distress	0	0	0	0
Nutrition/Healthy Foods	0	0	0	0
Obese/Overweight - Adults	0	0	0	0
Obese/Overweight - Youth	0	0	0	0
Smoking/vaping - by Adults	0	0	0	0
Smoking/vaping - by Youth	0	0	0	0
Substance misuse (alcohol, illegal drugs) - by Adults	0	0	0	0
Substance misuse (alcohol, illegal drugs) - by Youth	0	0	0	0
Teen pregnancy	0	0	0	0
Trauma/Violence	0	0	0	0
Unhealthy pregnancy and baby	0	0	0	0
Vaccines	0	0	0	0
Other, please specify:	0	0	0	0

- 10. Of the biggest health issues in this community listed above, rank the top three (1 being the biggest issue):
  - 0 1\_\_\_\_\_
    0 2 \_\_\_\_\_
  - o 3\_\_\_\_\_
- 11. Many things outside of medical care can impact a person's health. What do you believe are the social changes that would most improve the health of those living in the six-counties?

	Not Sure/ No Opinion	Would not help	Would help a little	Would be a major help
Ability to read	0	0	0	0
Affordable childcare	0	0	0	0
Affordable housing/ less homelessness	0	0	Ο	0
Better local jobs	0	0	0	0
Better public transportation options	0	0	0	0
Better water quality	0	0	0	0
Community safety/less violence	0	0	0	0
Economic security	0	0	0	0
Food security	0	0	0	0
Healthcare insurance	0	0	0	0
More places where people can gather and socialize - Adults	0	0	0	0
More places where people can gather and socialize - Youth	0	0	0	0
More parks and recreation centers	0	0	0	0
More places to get healthy foods	0	0	0	0
Other, please specify:	0	0	0	0

- 12. Of the many things outside of medical care that can impact a person's health listed above, rank the top three (1 being the most helpful change):
  - 0 1 \_\_\_\_\_\_
    0 2 \_\_\_\_\_\_
    0 3

#### C. Health care barriers, use and likes

This section asks about barriers to use of services or programs by people living in the six-counties (Giles, Lawrence, Lewis, Marshall, Maury and Wayne).

	Not Sure/ No Opinion	Not a Problem	Minor Problem	Major Problem
Do not have a doctor/do not know where to go	0	0	0	0
Cannot get an appointment soon enough or at the right time	0	0	0	0
Do not have car/transportation	0	0	0	0
Do not like to go to doctor/past experiences have been bad	0	0	0	0
Do not understand why I need a doctor	0	0	0	0
Have other duties (work or childcare) so do not have time	0	0	0	0
High cost of care	0	0	0	0
Not currently insured	0	0	0	0
Other, please specify:	0	0	0	0

#### 13. What are the biggest concerns that stop you from seeking medical care?

14. When you do receive health care, where do you go?

	Never go for	Sometimes go	Regularly go for
	Care	for Care	Care
Community health center	0	0	0

Doctor or other provider office	0	0	0
Hospital Emergency Room	0	0	0
Local Health Department	0	0	0
Urgent Care	0	0	0
Don't go anywhere	0	0	0
Other, please specify:	0	0	0

15. Would programs on topics like the ones below help you reach your personal health goals?

Program	Not Sure/	Would not	Would help	Would be a
riogram	No Opinion	help	a little	major help
General health and wellness	0	0	0	0
Diabetes self-management	0	0	0	0
Healthy nutrition/cooking	0	0	0	0
High blood pressure self-management	0	0	0	0
Parenting	0	0	0	0
Physical fitness	0	0	0	0
Quit smoking/vaping	0	0	0	0
Screenings (blood pressure, eye check, cancer screenings, etc.)	0	0	0	0
Stress-management	0	0	0	0

16. What other health or non-health programs do you believe are most needed, but are not readily available/accessible locally? Please specify. \_\_\_\_\_

## D. Health care information and communication

This section asks where you go for information and how you like to communicate.

- 17. Where do you go to find out about health care resources or health questions? (You may check more than one)
  - Community-based organization (non-health care service provider)
  - $\circ \quad \text{Doctor or other health care provider}$
  - Faith based organizations (e.g., church, temple)
  - Family or friends
  - o Health insurance plan

- o Internet
- o Social Media
- Health Department
- o School
- o Television/radio
- Other, please specify: \_\_\_\_\_
- 18. Where do you go to find out about social services or programs or non-health care questions (food, housing, childcare, etc.)? (You may check more than one)
  - Community-based organization (non-health care service provider)
  - Doctor or other health care provider
  - Faith based organizations (e.g., church, temple)
  - Family or friends
  - Health insurance plan
  - o Internet
  - Social Media
  - o Health Department
  - o School
  - Television/radio
  - Other, please specify: \_\_\_\_\_
- 19. In what ways do you like to communicate with healthcare providers? (You may check more than one)
  - o In-person
  - o Email
  - Online patient portal (e.g., MyChart)
  - Telephone
  - Text messaging
  - Video conferencing (e.g., FaceTime, Skype)
  - Other, please specify: \_\_\_\_\_
- 20. What primary language do you speak at home? (You may check more than one)
  - English
  - o Spanish
  - Other language, please specify: \_\_\_\_\_\_

Thank you for helping us better understand the needs of our six-county community!