REGIONAL ONE HEALTH

Community Health Needs Assessment

Regional One Health

2022 FINAL SUMMARY REPORT – SUBMITTED BY HOLLERAN

HOLLERAN

COMMUNITY ENGAGEMENT RESEARCH & CONSULTING

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EXECUTIVE SUMMARY

The Patient Protection and Affordable Care Act of 2010 set forth requirements for nonprofit hospital organizations in order to maintain their tax-exempt status as a charitable hospital, 501(c)(3). One of the regulations is a requirement that all nonprofit hospitals conduct a Community Health Needs Assessment (CHNA) and adopt an implementation strategy that meets the community health needs identified in the assessment every three years. Regional One Health has conducted previous CHNA's during the fiscal years 2013, 2016 and 2019 to identify needs and resources in the community. Regional One Health contracted with Holleran Consulting (Holleran), a research firm based in Wrightsville, Pennsylvania, to execute this project.

Beginning in March 2022, Regional One Health undertook a comprehensive CHNA to evaluate the health needs of individuals living in Shelby County, in Tennessee. The aim of the assessment is to reinforce Regional One Health's commitment to the health of residents and align its health delivery efforts with the community's greatest needs. The assessment examined a variety of health indicators including risk health behaviors, chronic health conditions, access to health care, and social determinants of health.

The completion of the CHNA enables Regional One Health to take an in-depth look at the health of its greater community. The findings from the assessment allowed them to prioritize public health issues and will enable them to develop a community health implementation plan focused on meeting community needs. Regional One Health is committed to the people it serves and the communities where they reside. Healthy communities lead to lower health care costs, robust community partnerships, and an overall enhanced quality of life. This CHNA Final Summary Report serves as a compilation of the overall findings of this research and is comprised of the following research components.

- Secondary Statistical Data Profile
- Online Key Informant Interviews
- Prioritization
- Implementation Strategy Planning Session

Key Community Health Issues

Regional One Health, in conjunction with community partners, examined the findings of the Secondary Data and Online Key Informant Survey to select Key Community Health Issues pertinent to Shelby County. Session participants are listed in Appendix E. The following issues were identified and discussed (presented in alphabetical order):

- Access to Health and Supportive Services
- Affordable Housing, Income and Poverty
- Community-wide Collaboration
- Disease and Accident Prevention
- Maternal and Child Health
- Mental and Behavioral Health
- Mortality and Chronic Disease Management
- Overweight and Obesity

Prioritized Community Health Issues

The identified issues were rated based on the seriousness of the issue and the perceived impact that Regional One Health may have. Based on this feedback from community partners Regional One Health plans to focus community health improvement efforts on the following four health priorities over the next three-year cycle:

- Community-wide Collaboration
- Access to Health and Supportive Services
- Mortality and Chronic Disease Management
- Maternal and Child Health

Previous CHNA and Prioritized Health Issues

Regional One Health conducted a comprehensive CHNA in 2013, 2016 and 2019 to evaluate the health needs of individuals living in the hospital service area within Shelby County. The purpose of the assessment was to gather information about local health needs and health behaviors. The assessment helped Regional One Health to identify 11 health issues in 2013, 5 health issues in 2016, and 4 health issues in 2019 and to develop a community health implementation plan to improve the health of the surrounding community. A compilation of prioritized health issues and implementation plans for all years are found in Appendixes G, H and I. The prioritized health issues and major outcomes identified in the previous years include:

Prioritized Health Issues in 2013:

- Teen Pregnancy
- Infant Mortality
- HIV/AIDS
- Diabetes
- Breast Cancer
- Colorectal Cancer
- Adult Obesity/Overweight
- Injury Prevention
- Education
- Violent Crime/Homicide/Firearm-Related Deaths
- Lung Health

Major Outcomes from the 2013 CHNA Priorities:

- Served approximately 180 young moms each year through the Sunrise Program.
- Approximately 3,700 new moms received education through the Safe to Sleep Program.
- Approximately 10,000 medical visits were provided annually to HIV patients, as well as 15,000 wrap around visits.
- Provided more than 1,800 glucose and blood pressure screenings in the community and participated in more than 78 community health fairs.
- Approximately 3,677 individuals were screened through the Take Care/Be Aware Program.
- Over 100 people from various faith groups attended the Spiritual Health & Wellness Conference.
- Average of 20 participants per month attended the Memphis Area Brain Injury Support Group.
- Touched more than 300 lives through hosting Bully, Conflict Resolution and Gun Violence and Police Interaction community educational programs.

Prioritized Health Issues in 2016:

- Poverty
- Healthy Lifestyles
- Violence
- Mental Healthcare
- Sexually Transmitted Illnesses and TB

Major Outcomes from the 2016 CHNA Priorities:

- Patient Medication Assistance Program (PMAP) served 291 patients in the Fiscal Year 2019, equating to $70,752.87 in medications provided to patients.
- Regional One Health offered 56 tours of the birth facility, as well as childbirth classes since the second quarter of 2019.
- Regional One Health has packaged 30,000 meals for the Meal Packing Event in partnership with MidSouth Food Bank for distribution to Memphians.
- Hospital Based Violence Intervention Program (HVIP) staff have evaluated more than 700 victims of violence who presented to Regional One Health in 2019.
- Trained 2,871 trauma-informed staff members, which is an average of 258 per quarter.

Prioritized Health Issues in 2019:

- Access to Healthcare
- Health Literacy
- Mental Health (Resource Awareness)
- Violence

Major Outcomes from the 2019 CHNA Priorities:

- One Health's Complex Care program served a total of 508 patients from 2019-2021. One Health also connected 670 enrollees with community agencies and provided 1,614 enrollees with transportation services.
- The Adult Special Care Center (a Center of Excellence) assisted 1,103 patients with utilities support and provided 3,049 patients with non-emergent transportation, 5,309 with case management support services, 2,223 patients with food vouchers/cards, and 1,667 with food boxes.
- 37 One Health patients were provided with permanent or temporary housing and patients received utility payments, job training, benefits screening and other referrals.
- Tens of thousands of meals were provided to Mid-South Food Bank and other food pantries or through vouchers.
- The Adult Special Care Center referred 443 individuals to behavioral health providers and 105 to Medication Assisted Treatment for alcohol use disorder.
- 75 active HVIP clients are securing employment or completing annual educational training.
- The Newborn Center (NBC) saw 6% of their newborns discharged on breastmilk in 2019 and saw an increase to 21% in 2020 and 22% in 2021. 761 participants enrolled in the childbirth education program.
- The Pharmacy completed 918 Patient Medication Assistance Program applications.

COMMUNITY HEALTH NEEDS ASSESSMENT OVERVIEW

Organization Overview

Regional One Health is home to the oldest hospital in Tennessee, chartered in 1829. Throughout its more than 180-year history, the acute care hospital has evolved significantly, housing a children's hospital, tuberculosis hospital, military hospital, maternity hospital and ultimately the Regional Medical Center. The Medical Center is home to nationally recognized Centers of Excellence including trauma, burn, high risk obstetrics and newborn centers and is committed to providing quality health care to all citizens of the Mid-South. Regional One Health now has seven service locations across Memphis. Most recently a new outpatient campus in east Memphis was opened.

Regional One Health has the expertise, research orientation and commitment to innovation to play a unique role in advancing the quality of health care in Tennessee. It's experience with some of the most challenging health crises a patient can face makes it uniquely qualified to provide a high quality of care in other services. Regional One Health recognizes that to assure quality care, they must be continuously vigilant. Quality is embedded in their Core Value of Excellence:

Living our passion for excellence by maintaining ethical standards and providing quality healthcare and service through continuous improvement.

The core programs and services within Regional One Health include:

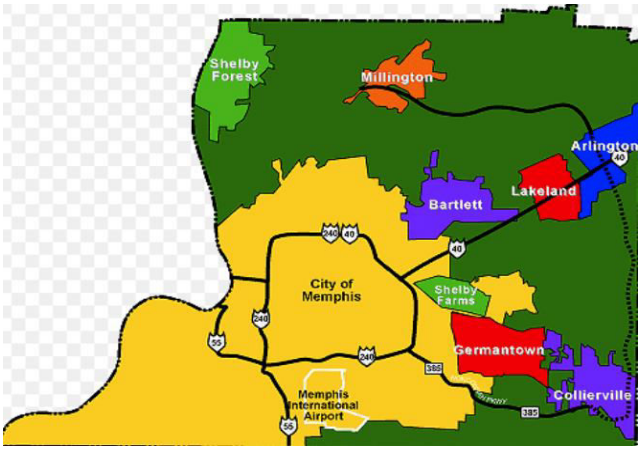
- Main Campus
  - Regional Medical Center – an acute care hospital providing the Mid-South with the highest quality health care. It also serves as one of the largest medical and surgical teaching sites for the University of Tennessee Health Science Center where more than half of the doctors in Tennessee receive their training.
  - Centers of Excellence
    - The Elvis Presley Trauma Center – a designated Level 1 Trauma Center in Tennessee, Mississippi and Arkansas.
    - Firefighters Burn Center – a full-service Burn Center, an outpatient clinic, surgery facilities, a rehabilitation center, a research division, and special cutting-edge burn care equipment. It is the only full-service American Burn Association verified burn center of its kind within a 250-mile radius of Memphis.
    - Sheldon B. Korones Newborn Center – one of the oldest and largest neonatal intensive care units in the United States, treating more than 1,300 premature or critically ill newborns each year.
    - High-Risk Obstetrics Program – receives 1,500 referrals annually due to complications in pregnancy. The facility has all the comforts of home, as well as the sophisticated equipment necessary to handle complications during delivery.
  - The Rehabilitation Hospital – a 23-bed inpatient facility in a newly renovated space with attractive, spacious private rooms, providing comprehensive medical rehabilitation services for adults and adolescents (over the age of 14).
  - Extended Care Hospital – treats a variety of patients that require longer lengths of stay (18 to 35 days) than in a traditional acute care hospital.

- East Campus is a multi-specialty site offering a one-stop shop for primary and specialty person centered care. The clinic is staffed with medicine services such as internal medicine, cardiology, endocrinology, neurology and rheumatology.
  - Center for Rehabilitative Medicine – a collaborative effort designed to help patients increase wellness through an effective three-part approach which includes State-Of-The-Art Technology, Innovative Care Plans, and Thoughtful Analysis.
  - East Campus Imaging Center – a state-of-the-art facility designed to enhance the quality of care, comfort, and convenience for all patient's imaging needs.
  - East Campus Multispecialty Care – a site that offers primary care and specialty services, such as internal medicine, cardiology, endocrinology, nephrology, neurology, and rheumatology.
- Outpatient Care Network
  - Physicians, registered nurses, pharmacists and technicians provide outpatient medical services such as x-ray, laboratory, medical imaging, ultrasound, cardiac diagnostic testing, pharmacy and specialty clinics.
  - Outpatient Surgery Center provides special equipment and care for surgical outpatient procedures such as orthopedics, ear, nose and throat, plastics/reconstructive, gynecology, urology and general surgeries.

Community Served

Regional One Health considers the community it serves to include not only the neighborhoods surrounding the campus on Memphis' downtown corridor, but also extends to the tristate area of West Tennessee, Arkansas, Mississippi, and beyond. For purposes of this CHNA, Regional One Health defined their current service area by analyzing the geographic area surrounding the hospital as well as local communities from which all residents are drawn (including low-income or underserved individuals). The primary service area is considered to be Shelby County, Tennessee including the city of Memphis.

Shelby County is located in the southwestern corner of Tennessee along the Mississippi River. Overtime, the county has continued to expand and change from a rural to an urban center. It has a long history of caring for and serving its citizens. The city of Memphis in Shelby County is also located along the Mississippi River in the western portion of the county and is the second most populous city in Tennessee.



Methodology

The CHNA is comprised of both quantitative and qualitative research components. A brief synopsis of the research components is included here with further details provided throughout the document.

- A Secondary Data Profile uses existing local-level data with state and national comparisons of demographic and health data, also known as "secondary data." Specific data sources depicting population and household statistics, education and economic measures, morbidity and mortality rates, incidence rates, and other health statistics for Shelby County were compiled. The most recent data are used whenever possible. Data were compiled and compared to state and national level data, where applicable. National comparisons and benchmarks include United States data when available. Data from the U.S. Census Bureau is typically provided in 5-year estimates (e.g., 2016 – 2020). Five-year period estimates represent data collected over a period of time. The primary advantage of using multiyear estimates is the increased reliability of the data for less populated areas and small population subgroups.

- Key Informant Surveys were conducted with key community stakeholders. In total, 121 individuals participated between April 11 and April 27, 2022. This reflects an 86.4% response rate. Key informants were invited to participate in a survey to gather a combination of quantitative ratings and qualitative feedback through closed and open-ended questions. Questions focused around health issues and barriers for people in the community, health care access, underserved populations, and how to increase the overall health of Shelby County and the surrounding areas. Key informants are defined as community stakeholders with expert knowledge including public health and health care professionals, social service providers, non-profit leaders, business leaders, faith-based organizations, and other community leaders. The largest percentage of informants participating in this Key Informant Survey are affiliated with non-profit/social service providers (16.8%). This is followed by government/housing/ transportation sector agencies (15.8%) and faith-based/cultural organization professionals (13.9%). The vast majority of respondents work in organizations that primarily serve traditionally underserved populations, such as Black/African Americans, low-income/poor, children/youth, Hispanic/Latinos, the elderly and disabled.

For all demographic and health indicator statistics, data from Shelby County are incorporated as local-level data unless otherwise noted. When available, state and national comparisons are provided as benchmarks for the county statistics. A national comparison includes United States data, Healthy People 2030 objectives and County Health Rankings National Benchmarks when available.

In addition to summarizing the findings of the Secondary Data Profile and the Online Key Informant Survey in Key Findings, report cards are provided which clearly delineated key indicators and results for comparison of county level data to state and national figures.

Research Partner

Regional One Health contracted with Holleran, an independent research and consulting firm located in Wrightsville, Pennsylvania, to conduct research in support of the CHNA. Holleran has over 25 years of experience in conducting public health research and community health assessments. The firm provided the following assistance:

- Collected and interpreted data from secondary data sources
- Collected, analyzed, and interpreted data from key informant interviews
- Prepared all reports
- Facilitated prioritization session

Community Representation

Community engagement and feedback are an integral part of the CHNA process. Regional One Health sought community input through key informant interviews with community leaders and partners, and inclusion of community leaders in the prioritization and implementation planning process. Public health and health care professionals as well as leaders and representatives of nonprofit and community-based organizations shared their knowledge and expertise about health issues, and provided insight about the community, including the medically underserved, low income, and minority populations.

Research Limitations

As with all research efforts, there are some limitations related to this study's research methods that should be acknowledged. In some cases, local-level secondary data may be limited or dated. The most recent data are used whenever possible. Secondary data should be interpreted with some caution, since Shelby County includes the city of Memphis. The presence of this densely populated urban area may present a somewhat skewed picture of all of Shelby County when viewing county-wide data.

In addition, timeline and other restrictions may have impacted the ability to survey all key stakeholders. Regional One Health sought to mitigate limitations by including representatives of diverse and underserved populations from the local community.

Prioritization of Needs

Following the completion of the CHNA research, Regional One Health prioritized community health issues and developed an implementation strategy to address the prioritized community needs. A description of the prioritization process is included along with a listing of the participants.

COMMUNITY HEALTH NEEDS ASSESSMENT KEY FINDINGS

Both components of the CHNA come together to reveal a unique perspective of the health status of residents living in Shelby County. A number of health issues were found in both components and are worthy of attention for Regional One Health. The key findings represent themes which have been pulled from the Secondary Data Profile and the Key Informant Survey and highlight the key takeaways that stand out across the research components, as found by the Holleran team.

It is worth noting that a very large number of key informants participated in the Key Informant Survey. The participants are from varied backgrounds, providing diverse perceptions related to key health issues, barriers, availability of resources and services, and underserved populations. Participants were effusive in their responses to the open-ended questions. This demonstrates a concern for and an active interest in the health of the community by its stakeholders. Several issues of concern were mentioned consistently including mental health, overweight/obesity, food insecurity, poverty and meeting basic needs, navigating the health care system, transportation, neighborhood safety/recreational space, and a need for increased coordination of services. These key informant perceptions seem invaluable in terms of bringing about meaningful improvements moving forward. Findings are presented alphabetically as follows.

- **Access to Health and Supportive Care Services:**

  The ability to access affordable health care services is key to community health. Identifying and decreasing barriers which impede access can markedly improve the health and well-being of individuals and families. Key informants identified accessing health care services as the second most significant health issue facing the community. Health care access and quality, a social determinant of health, was selected by 47.3% of informants as being "Poor". One respondent stated it clearly, "Our community has many hospitals, clinics, health care providers and emergency services. Our issue is that these services are difficult if not impossible for our community to access."

  One factor in ensuring accessibility to health care and good health outcomes is whether or not families and individuals have health insurance coverage. Shelby County residents are more likely to be uninsured (11.5%) when compared to Tennessee (9.7%), and the U.S. (8.7%). Fortunately, the percentage of the population without insurance coverage continues to decrease from higher levels in 2010 – 2014 (15.4%) and in 2013 – 2017 (12.8%). The lack of health insurance was identified as a barrier by over half of key informants. One key informant commented, "Insurance coverage is a challenge, people knowing where to go and get primary care (in lieu of using the ER) is a challenge."

  Access to key health care providers such as doctors and dentists is also critical to healthy outcomes in a population. According to County Health Rankings, Shelby County is ranked 35 out of the 95 counties in Tennessee for Clinical Care which measures provider density and prevention activities. A ranking of 1 is considered the best. In 2019, the county ranked 21. This demonstrates a loss of health care providers and prevention activities. However, the ratio of Shelby County residents to primary care physicians is better than in Tennessee, possibly due to the plethora of health care resources in the city of Memphis. This is true for dentists as well. Yet the physician and dentist ratios are worse than the National Benchmark.

Community support services help to mitigate access issues when available. In Shelby County however, key informants identified the inability to pay out of pocket expenses as the most significant barrier to obtaining health care. Basic needs not being met (such as food, water, shelter, job) and transportation were selected as the second and third most significant barriers. Choosing between meeting basic needs such as food and buying medication or seeing a doctor is a familiar choice for many families. One key informant reported, "Many people lack the funds to purchase their medicine essential for their health. For many it is a choice between paying their essential monthly bills or getting their prescriptions filled." Among the top resources "Lacking" in the county are advocacy and case management. Without family or professional assistance to find important resources, services may be underutilized. This was confirmed by a respondent. "Due to COVID, family support has decreased."

The inability to navigate the health care system was selected as a barrier to accessing health care by a large majority. Respondents felt it may be particularly difficulty for immigrants who may lack a social security number, experience language barriers, and may not understand their rights within the health care system. "There needs to be greater cultural competency, a stronger sense of welcome for non-English speaking families and improved access to health systems and resources regardless of your citizenship status or preferred first language." When navigating the system becomes difficult or medical care is delayed, many key informants report that individuals go to the hospital emergency department. Fortunately, fewer respondents perceived this to be true in 2022 than in 2019. In Shelby County, the rate of preventable hospital stays per 1,000 Medicare enrollees is high. One remarked, "The health care system is too complex for most to navigate on their own. Having support in navigation as well as in accessing resources is critical."

Access to health education is also limited and was rated among the top 5 health care resources/services as "Missing". A majority of key informants reported health literacy to be "Very Poor" or "Poor". Many called for intervention in the school system to improve health literacy beginning at an early age. The placement of public health professionals in schools seems to be an important component.

➢ Affordable Housing, Income and Poverty

Key demographic indicators for Shelby County such as housing, income, family composition and employment are noteworthy. In the county, these indicators portray individuals and families with fewer resources, less social support and limited access to affordable housing. In Shelby County, far fewer housing units are owner-occupied than in the state or the nation. As a result, more housing units are rented. To assess the affordability of housing, 30% of a household's total income is considered the cut off for housing cost burdens and avoiding financial hardship. Over half of renter households in Shelby County spend more than 30% of their income on rent, higher than the state and the nation. County Health Rankings reports that 19% of county residents experience severe housing problems. When affordable housing is missing, individuals and families often make trade-offs which include taking second jobs, cutting back on health care and healthy food, and moving to less safe neighborhoods.

Demographically, over one-third of all individuals in the county reside in a nonfamily household and of these households, 85.9% reside alone. This percentage is higher than Tennessee (82.6%) and the

nation (80.6%). Living alone can create a higher risk for social isolation and potentially poor mental and physical health. As well, Shelby County has a larger proportion of unmarried residents when compared to Tennessee and the nation. The percent of female householders with no spouse present is much higher in Shelby County (19.3%) than in the state or nation. In addition to health risks, female headed households are much more likely to face poverty than married-couple families and male headed households. Also, the percent of grandparents caring for grandchildren has risen since the previous study was conducted.

Median income for families has not kept pace in the last few years with Tennessee. As a result, families in Shelby County are more likely to live in poverty when compared to the state and the nation. In addition, the incidence of poverty among female headed households is worse in the county. A high percentage of households receive supplemental security income and 16.4% rely on Food Stamp/SNAP (supplemental nutritional assistance program) benefits to make ends meet. Finally, Shelby County has a higher unemployment rate than Tennessee and the U.S., however, the rate has decreased somewhat since 2013 – 2017. It is known that unemployment and a low income may have a negative effect on both mental and physical health over time.

Key informants also emphasized the negative impact that poverty has on community health. "Until we are able to face poverty head on, we will be an unhealthy community. The quality of health care provided by our major hospital systems is quite high - the need in our community for services is just so great." Another stated, "Memphis has such significant poverty issues, our residents have limited transportation, limited access to healthy foods and limited funds for any medical expenses. In addition, meeting basic needs takes precedence over preventive care."

➢ Community-wide Collaboration:

Key informants stressed the excellent job that the local hospitals, the medical community, Federally Qualified Health Centers, and nonprofit agencies do to address social determinants of health, help meet basic needs and educate the community on the importance of health maintenance. Several said COVID-19 demonstrated that a successful community-wide public health effort can be undertaken when other health issues prevail. "More resources are available for public health outreach and care since COVID-19. This collaboration across local and federal government should and must continue." However, another said this about the impact of the pandemic. "Visits to primary care dropped as many residents were fearful of any health care facility. COVID highlighted gaps such as the need of more skilled nurses, mental health issues that stemmed from quarantine and the stress the pandemic brought on overall."

Consistently, key informants remarked that more needs to be done, particularly as it relates to putting forth a unified, systemic effort to address the health care and social issues found in Memphis and Shelby County. "There are various small programs addressing each concern for social determinants of health. (But) no large cohesive approach." Fortunately, almost three-quarters of respondents feel that their organization collaborates to improve health in the community. However, this is a much lower percentage than in 2019. It is possible that collaboration was made more difficult with the onset of the pandemic in 2020. One informant commented, "Health and other issues cannot be addressed as siloed policy and strategy concerns. In order for community health to improve, a comprehensive approach for improving social and economic mobility in the community

needs to be developed." To address this issue, key informants recommended offering health education and prevention services at existing institutions, pooling funding and resources, starting health education early, coordinating early intervention services for mental health, improving provider understanding of cultural differences, and offering bilingual services.

➢ Disease and Accident Prevention:

The availability of preventative health services such as cancer screenings and vaccinations can positively impact health outcomes in a community. Forty-one percent of key informants identified the lack of preventative health care such as screenings and annual checkups, as a significant health barrier. As one key informant pointed out, "With poverty and lack of early detection, the diseases are left undiagnosed until they are so far along it is harder to help with recovery and remission." Another recognized a frequent delay in obtaining treatment. "Unless there is a health emergency, all of the obstacles to care may be overwhelming. Well-visits and preventative care and screenings may not be happening."

Data were collected about preventative care. The percent of female Medicare enrollees receiving mammography screenings in the county is far less than in Tennessee or the National Benchmark. Additionally, the rate of age-adjusted deaths from influenza and pneumonia in Shelby County (23.0) is much higher than the state (18.5) and the nation (18.6). These deaths may indicate a lack of access to vaccinations or lack of education about prevention. The incidence of tuberculosis is also higher. Shelby County experiences much higher rates of preventable sexually transmitted diseases as well. These diseases have been shown to have serious negative effects impacting psychological well-being and quality of life. If left untreated, these diseases may cause complications in men, women and affected infants.

Shelby County ranks 16 out of 95 Tennessee counties[1] for Health Behaviors Rank (2021). Health Behaviors includes activities such as smoking, excessive drinking, obesity and alcohol-impaired driving deaths which may preventable. Fortunately, the ranking is a sizable improvement over 2019 when it was 35. Accidental injury and death have far-reaching economic and psychological implications for public health. The rate of death due to accidents in Shelby County is 98.7 per 100,000 and is more than twice as high as in the U.S. (42.8). There is also a higher number of premature deaths (and years of potential life lost) in Shelby County when compared to Tennessee and the National Benchmark. This demonstrates that more younger lives are being lost in Shelby County than elsewhere. Also, the rate of violent crime per 100,000 Shelby County residents is 816. Of the three components of violent crime, aggravated assault is the highest at 655.8 per 100,000. Unexpected injury, disability and even death can diminish the health and well-being of the individual as well as concerned family members.

➢ Maternal and Child Health:

Improving outcomes for mothers, infants and children requires a focus on fostering healthy behaviors and supportive environments. Increasing the availability and use of women's health services prior to and during pregnancy as well as during the post-natal period can lead to healthier babies and mothers. In Shelby County, 22.3% of all key informants identified maternal, infant and

[1] A ranking of "1" is the best.

child health as one of the top health issues. Also, 56.4% selected children and youth as an underserved population.

Good birth outcomes and early identification and treatment of developmental delays can prevent death or disability and enable children to reach their full potential. Conversely, a lack of access to health care, health behaviors and socioeconomic and environmental risks contribute to infant deaths and low birthweight infants. In Shelby County, data describe infant, neonatal (4 weeks or earlier) and post-neonatal (28 days to 1 year) mortality rates that are higher than the state and the nation and much higher than the target set by Healthy People 2030. In Shelby County, the infant mortality rate is highest for Black non-Hispanic women (11.4 per 1,000 Live Births). For White non-Hispanic women in the county, the rate is 4.7. Infants born with low birthweight have added health risks. Long term and sometimes costly follow up is often required to monitor for health consequences. In Shelby County the percentage of infants who are born with low birthweight (12.2%) is much higher than in the state (9.3%) or nation (8.2%).

The rate of infants born to unmarried women is high in the county (60.1%). According to the National Center for Health Statistics, births outside of marriage are often associated with disadvantages for children and their parents. Children born to unmarried parents are more likely to live in poverty and to have poor developmental outcomes. Although the teen birth rate (for females age 15 to 19) has declined in Shelby County and Tennessee, the rate of teen births in the county (36 per 1,000 births) is much higher as compared to the National Benchmark of 12. On a positive note, one informant stated that "Home visitation programs for new mothers and babies are showing strong results."

➢ Mental and Behavioral Health:

Mental health was selected by key informants as the most pressing health issue in the community and a lack of resources was emphasized. Mental health services are the top resource found "Missing" in the community in 2022. County Health Rankings found that mental health provider density is worse in Shelby County (669:1) than in Tennessee (634:1) and far worse as compared to the National Benchmark (270:1). A large majority of respondents disagree or strongly disagree that there are a sufficient number of mental health and substance abuse providers in the area. One respondent stated that facilities for mental health are "atrocious." And another said, "There are not nearly enough resources for mental health or for people with dual diagnosis."

Self-assessed health status is a measure of how an individual perceives his or her health and provides a strong predictive measure for overall health outcomes. County Health Rankings tracks the average number of physically or mentally unhealthy days reported within the past 30 days. Shelby County residents report experiencing a monthly average of 4.7 days of poor physical health, 4.8 days of poor mental health and a higher percentage of fair or poor health when compared to adults in Tennessee and the National Benchmark. The crude death rate due to suicide per 100,000 in Shelby County is increasing steadily, from 8.6 in 2014 to 9.9 in 2017 and to 11.2 in 2020. Fortunately, the rate is still much lower than the state and the nation.

Populations recognized as particularly affected by mental health issues include victims of domestic abuse, LGBTQI+ individuals, clergy, those addicted to opioids and veterans. One respondent

pointed out that when dysfunction is prevalent, substance abuse, homelessness and even injuries follow. Medical complications result which impact the physical health and well-being of individuals, families, and the community and consume a large portion of community health resources. A key informant offered a personal account, "I know many people with mental health issues who use drugs to self-medicate because they lack the money for treatment plans." Key informants recommend addressing mental health issues early (before they become severe) by starting in the school system and increasing the availability of services for this population overall. "There should be options to prevent mental health issues from becoming severe. We only offer critical services once the patient is in crisis mode."

Mortality and Chronic Disease Management:

Chronic diseases are among the leading cause of death and disability in the U.S. and include diseases of the heart, malignant neoplasms (cancer), chronic lower respiratory disease, diabetes and cerebrovascular diseases (stroke). The top 3 leading causes of death in Shelby County and in Tennessee are diseases of the heart, malignant neoplasms (cancer) and accidents (unintentional injuries). In the U.S., instead of accidents, the third leading cause of death is cerebral vascular disease (stroke). The overall age-adjusted mortality rate in Shelby County is much higher for the Black population than for the White population. On the other hand, the death rate for Hispanics is much lower than either the White or Black populations.

The overall rate of age-adjusted deaths from cancer is lower than Tennessee but higher than the nation and it is the second leading cause of death in Shelby County. The rate of death from cancer remains well above the target set by Healthy People 2030. Overall, incidence rates for cancer have trended upward in the county, state and nation in 2014 – 2018 as compared to 2011 – 2015. The county has notably higher incidence rates for breast (female), colon and rectum, prostate (male), cervix (female) and uterine (female) cancer which translate to higher age-adjusted mortality rates. In addition, in Shelby County the age-adjusted death rate due to diabetes is much higher than in the state and the nation as well as the target set by Healthy People 2030. Death from Alzheimer's Disease is lower than the state, but higher than the nation. Based on this research, chronic diseases in Shelby County including heart disease, some cancers (largely gender-specific), and diabetes are of particular concern. Unintentional injuries (accidents) also warrant attention. On a positive note, the chronic lower respiratory disease rate is lower in Shelby County than in either the state or the nation.

Key informants are keenly aware of chronic disease and the need to prevent it. "Cardiovascular (heart) disease is the #1 issue both here in Memphis and the world. The causes are many - unhealthy eating (which can stem from food deserts and lack of access to healthy foods whether by location or funding), hypertension, diabetes, lack of exercise (which can stem from unsafe neighborhoods), smoking and vaping (vaping becoming a HUGE problem in our schools), stress, and the list goes on." An informant was complimentary about the efforts on the part of Regional One Health. "Regional One partners with local nonprofits who are trying to lower heart disease and diabetes, they have the best trauma center in the area to deal with the gun violence we face, and they have excellent physicians who dedicate their time to make our community healthier." One respondent called for "Education on how to manage chronic disease without medication, prevention, and having access to healthy and affordable food options."

Overweight and Obesity:

Eating well and exercising are important in maintaining a healthy weight and reducing community obesity rates. The percent of adult obesity in Shelby County (measured by a BMI of 30 or more) is 35% compared to 33% (Tennessee) and 26% (U.S.). The high rate of obesity may reflect a household's need to make trade-offs between important basic needs, such as housing or medical bills, and purchasing nutritionally adequate foods. Key informants identified overweight/obesity as the most significant health issue. Also, diabetes and heart disease, which often result from obesity are among the top 5 key health issues. Healthy food options were identified as one of the top health care resources "Missing" in the community.

The food environment index measures the proximity of one's home to a grocery store and food insecurity. Food insecurity refers to the lack of consistent access to enough food for an active, healthy life. In Shelby County the food environment index, (6.9) is above Tennessee (6.2) but well below the U.S. (8.7) with 10 being the best. This recommendation was made by a key informant. "Eliminate food deserts, do a better job of promoting the importance of healthy choices and the detrimental effects when people don't make healthy choices." Respondents point out that many community members who reside in a food desert are surrounded by fast food and convenience stores. In this case, the built environment, a social determinant of health, is a limiting factor in accessing food that might otherwise support healthy eating patterns.

A community's health and overall quality of life is also affected by access to exercise opportunities. The measure by County Health Rankings is based on the proportion of residents who live reasonably close to a physical activity location. These locations may include parks or facilities identified by the NAICS code 713940 (gyms, community centers, YMCAs, pools, etc.). In Shelby County, 87% of residents have reasonable access to exercise opportunities. Yet, 27% of adults over the age of 20 are reported to be inactive. Key informants frequently observed that residents have little safe, convenient, and accessible recreational space and therefore are physically active less often. "Fear of violence and unsafe areas do affect community members feeling comfortable exercising in their own neighborhoods."

Other compounding factors noted by informants are a lack of education about the medical complications of being overweight and the benefits of a healthy diet. Importantly, cultural norms which are accepting of a large body size and the consumption of fried food are perceived to be pervasive. "Overweight/obesity is largely due to the eating habits/popular foods in the south and specifically to our region and city." On a favorable note, one key informant applauded the strong push to "install separated bike lanes that run through all neighborhoods so kids could safely ride, adults can ride longer distances to commercial centers, and everyone could reach destinations simply and safely without needing access to a car."

REGIONAL ONE
2022 CHNA Report Card

HOLLERAN
COMMUNITY ENGAGEMENT RESEARCH & CONSULTING

DOMAIN	INDICATOR	MEASURE	SHELBY COUNTY	TENNESSEE	U.S.
SOCIO-ECONOMIC FACTORS	LANGUAGE	Population 5 Years and Older who speak English less than "very well"	3.6%	2.9%	8.2%
	INCOME	Population below 100% of the poverty level	19.0%	14.6%	12.8%
		Households with Food Stamp/SNAP benefits	16.4%	12.6%	11.4%
		% of unemployed civilian labor force	7.4%	5.3%	5.4%
	EDUCATION	% of bachelor's degree or higher in adults 25 years and over	32.4%	28.2%	32.9%
	AFFORDABLE HOUSING	Renter households spending more than 30% of their income on housing	53.3%	47.1%	49.1%
		Owner households spending more than 30% of their income on housing	26.4%	23.9%	27.4%
	SOCIAL SUPPORT	Nonfamily households	38.5%	34.6%	34.7%
		Lack of social support (family, friends, social network) as a key health barrier selected by key informants.	31.4%	—	—
	HEALTH CARE ACCESS	% of population without health insurance coverage	11.5%	9.7%	8.7%
		Primary care physicians to population ratio	1,161:1	1,396:1	1,020:1*
		Mental health providers to population ratio	669:1	634:1	270:1*
		Dentist to population ratio	1,358:1	1,801:1	1,200:1*
		Most prevalent barrier to accessing care cited by key informants: inability to pay out of pocket expenses	70.2%	—	—
		Most "missing" healthcare service in the community cited by key informants: mental health services	22.9%	—	—
		Most needed/lacking healthcare service in the community cited by key informants: advocacy for social needs	71.3%	—	—
	BUILT ENVIRONMENT	Food environment index=food access and insecurity (ranking from 1=worst to 10=best)	6.9	6.2	8.7*
		Access to exercise opportunities	91%	71%	87%*

= Areas of Geatest Strength = Areas of Moderate Need = Areas of Greatest Need

*National benchmark represents the 90th percentile, i.e., only 10% better across the nation.

REGIONAL ONE
2022 CHNA Report Card

HOLLERAN
COMMUNITY ENGAGEMENT RESEARCH & CONSULTING

DOMAIN	INDICATOR	MEASURE	SHELBY COUNTY	TENNESSEE	U.S.
HEALTH BEHAVIORS	PHYSICAL AND MENTAL HEALTH	Population reporting "fair" or "poor" overall health	23%	21%	14%
		Poor physical health (average within past 30 days)	4.7	4.7	3.4
		Poor mental health (average within past 30 days)	4.8	5.2	3.8
		% of population with adult obesity (BMI ≥ 30)	35%	33%	26%
	TOBACCO USE/ SUBSTANCE USE	Adults who are current smokers	21%	21%	16%
		Excessive drinking in adults	15%	17%	15%
	PREVENTION	Mammography screening among female enrollees, ages 65 to 74	34%	41%	51%
		Preventable hospital stays per 1,000 Medicare enrollees	49.5	49.2	27.0*
HEALTH OUTCOMES	CHRONIC CONDITIONS AND INFECTIOUS DISEASES	Overall cancer incidence rates per 100,000 in adults	458.2	466.0	448.6
		Incidence of Chlamydia per 100,000	1,096.9	607.7	552.8
		Incidence of Gonorrhea per 100,000	454.8	237.0	188.4
		Incidence of HIV per 100,000	10.7	11.4	13.2
		Incidence of tuberculosis per 100,000	3.4	1.9	2.7
	PREMATURE DEATH	Years of potential life lost (death before age 75) per 100,000 people	10,577	9,355	5,400*
	DEATH RATES	Overall cancer mortality rates per 100,000 (Age-adjusted)	176.9	208.8	173.9
		Deaths due to intentional self-harm (suicide) per 100,000 (Age-adjusted)	11.2	17.2	13.9
		Death by accidents (unintentional injury) per 100,000 (Age-adjusted)	98.7	86.4	42.8
		Infant mortality rate per 1,000 live births	8.7	6.9	5.7

= Areas of Geatest Strength = Areas of Moderate Need = Areas of Greatest Need

*National benchmark represents the 90th percentile, i.e., only 10% better across the nation.

SECONDARY DATA PROFILE OVERVIEW

I. Socio-Demographic Statistics Overview

Overall Population Statistics

Shelby County had a 5-year estimate population of 936,611 from 2016 – 2020. This is somewhat lower than the 5-year estimate in 2013 – 2017 in which the total population was 937,847. The county experienced a slightly faster growth (since 2010) than both Tennessee and the nation. Shelby County also has a notably younger population as evidence by the lower median age (35.7 years) when compared to the state (38.8) and the nation (38.2).

Table 1. Overall Population (2010; 2016 - 2020)

	U.S.	Tennessee	Shelby County
Population (2016-2020)	326,569,308	6,772,268	936,611
Population Change from 2010	**9.3%**	**9.2%**	**9.9%**
Male population	49.2%	48.8%	47.5%
Female population	50.8%	51.2%	52.5%
Median Age (Years)	**38.2**	**38.8**	**35.7**

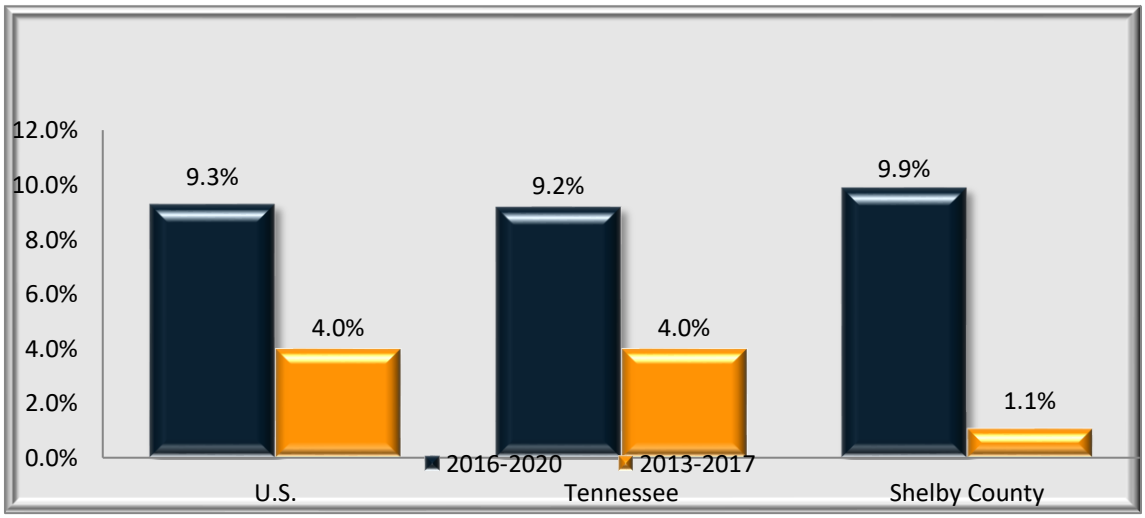
Source: U.S. Census Bureau

Table 2. Overall Population (2010; 2013 - 2017)

	U.S.	Tennessee	Shelby County
Population (2013-2017)	321,004,407	6,597,381	937,847
Population Change from 2010	**4.0%**	**4.0%**	**1.1%**
Male population	49.2%	48.8%	47.6%
Female population	50.8%	51.2%	52.4%
Median Age (Years)	**37.8**	**38.6**	**35.3**

Source: U.S. Census Bureau

Figure 1. Percent population change, 2010; 2016 – 2020 vs. 2010; 2013– 2017



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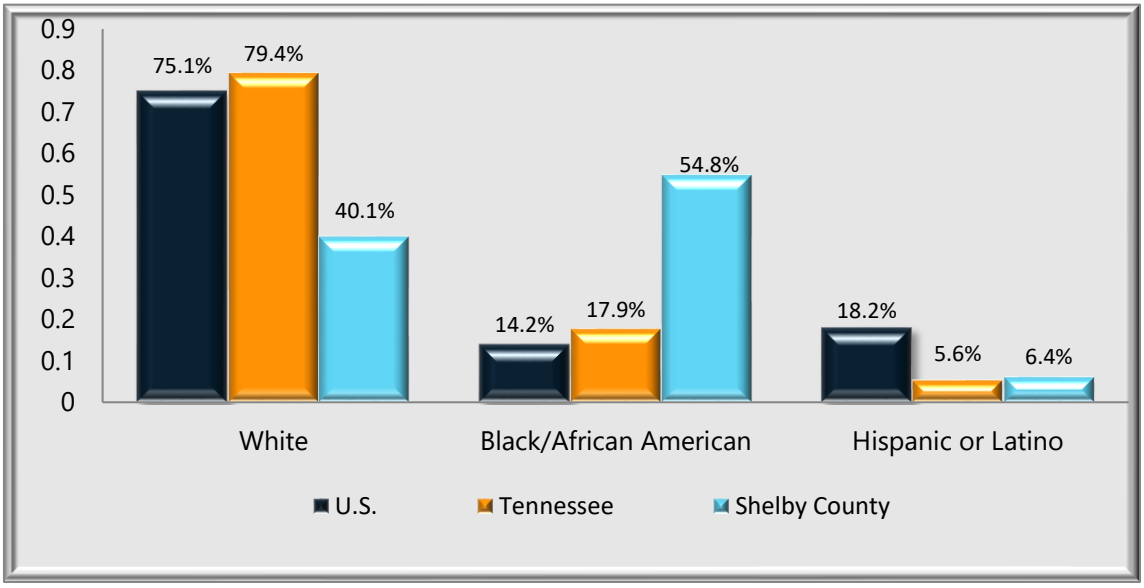
Racial Composition

Over half of the population in Shelby County is predominantly Black/African-American (54.3%), which is a much larger proportion when compared to Tennessee (17.9%) and the nation (14.2%). There is a slightly higher percent of Hispanic or Latino population in the county when compared to Tennessee, however this is considerably less than in the U.S.

Figure 2. Racial breakdown of the major races/ethnicity



* Hispanic/Latino residents can be of any race, for example, White Hispanic or Black/African American Hispanic

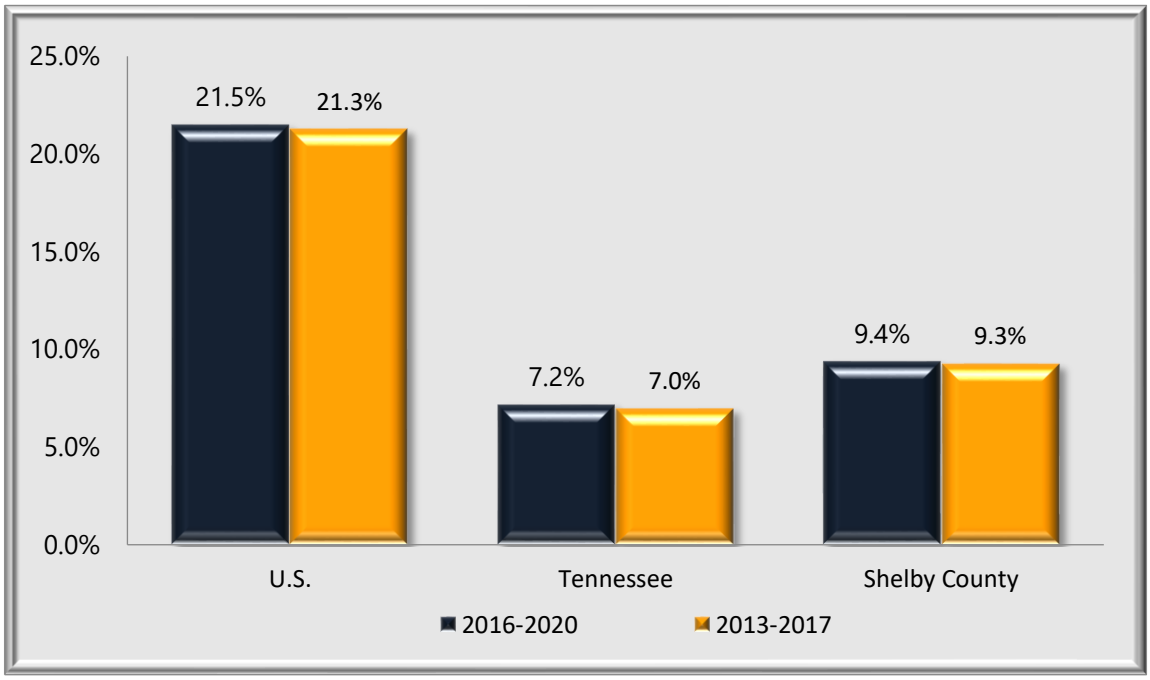
The percentage of residents aged 5 years and over who speak a language other than English at home is slightly higher in Shelby County (9.4%) when compared to Tennessee (7.2%). It is much lower when compared to the nation (21.5%). Spanish is the most common language spoken after English. Of county residents who speak Spanish, 43.1% speak English "less than very well".

Table 3. Language Spoken at Home Population, 5 Years Old and Older (2016 – 2020)

	U.S.	Tennessee	Shelby County
English only	78.5%	92.8%	90.6%
Language other than English	21.5%	7.2%	9.4%
Speak English less than "very well"	8.2%	2.9%	3.6%
Spanish	13.2%	4.2%	5.4%
Speak English less than "very well"	39.3%	44.3%	43.1%
Other Indo-European languages	3.7%	1.2%	1.3%
Speak English less than "very well"	30.4%	24.9%	19.8%
Asian and Pacific Islander languages	3.5%	1.1%	1.7%
Speak English less than "very well"	45.2%	42.6%	44.9%
Other languages	1.1%	0.7%	1.1%
Speak English less than "very well"	30.2%	43.2%	29.4%

Source: U.S. Census Bureau

Figure 3. Percentage of population speaking a language other than English at home (2016 – 2020; 2013- 2017)



Housing Tenure and Value

Housing is an important social determinant of physical and mental health. Affordable housing helps to alleviate financial burden and makes more household resources available to pay for healthcare and healthy food, leading to better health outcomes.

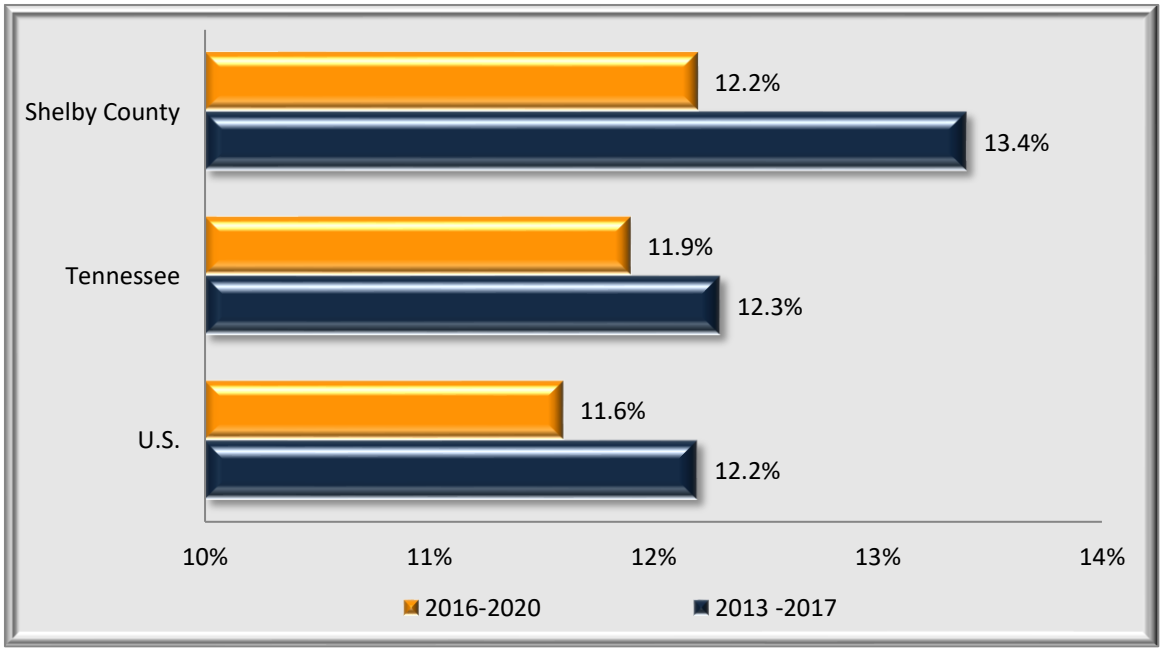
In Shelby County, far fewer housing units are owner-occupied (54.8%) than in the state (66.5%) or the nation (64.4%). Therefore, more housing units are rented. The percentage of all housing units in the county that are vacant is 12.2%, slightly higher than in Tennessee or the U.S.

Table 4. Households by Occupancy (2016 – 2020)

	U.S.	Tennessee	Shelby County
Total housing units	138,432,751	2,996,127	406,026
Occupied housing units	88.4%	88.1%	87.8%
Owner-occupied	64.4%	66.5%	54.8%
Renter-occupied	35.6%	33.5%	45.2%
Vacant units	11.6%	11.9%	12.2%

Source: U.S. Census Bureau

Figure 4. Percentage of vacant housing units, 2016 – 2020 vs. 2013 – 2017



When looking at housing costs in Shelby County, a slightly higher percentage of homeowners spend more than 30% of their income on their mortgage when compared to Tennessee, but slightly lower when compared to the nation. Thirty-percent of a household's total income is considered the cut off for housing-cost burden and avoiding financial hardship. More than half of renters (53.3%) in the county spend more than 30% of their income on rent. This is somewhat higher than the state and the nation.

Home values are lower in Shelby County than in Tennessee and the U.S. However, dollars spent on rent each month ($957) are higher than in Tennessee, but somewhat lower than the nation.

Table 5. Housing Characteristics (2016 – 2020)

	U.S.	Tennessee	Shelby County
Households spending 30% or more of income on mortgage/Owner costs	27.4%	23.9%	26.4%
Median value	$229,800	$177,600	$158,700
Households spending 30% or more of income on rent	49.1%	47.1%	53.3%
Median dollars	$1,096	$897	$957

Source: U.S. Census Bureau

Household Status

Households are identified as either family households or nonfamily (non-related) households. In Shelby County, over one-third of all individuals reside in a nonfamily household and of these households, 85.9% reside alone. This percentage is higher when compared to Tennessee (82.6%) and the nation (80.6%). Living alone generally entails a higher risk for social isolation

and potentially poor physical and mental health. Of these nonfamily households in the county, 27.2% are over the age of 65 years.

As it relates to family households, the percent of female householders with no spouse present is much higher in Shelby County (19.3%) than in the state or nation. These households are much more likely to face poverty than married-couple families or male headed households.

Table 6. Households by Type (2016 – 2020)

	U.S.	Tennessee	Shelby County
Total households	122,354,219	2,639,455	356,607
Average household size	2.60	2.51	2.58
Average family size	3.21	3.09	3.36
Family households (Families)	65.3%	65.4%	61.5%
Male householder, no wife present, family	4.9%	4.6%	4.6%
Female householder, no husband present, family	12.3%	12.7%	19.3%
Married-couple families	48.1%	48.2%	37.6%
Nonfamily households	34.7%	34.6%	38.5%
Householder living alone	80.6%	82.6%	85.9%
65 years and over	32.4%	32.1%	27.2%

Source: U.S. Census Bureau

Regarding marital status, Shelby County has a larger proportion of individuals aged 15 years and over who were never married when compared to Tennessee and the nation. In addition, 2.7% of the population in Shelby County is separated, which is slightly higher than both the state and the nation.

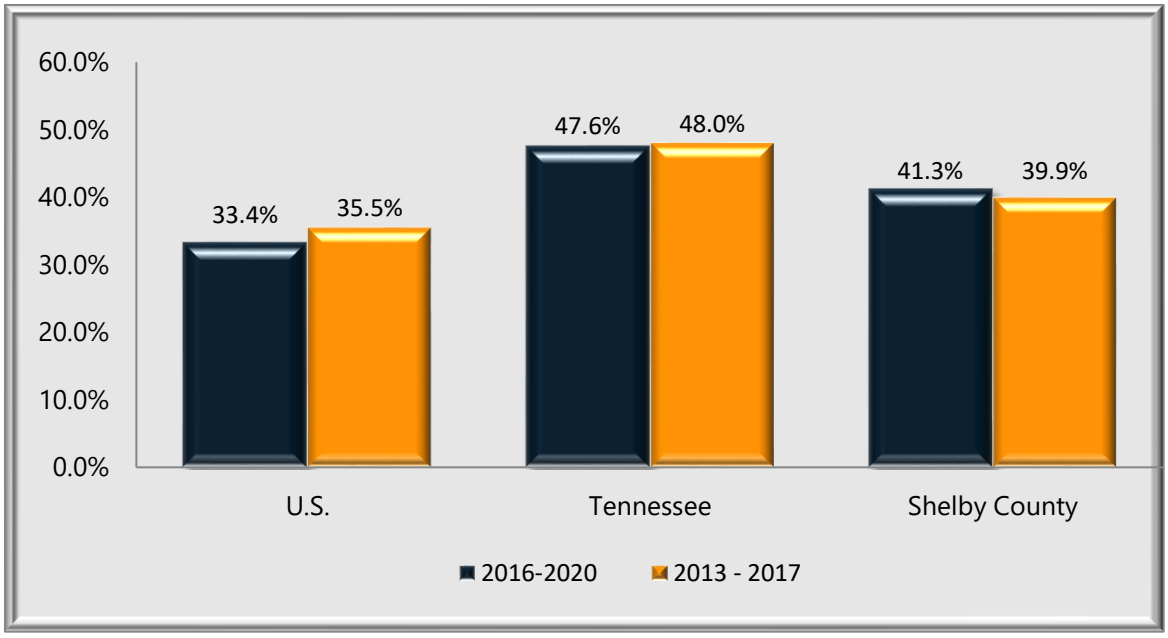
Table 7. Marital Status Population, 15 Years and Over (2016 – 2020)

	U.S.	Tennessee	Shelby County
Never married	33.5%	30.3%	41.8%
Now married, except separated	48.1%	49.2%	39.3%
Separated	1.8%	2.0%	2.7%
Widowed	5.7%	6.3%	5.4%
Divorced	10.8%	12.2%	10.7%

Source: U.S. Census Bureau

It is estimated that 23,717 grandparents live with their own grandchild or grandchildren, under 18 years of age, in Shelby County. The percentage of grandparents responsible for their grandchild or grandchildren (41.3%) has risen since the 2013 – 2017 estimate of 39.9%. Although higher than the percent in the U.S., this is much lower than in Tennessee which is 47.6% in 2016 - 2020.

Figure 5. Grandparents Responsible for Grandchildren, 2016 – 2020 vs. 2013 – 2017



Income Statistics

In the 2016 – 2020 5-year estimate period, the median income for families in Shelby County ($65,547) is now lower than in Tennessee, unlike the 2013 – 2017 period when it was slightly higher. Importantly, in both periods it is much lower than the nation. Median earnings for individual workers are $32,487, about the same as the state, but lower than the nation.

Table 8. Household and Family Income (2016 – 2020)

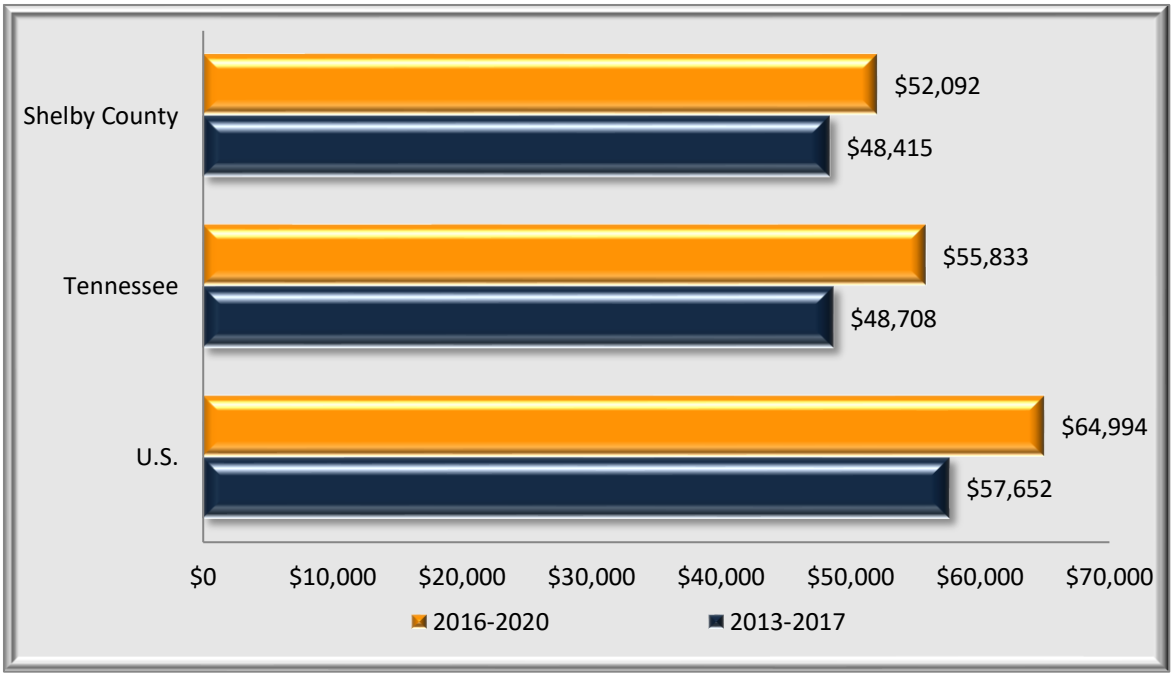
	U.S.	Tennessee	Shelby County
Household Income			
Median household income	$64,994	$55,833	$52,092
Mean household income	$91,547	$76,937	$78,897
Family Income			
Median family income	$77,263	$66,242	$65,547
Mean family income	$103,863	$88,501	$93,228

Table 9. Household and Family Income (2013 – 2017)

	U.S.	Tennessee	Shelby County
Household Income			
Median household income	$57,652	$48,708	$48,415
Mean household income	$81,283	$68,386	$72,387
Family Income			
Median family income	$70,850	$60,217	$61,252
Mean family income	$95,031	$80,742	$87,073

Source: U.S. Census Bureau

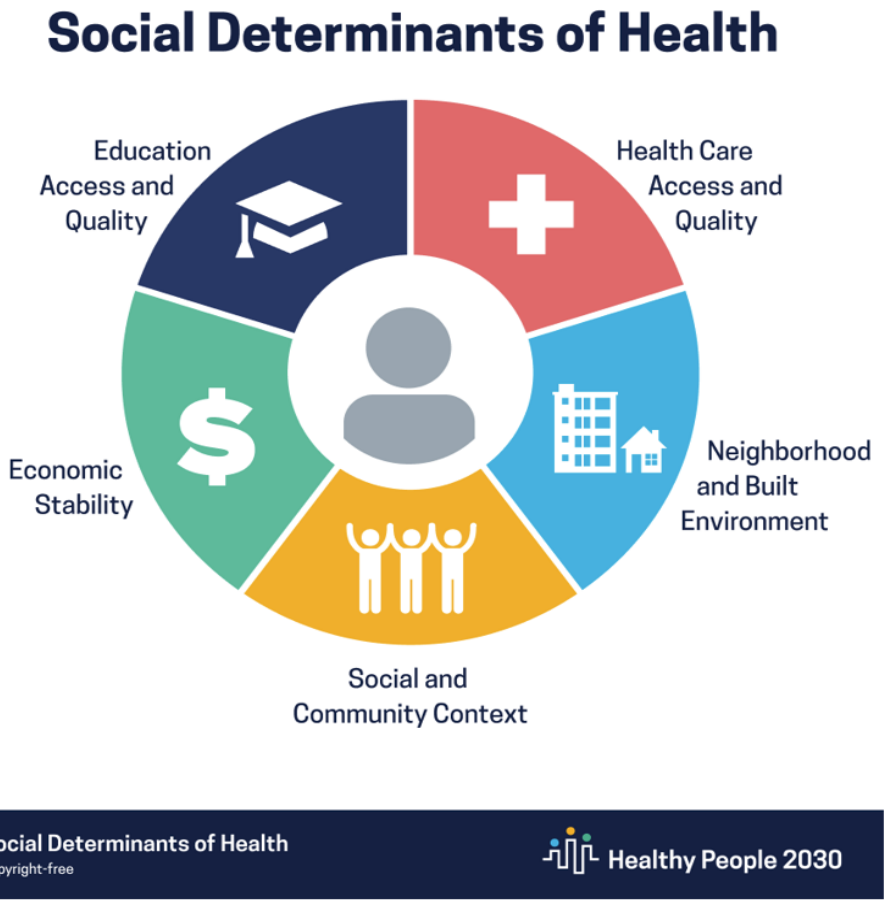
Figure 6. Median household income, 2016 – 2020 vs. 2013 – 2017



II. Social Determinants of Health

An individual's health is influenced by numerous factors including a range of personal, social, economic and environmental factors known as social determinants of health. These reach beyond the boundaries of traditional health care into public health sectors and can be important allies in improving population health. Addressing social determinants of health is important for improving health outcomes and reducing disparities. Research demonstrates that lower educational attainment, poverty, and race/ethnicity are risk factors for certain health conditions.

The U.S. Department of Health and Human Services Healthy People 2030, addresses conditions in the environment in which people are born, live, learn, work, play, worship, and age. The conditions affect a wide range of health, function, and quality-of-life outcomes and risks. Healthy People 2030 groups these determinants into 5 domains; economic stability, education access and quality and healthcare.



Poverty Status

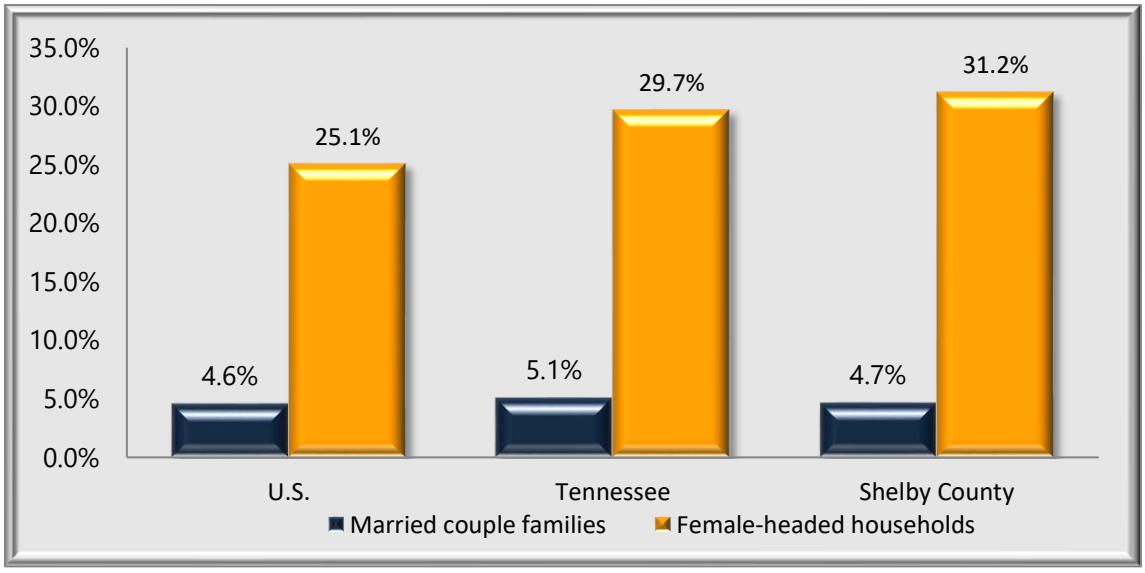
One measurement of economic stability is the proliferation of poverty in a geographic area. Poverty is an extreme issue for many families across the nation and often compounds the difficulty in seeking assistance with healthcare issues and needed resources. For all families, those in Shelby County are more likely to live in poverty when compared to the state and the nation. The federal poverty level represents the dollar amount below which a household has insufficient income to meet minimal basic needs. Households that are below 100% of the poverty level have an income less than the amount deemed necessary to sustain basic needs. In Shelby County, 19% of the population has an income below 100% of the federal poverty level. The incidence of poverty among female-headed households with no husband present in Shelby County (31.2%) is worse than Tennessee (29.7%) and the nation (25.1%).

Table 10. Poverty Status of Families and People in the Past 12 Months (2016 – 2020)

	U.S.	Tennessee	Shelby County
All families	9.1%	10.6%	14.3%
Married couple families	4.6%	5.1%	4.7%
Female-headed households, no husband present	25.1%	29.7%	31.2%
All people	12.8%	14.6%	19.0%
Under 18 years	17.5%	20.8%	29.9%
18 years to 64 years	12.1%	13.8%	16.2%
65 years and over	9.3%	9.3%	11.0%

Source: U.S. Census Bureau

Figure 7. Poverty status of married couple families and female-headed households, 2016-2020



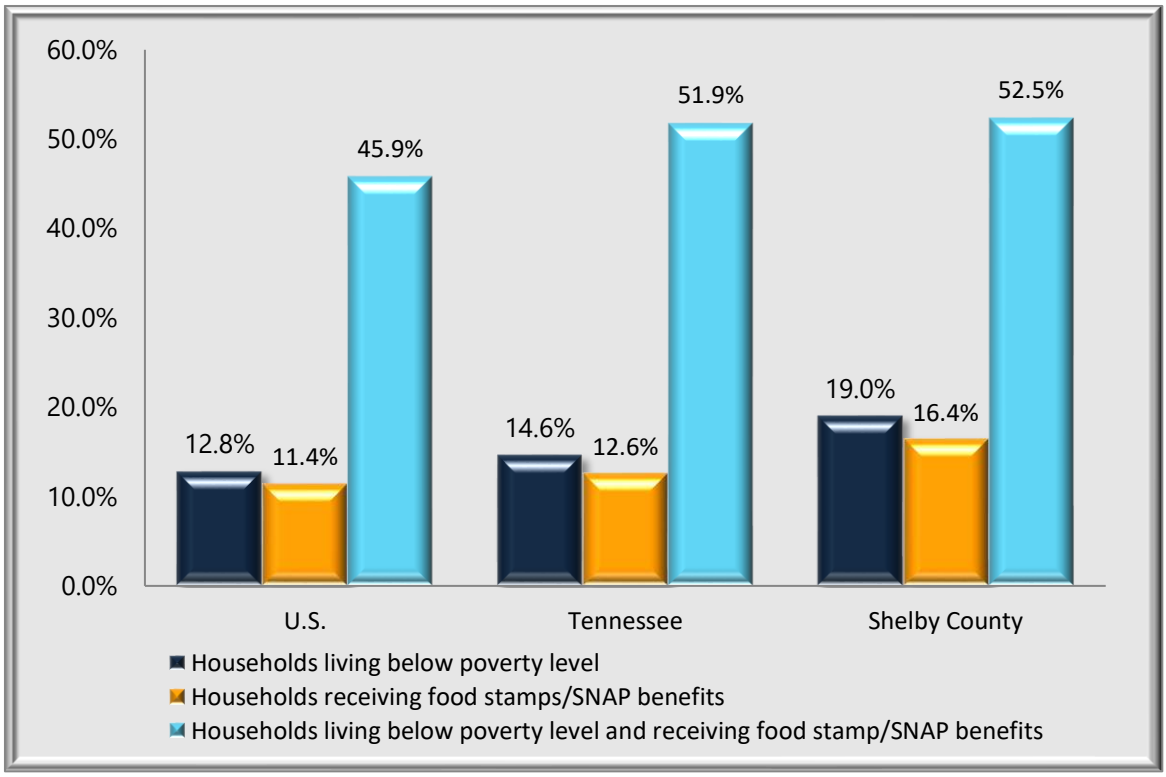
The percentage of households with supplemental security income is somewhat higher in Shelby County, although a smaller percentage of households receive cash assistance. In addition, 16.4% of households in Shelby County rely on Food Stamp/SNAP (supplemental nutritional assistance program) benefits. Households living in poverty, and receiving food stamps in Shelby County (52.5%) and Tennessee (51.9%) are higher than in the U.S. (45.9%).

Table 11. Households with Supplemental Benefits in the Past 12 Months (2016 – 2020)

	U.S.	Tennessee	Shelby County
Households with supplemental security income	5.2%	5.7%	6.7%
Households with cash public assistance income	2.4%	2.0%	1.8%
Households with food stamp/ SNAP benefits in the past 12 months	11.4%	12.6%	16.4%
Households below poverty level and receiving food stamp	45.9%	51.9%	52.5%

Source: U.S. Census Bureau

Figure 8. Households living below poverty level and/or receiving food stamps/SNAP benefits, 2020



Employment

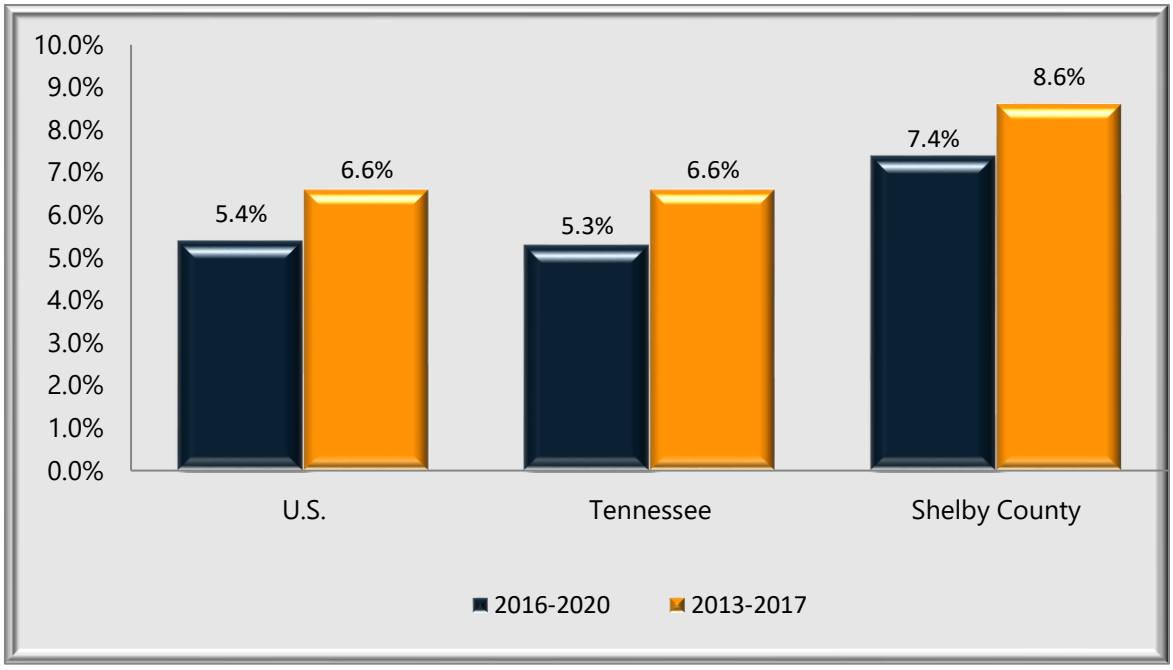
The majority of the population in Shelby County is currently employed in the labor force (64.2%). The unemployment rate in Shelby County (7.4%) is much higher than Tennessee (5.3%) and the nation (5.4%). However, this has decreased somewhat since 2013 – 2017. Unemployment can have a negative effect on both mental and physical health over time.

Table 12. Employment Status, 16 Years Old and Older (2016 – 2020)

	U.S.	Tennessee	Shelby County
Population in labor force	162,184,325	3,225,549	472,203
% of population in labor force	63.4%	61.5%	64.2%
Unemployed civilian labor force	5.4%	5.3%	7.4%

Sources: U.S. Census Bureau

Figure 9. Unemployment rates, 2016-2020 vs. 2013-2017



Education

Education is an important social determinant of health. Evidence indicates that individuals who are less educated tend to have poorer health outcomes. In the county, about 89% of residents are high school graduates or higher, while over 32% have a Bachelor's degree or higher. These indicators are favorable when compared to the state and the nation. The number of residents with less than a high school diploma in the county is slightly higher than in Tennessee and about the same as in the U.S.

Table 13. Educational Attainment, Population 25 Years and Over (2016 – 2020)

	U.S.	Tennessee	Shelby County
Less than high school diploma	12.2%	11.4%	12.9%
High school graduate (includes equivalency)	26.7%	31.8%	27.3%
Some college, no degree	20.3%	20.7%	22.8%
Associate's degree	8.6%	7.5%	6.5%
Bachelor's degree or higher	20.2%	17.8%	19.3%
Graduate or professional degree	12.7%	10.4%	13.0%
Percent high school graduate or higher	88.5%	88.2%	89.1%
Percent bachelor's degree or higher	32.9%	28.2%	32.4%

Source: U.S. Census Bureau

Access to Health Insurance, Providers and Preventive Care

Health insurance coverage can have a significant influence on health outcomes as those without health insurance tend to have less access to care than people who are insured. Shelby County residents are more likely to be uninsured (11.5%) when compared to Tennessee (9.7%), and the nation (8.7%). However, the percentage of the population without health insurance coverage in Shelby County continues to decrease from 15.4% in 2010 – 2014 and 12.8% in 2013 – 2017.

Table 14. Health Insurance Coverage (2016 – 2020)

	U.S.	Tennessee	Shelby County
With health insurance coverage	293,466,138	6,014,822	817,782
% of population with health insurance coverage	91.3%	90.3%	88.5%
With private health insurance	68.1%	66.7%	63.8%
With public coverage	35.3%	36.5%	36.2%
% of population without health insurance	8.7%	9.7%	11.5%

Source: U.S. Census Bureau

County Health Rankings measures the health of nearly all counties in each state. Rankings are based on factors that, if improved, can help make communities healthier places to live, learn, work and play. Access to medical providers is one of these factors and is critical to healthy outcomes in a population. County Health Rankings ranks Shelby County 35 out of 95 counties in Tennessee for Clinical Care which focuses on provider density (which measures access) and prevention activities. In 2018, the county was ranked 21. This demonstrates a loss for the county over the last 3 years in terms of the number of providers and prevention activities available. This decline may be attributed in part to the pandemic which began in 2020. Primary care physician and dentist densities in Shelby County are better than in Tennessee, perhaps due to the significant healthcare resources in Memphis. However, the densities are worse than the National Benchmark. Notably, mental health provider density is worse in Shelby County than in Tennessee and far worse as compared to the National Benchmark.

In terms of prevention, the percent of female Medicare enrollees receiving mammography screenings is far less than in Tennessee or in comparison to the National Benchmark. It is also noteworthy that the rate of age-adjusted deaths from influenza and pneumonia in Shelby County (23.0) is much higher than the state (18.5) and the nation (18.6). This may indicate a lack of access to vaccinations or lack of education about the need for prevention.

Table 15. Clinical Care Rankings (2021)[a]

	National Benchmark[b]	Tennessee	Shelby County
Clinical Care Rank			**37**
Uninsured (Population <65 years)	6%	12%	14%
Primary care physician density	1,020:1	1,396:1	1,161:1
Dentist density	1,200:1	1,801:1	1,358:1
Mental health provider density	270:1	634:1	669:1
Preventable hospital stays per 1,000 Medicare enrollees	27.0	49.2	49.5
Mammography screening among female Medicare enrollees age 65 - 74	51%	41%	34%

Source: County Health Rankings

[a] Rank is based on all 95 counties within Tennessee State. A ranking of "1" is considered to be the healthiest.

[b] National benchmark represents the 90th percentile, i.e., only 10% are better.

-- Unavailable

Neighborhood and Built Environment

The physical environment, social relationships, services and opportunities accessible in neighborhoods can either heighten or constrain an individual's choices related to health promotion and well-being. Research suggests that where one lives can shape their health in many significant ways. Aspects of neighborhood environments, such as the presence of playgrounds and parks and availability of affordable nutritious food, can promote health by encouraging healthy behaviors. Similarly, individuals are more likely to utilize health care services when they are accessible to where they live. Poor environmental quality has the greatest impact on individuals whose health status is already at risk. Therefore, it is critical for residents to have clean drinking water and safe places to go outside of their home to access needed services and engage in physical activity. Shelby County is ranked 69 of 95 counties in terms of the Physical Environment (with 1 as the best). Although Shelby County is reported to have no drinking water violations, 19% of the county experiences severe housing problems. Also, air pollution measures are much higher in Shelby County than the National Benchmark, but lower than Tennessee.

The Health Factors Rank measures access to nutritional food and physical activity. Shelby County ranks 42 in the state for this indicator. Specifically, the food environment index measures the proximity of one's home to a grocery store and food insecurity. Food insecurity refers to the lack of consistent access to enough food for an active, healthy life. It reflects a household's need to make trade-offs between important basic needs, such as housing or medical bills, and purchasing nutritionally adequate foods. In Shelby County the food environment index, (6.9) is above Tennessee (6.2) but well below the U.S. (8.7) with 10 being the best.

A community's health and overall quality of life is also affected by access to exercise opportunities. The measure by County Health Rankings is based on the proportion of residents who live reasonably close to a physical activity location. Physical activity locations may include parks or facilities identified by the NAICS code 713940 (gyms, community centers, YMCAs, pools, etc.). Despite having reasonable access to exercise opportunities (87%), 27% of adults over the age of 20 in Shelby County are inactive.

Table 16. Physical Environment and Health Factors Rankings (2021)[a]

	National Benchmark[b]	Tennessee	Shelby County
Physical Environment Rank			**69**
Air pollution – particulate matter	5.2	8.8	7.8
Drinking water violations	N/A	N/A	No
Severe housing problems	9%	14%	19%
Driving alone to work	72%	83%	84%
Long commute – driving alone	16%	35%	31%
Health Factors Rank			**42**
Food environment index	8.7	6.2	6.9
Physical inactivity (Adults aged 20 years+)	19%	27%	27%
Access to exercise opportunities	91%	70%	87%

Source: County Health Rankings

[a] Rank is based on all 95 counties within Tennessee State. A ranking of "1" is considered to be the healthiest.

[b] National benchmark represents the 90th percentile, i.e., only 10% are better.

Crime & Violence

According to Healthy People 2020, crime and violence experienced by individuals in a community is an important public health issue. Violence can lead to premature death and people who survive violent crime endure pain and mental distress. The total crime rate per 100,000 in Shelby County (5,889.7) is lower than the rate in Tennessee (7,479.9). Likewise, the rate of crimes against persons and crimes against property are lower than in Tennessee.

Table 17. Number and Rates of Violent Crimes Against Persons and Property Crimes Per 100,000 Population (2020)*

	Tennessee		Shelby County	
	n	Rate	n	Rate
Total Crimes	506,558	7,479.9	55,173	5,889.7
Crimes Against Persons	145,069	2,142.1	7,638	816.0
Crimes Against Property	266,303	3,932.3	20,770	2,219.0

Sources: University of Memphis Public Safety Institute and Tennessee Bureau of Investigation

III. Key Health Issues

Overall Mortality and Premature Death

The overall age-adjusted death rate per 100,000 in Shelby County is similar to the state, but much worse than the nation. The age-adjusted death rate for the Black population in Shelby County (1,260.0) is somewhat similar to Tennessee (1,220.0) but higher than the nation (1,086.7) and much higher than for the county's White population. The death rate for Hispanics is much lower than either the White or Black populations.

Table 18. Mortality, All Ages per Age-Adjusted 100,000 (2020)

	U.S.	Tennessee	Shelby County
Number of deaths	3,383,729	84,194	10,624
Death Rate	**835.4**	**1,010.0**	**1,080.0**
Death rate by Race			
White	829.5	990.0	890.0
Black	1,086.7	1,220.0	1,260.0
Hispanic or Latino	593.2	550.0	530.0

Sources: Centers for Disease Control and Prevention WONDER; Tennessee Department of Health

Years of potential life lost from premature deaths are higher in Shelby County than Tennessee and when compared to the National Benchmark. This demonstrates that more younger lives are being lost in Shelby County than in the state and the nation.

Table 19. Premature Mortality, Years of Potential Life Lost Before Age 75 per 100,000 (2018; 2021)

National Benchmark[b]		Tennessee		Shelby County	
2018	2021	2018	2021	2018	2021
5,300	5,400	8,800	9,355	9,600	10,577

Source: County Health Rankings[a]

[a] Rank is based on all 95 counties within Tennessee State. A ranking of "1" is considered to be the healthiest.

[b] National benchmark represents the 90th percentile, i.e., only 10% are better.

The crude death rate due to suicide per 100,000 in Shelby County is increasing steadily, from 8.6 in 2014 to 9.9 in 2017 and to 11.2 in 2020 but the rate is still much lower than the state and the nation.

Table 20. Deaths Due to Intentional Self-harm per Age-Adjusted 100,000 (2020)

	HP 2030	U.S.	Tennessee	Shelby County
Total suicide	12.8	13.9	17.2	11.2

Sources: Centers for Disease Control and Prevention & Healthy People 2030

Leading Causes of Death and Chronic Health Conditions

The top three leading causes of death in Shelby County and in Tennessee are diseases of the heart, malignant neoplasms (cancer) and accidents (unintentional injuries). In the U.S. the third leading cause of death is cerebral vascular disease (stroke).

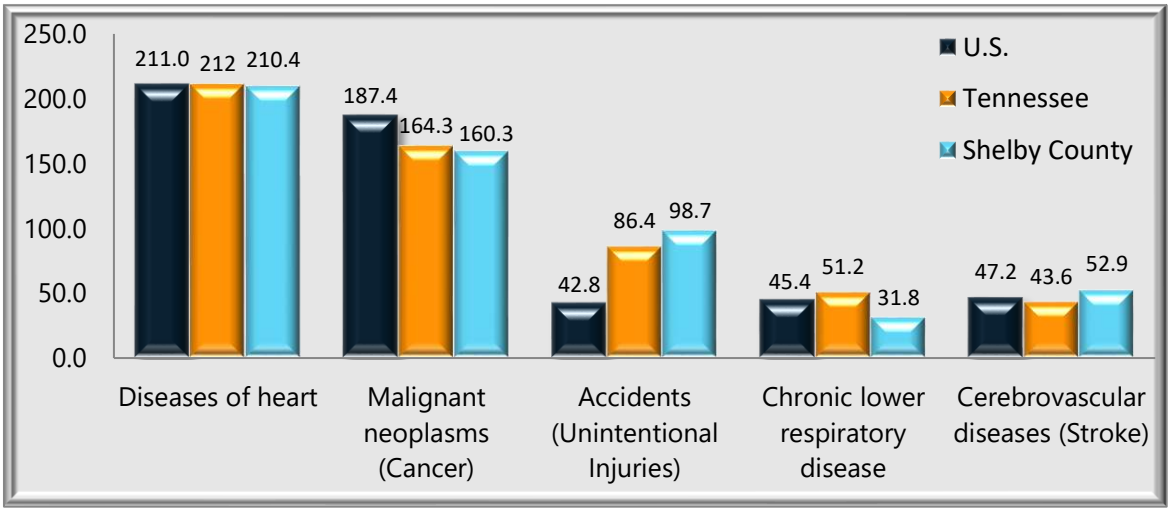
Chronic diseases are among the leading cause of death and disability in the United States and include diseases of the heart, malignant neoplasms (cancer), chronic lower respiratory disease, diabetes and cerebrovascular diseases (stroke). The age-adjusted death rates due to stroke and diabetes are much higher than in the state and the nation as well as the target set by Healthy People 2030. On a positive note, chronic lower respiratory disease rates and cancer are lower in Shelby County than in either Tennessee or the U.S. The rate of death from Alzheimer's Disease in the county is lower than the state but higher than the nation.

Table 21. Deaths by Selected Causes, All Ages per Age-Adjusted 100,000 (2020)

	HP 2030 Target	U.S.	Tennessee	Shelby County
Diseases of heart	71.1	211.0	212.0	210.4
Malignant neoplasms (Cancer)	122.7	187.4	164.3	160.3
Cerebrovascular diseases (Stroke)	33.4	47.2	43.6	52.9
Chronic lower respiratory disease	N/A	45.4	51.2	31.9
Accidents (Unintentional Injuries)	N/A	42.8	86.4	98.7
Alzheimer's disease	N/A	27.8	44.4	37.5
Diabetes mellitus	N/A	24.8	30.2	29.5
Influenza and pneumonia	N/A	18.6	18.5	23.0
Nephritis, nephrotic syndrome and nephrosis (Kidney & Renal Pelvis)	N/A	17.1	19.5	21.7
Suicide (Intentional Self-Harm)	12.8	13.9	17.2	11.2

Sources: Centers for Disease Control and Prevention & Healthy People 2030

Figure 10. Deaths by Selected Causes, All Ages per Age-Adjusted 100,000 (2020)



HOLLERAN

Cancer

The rate of age-adjusted deaths from cancer is lower than the state and higher than the nation. It is the second leading cause of death in Shelby County and the rate of death remains well above the target set by Healthy People 2030.

The county has notably higher incidence rates for breast (female), colon and rectum, prostate (male), cervix (female) and uterine (female). More positively, cancer of the bladder and melanoma of the skin are lower in Shelby County than the state and the nation. Pancreatic and lung cancer are slightly higher than Tennessee, but also lower than the nation. The higher incidence rates for breast, colon/rectum, prostate, cervix and uterine translate to higher age-adjusted mortality rates as well. Overall, incidence rates for cancer have trended upward in the county, state and nation in 2014 – 2018 as compared to 2011 – 2015.

Table 22. Average Annual Cancer Mortality by Site, per Age-Adjusted 100,000 (2014 – 2018)

	HP 2030 Target	U.S.	Tennessee	Shelby County
Breast (female)	15.3	21.8	19.9	27.3
Bladder	N/A	4.2	4.3	3.7
Colon & Rectum	8.9	13.4	15.0	16.9
Lung & bronchus	25.1	36.7	49.1	41.2
Pancreas	N/A	11.1	11.1	11.1
Melanoma of the skin	N/A	2.2	2.7	1.3
Prostate (male)	16.9	18.9	19.6	29.6
Cervix (female)	N/A	2.2	2.8	4.0
Uterus (female)	N/A	4.5	5.0	6.0
All sites	**152.4**	**173.9**	**208.8**	**176.9**

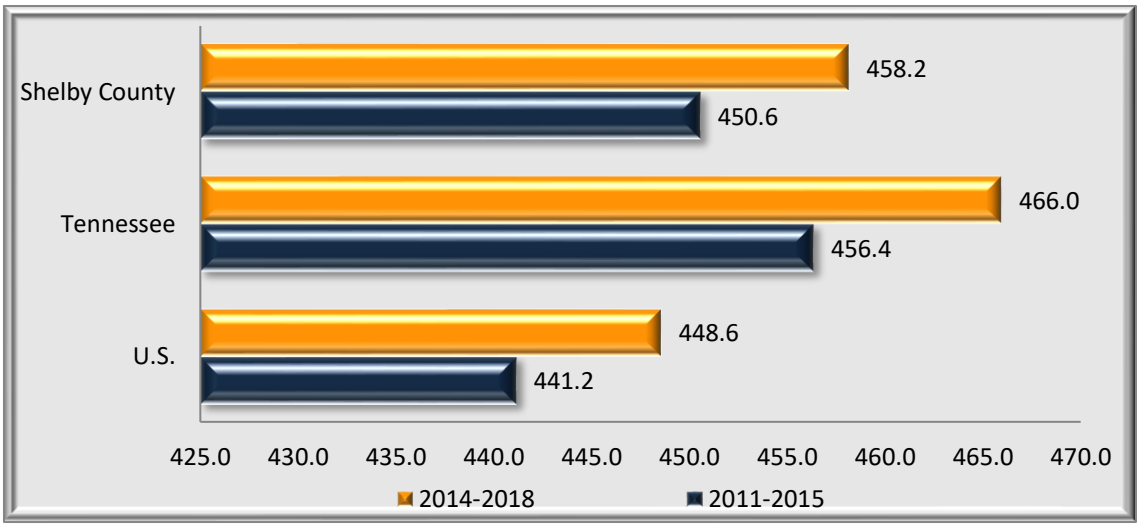
Sources: National Cancer Institute & Healthy People 2030

Table 23. Cancer Incidence by Site, per Age-Adjusted 100,000 (2014 – 2018)

	U.S.	Tennessee	Shelby County
Breast (female)	126.8	123.1	129.8
Bladder	19.7	19.9	14.6
Colon & Rectum	40.4	38.0	43.3
Lung & bronchus	74.0	57.3	59.3
Pancreas	13.1	12.6	12.8
Melanoma of the skin	20.2	22.6	10.4
Prostate (male)	106.2	113.9	141.7
Cervix (female)	7.7	8.5	9.7
Uterus (Corpus & Uterus, Nos)	27.4	25.3	28.3
All sites	**448.6**	**466.0**	**458.2**

Source: National Cancer Institute

Figure 11. Cancer incidence for all sites per age-adjusted 100,000, 2014 – 2018 vs. 2011 – 2015



Communicable Diseases

Shelby County experiences much higher rates of sexually transmitted diseases than in Tennessee and the U.S. This trend was similar in the 2016 data reported in the previous study. These illnesses have been shown to have serious negative effects impacting psychological well-being and quality of life. If left untreated, these diseases may cause complications in both men and women and affected infants.

Figure 12. Chlamydia incidence rate per 100,000, 2019 vs. 2016

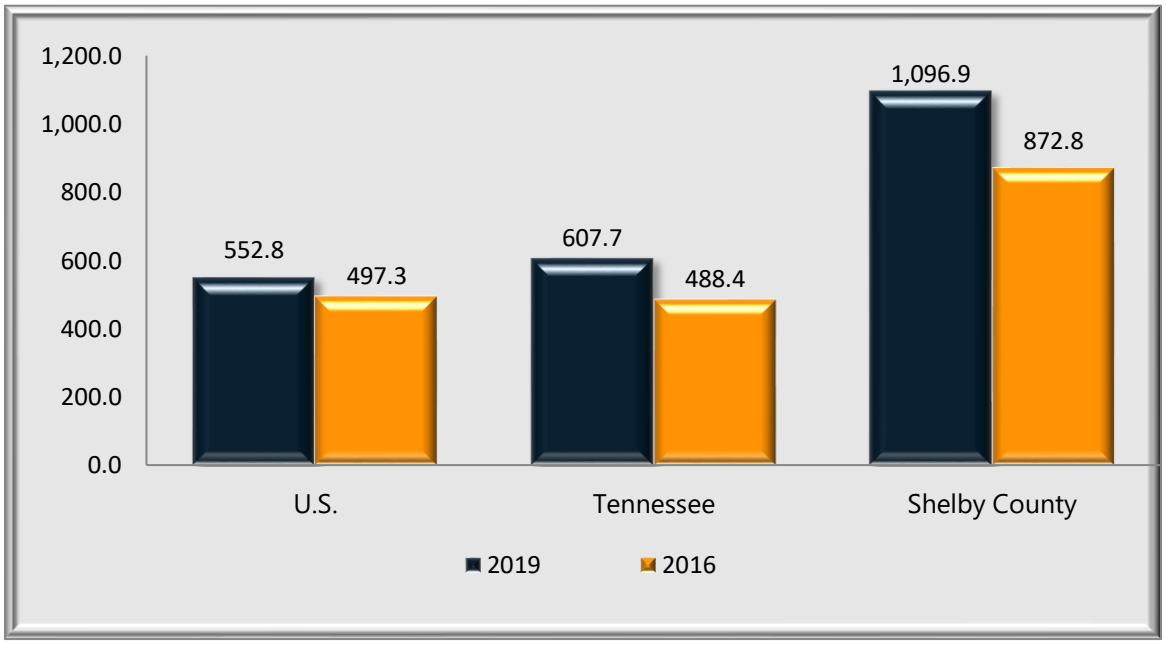
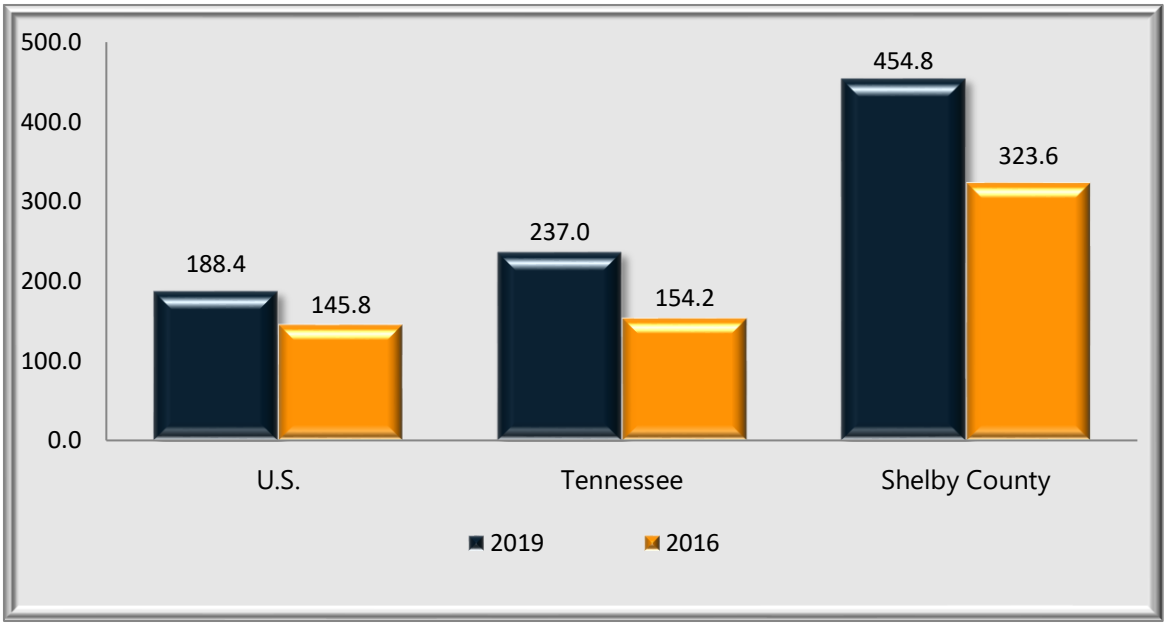


Figure 13. Gonorrhea incidence rate per 100,000, 2019 vs. 2016



In Shelby County, the incidence of new HIV infections per 100,000 is lower than both the U.S. and Tennessee which is favorable. However, the tuberculosis incidence rate is higher.

Table 24. HIV/AIDS, Tuberculosis and Hepatitis B Incidence Rates per 100,000 (2019)

	U.S.	Tennessee	Shelby County
HIV (new infections)	13.2	11.4	10.7
Tuberculosis	2.7	1.9	3.4
Hepatitis B (acute)	1.0	3.0	--

Sources: Shelby County Health Department & Centers for Disease Control and Prevention ATLAS

--Not available for Shelby County

Maternal and Child Health

Data for infant deaths in Shelby County describe infant and neonatal (4 weeks or earlier) mortality rates higher than in the state and the nation and much higher than the target set by Healthy People 2030. Post-neonatal deaths (from 4 weeks to 1 year) in Shelby County are similar to Tennessee but higher than the U.S.

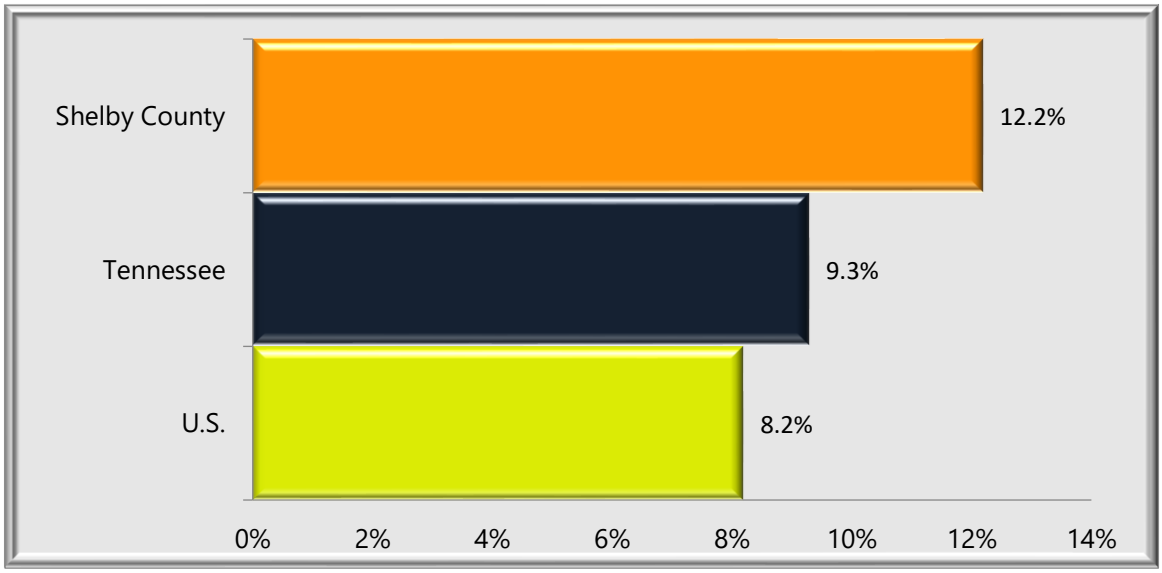
Infants born with low birthweight have added health risks and require close management often in a neonatal intensive care unit. Long term follow up is typically required to monitor for health consequences which may be costly. In Shelby County the percentage of infants who are born with low birthweight (12.2%) is much higher than in the state (9.3%) or nation (8.2%). Factors such as access to healthcare, health behaviors and socioeconomic and environmental risks contribute to low birthweight infants.

Table 25. Infant Mortality Rate per 1,000 Live Births (2018)
Healthy People 2030 – MICH -02 Reduce the rate of infant deaths

	HP 2030	U.S.	Tennessee	Shelby County
Infant	5.0	5.7	6.9	8.7
White non-Hispanic	N/A	4.6	5.6	4.7
Black non-Hispanic	N/A	10.8	12.3	11.4
Neonatal	N/A	3.8	4.4	6.1
Post-neonatal	N/A	1.9	2.5	2.6

Sources: Centers for Disease Control and Prevention, Tennessee Department of Health & Healthy People 2030

Figure 14. Percentage of infants with low birthweight, 2018



The rate of infants born to unmarried women in the county is much higher than the state and the nation. According to the National Center for Health Statistics, births outside of marriage are often associated with disadvantages for the children and their parents. Children born to unmarried parents are more likely to live in poverty and to have poor developmental outcomes. The teen birth rate (for females age 15 to 19) has declined from 2018 to 2021 in Tennessee and Shelby County. However, rate for teen births (36 per 1,000 births) is much higher than the National Benchmark of 12 per 1,000 births.

Figure 15. Percentage of births to unmarried women, 2018 vs. 2016

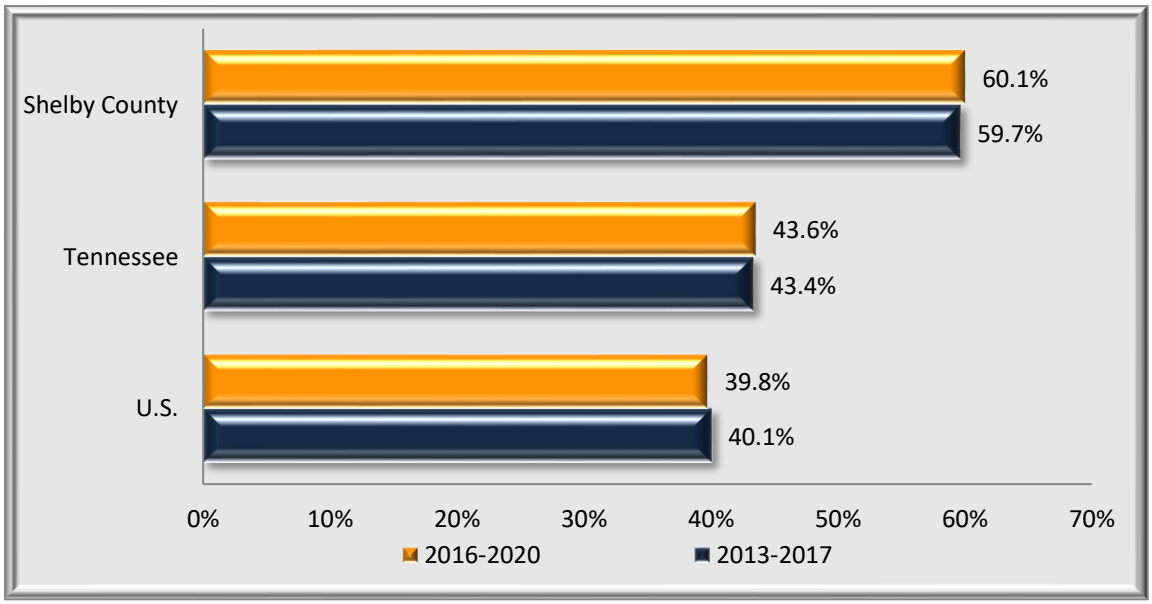


Table 26. Teen Birth Rate per 1,000 Females Aged 15 to 19 (2018; 2021)

National Benchmark[b]		Tennessee		Shelby County	
2018	2021	2018	2021	2018	2021
15	12	36	29	45	36

Source: County Health Rankings[a]

[a] Rank is based on all 95 counties within Tennessee State. A ranking of "1" is considered to be the healthiest.

[b] National benchmark represents the 90th percentile, i.e., only 10% are better.

Behavioral Health

With an aging American population, a significant amount of research has focused on people with one or more chronic medical condition and the individual unhealthy behaviors that lead to chronic conditions. Unhealthy behaviors and related chronic diseases are among the costliest health conditions in the United States. Tobacco use, physical inactivity, inadequate nutrition, unsafe sex, heavy alcohol consumption, and low rates of immunizations and screenings are behaviors that can lead to poor health outcomes. Smoking in particular is detrimental to nearly every organ in the body and is often correlated with poorer health outcomes and chronic health conditions such as lung cancer, stroke, and heart disease.

Shelby County ranks 16 out of all 95 counties within the State of Tennessee for the Health Behaviors Rank in 2021. This is a sizable improvement from 2018 when it was ranked 35th (with 1 considered the healthiest). According to County Health Rankings, Shelby County has the same percentage of adult smokers as Tennessee (21%), but has a higher percentage than the National Benchmark of 16%. It has a lower percentage of excessive drinking than Tennessee and is similar to the National Benchmark.

As it relates to obesity, the percent of adults with a BMI index of greater than 30 is slightly higher than Tennessee and much higher than the National Benchmark. Obesity is caused by a sedentary lifestyle and high caloric intake and may lead to difficulty sleeping, arthritis, skin problems, diabetes and heart disease.

Table 27. Health Behaviors Rankings (2021)

	National Benchmark[b]	Tennessee	Shelby County
Health Behaviors Rank			**16**
Adult smoking	16%	21%	21%
Adult obesity (BMI ≥ 30)	26%	33%	35%
Excessive drinking	15%	17%	15%
Alcohol-impaired driving deaths	11%	25%	17%

Source: County Health Rankings

[a] Rank is based on all 95 counties within Tennessee State. A ranking of "1" is considered to be the healthiest.

[b] National benchmark represents the 90th percentile, i.e., only 10% are better.

Overall Physical Health Status

Self-assessed health status is a measure of how an individual perceives his or her health and provides a strong predictive measure for overall health outcomes. Adults in poor physical or mental health, defined by the County Health Rankings, are the average number of physically or mentally unhealthy days reported within the past 30 days. Shelby County residents report experiencing an average of 4.7 days of poor physical health and 4.8 days of poor mental health within the past 30 days. According to the County Health Rankings, adults in Shelby County are more likely to report fair or poor health when compared to adults in Tennessee and the Nation Benchmark.

Table 28. Health Outcome Rankings (2021)[a]

	National Benchmark[b]	Tennessee	Shelby County
Quality of Life Rank			**75**
Poor or fair health	14%	21%	23%
Poor physical health in past 30 days (Average number of days)	3.4	4.7	4.7
Poor mental health in past 30 days (Average number of days)	3.8	5.2	4.8
Low birth weight	6.0%	9.0%	12.0%

Source: County Health Rankings

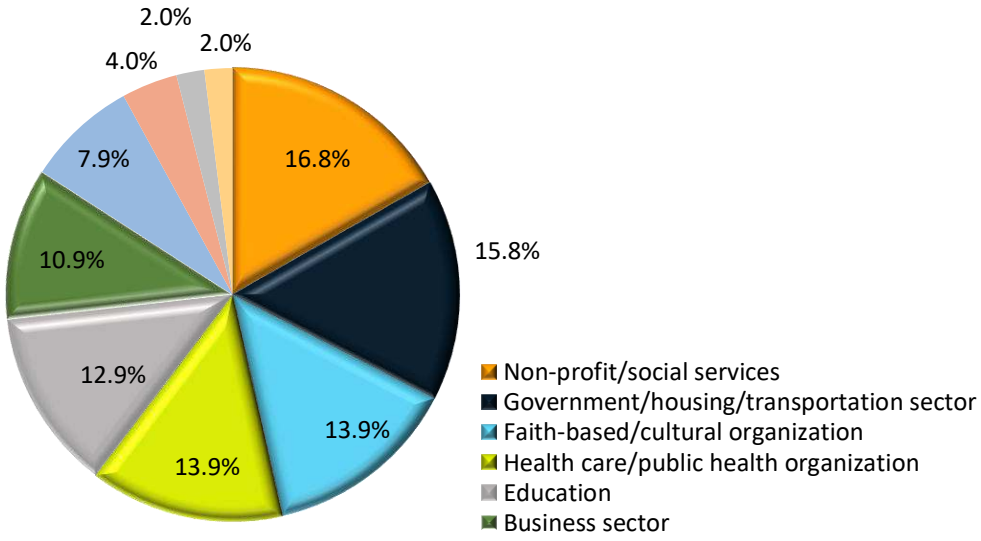
[a] Rank is based on all 95 counties within Tennessee State. A ranking of "1" is considered to be the healthiest.

[b] National benchmark represents the 90th percentile, i.e., only 10% are better.

KEY INFORMANT SURVEY RESULTS

Of the 140 key informants identified, a total of 121[1] completed the survey for a response rate of 86.4%. These include public health and health care professionals, nonprofit/social service providers, childcare/youth services providers, mental/behavioral health experts, faith-based/cultural professionals, education specialists, business leaders, government housing/transportation agencies and other community members. The largest percentage of informants are affiliated within nonprofit/social service providers (16.8%), followed by government/housing/transportation sector agencies (15.8%), and faith-based/cultural organizations professionals (13.9%). A list of key informants and their organizations can be found in Appendix B. It is important to note that the results reflect the perceptions of some community leaders but may not represent all community perspectives.

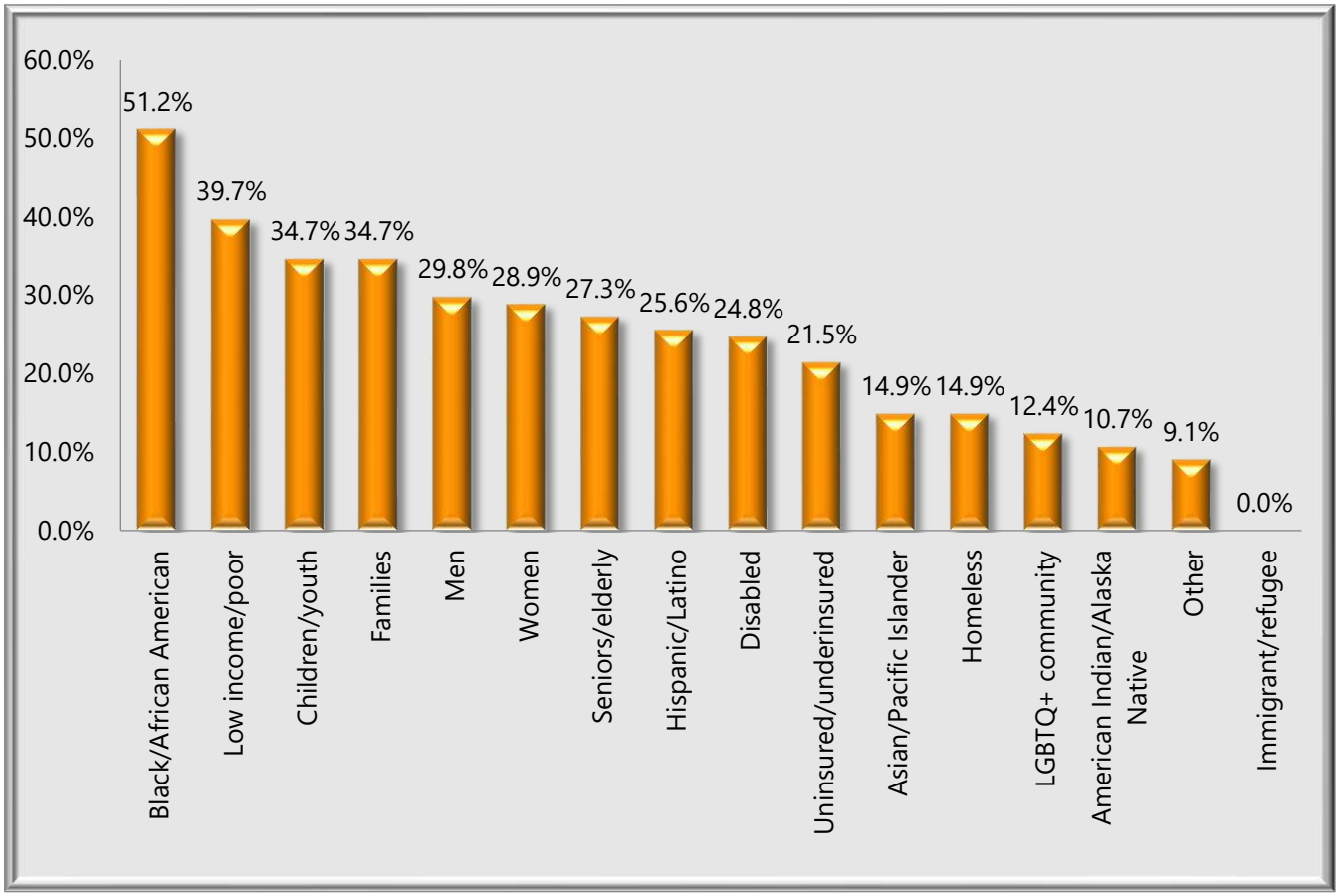
Figure 16. Percentage respondents by community affiliation



The vast majority of respondents work in organizations that primarily serve traditionally underserved populations, such as Black/African Americans, low-income/poor, children/youth, Hispanic/Latinos, the elderly and disabled.

[1] 101 participants completed the full survey. 20 participants partially completed the survey, and these results are included in with the results of the fully completed surveys.

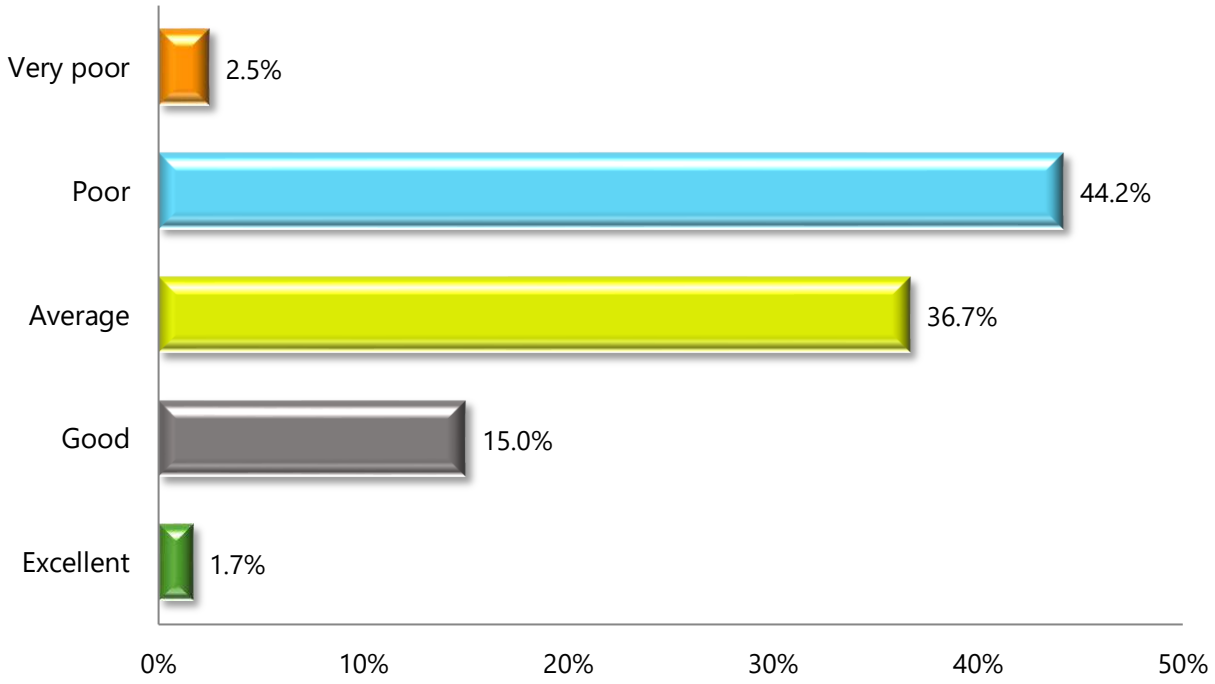
Figure 17. Total respondents by specific population their organization primarily serves



Fortunately, almost three-quarters (74%) of respondents feel that their organization collaborates with other organizations/institutions on local efforts to improve health in the community. However, in the 2019 CHNA, a higher percentage (96%) of respondents perceived this to be true. Since collaboration among local organizations and entities is crucial to the implementation of the CHNA the decrease in efforts to collaborate is notable. It is possible that collaboration became more difficult with the onset of the pandemic in 2020. One key informant commented, "There are plenty of well-meaning nonprofit organizations that do great work. More needs to be done to help them collaborate and reduce the duplicative efforts." Another stated, I do believe there should be a more realistic conversation between health providers, law enforcement, and community leaders to better address, not the problem, but a solution to it."

Respondents were asked to rate the overall health of the community. About 74% of key informants stated that they would not consider the communities surrounding Regional One Health as healthy. This is an improvement from the previous CHNA in which 85% perceived the community to be unhealthy. A large proportion of respondents (44.2%) believe the community's overall health to be "Poor", however 36.7% feel that it is "Average" and 15% feel it is "Good".

Figure 18. Rating of overall health of the community



I. Key Health Issues & Barriers

Key Health Issues

Key informants were asked to determine the 5 most pressing health issues in their community from a list of 18 focus areas. The issues of mental health, overweight/obesity, diabetes, accessing health care services, and heart disease were identified by key informants as the top 5 health issues in their communities. In 2019, key informants identified overweight/obesity, mental health, accessing health care services, maternal, infant, and child health, and unintentional injuries and violence as the top 5 pressing health issues in their communities.

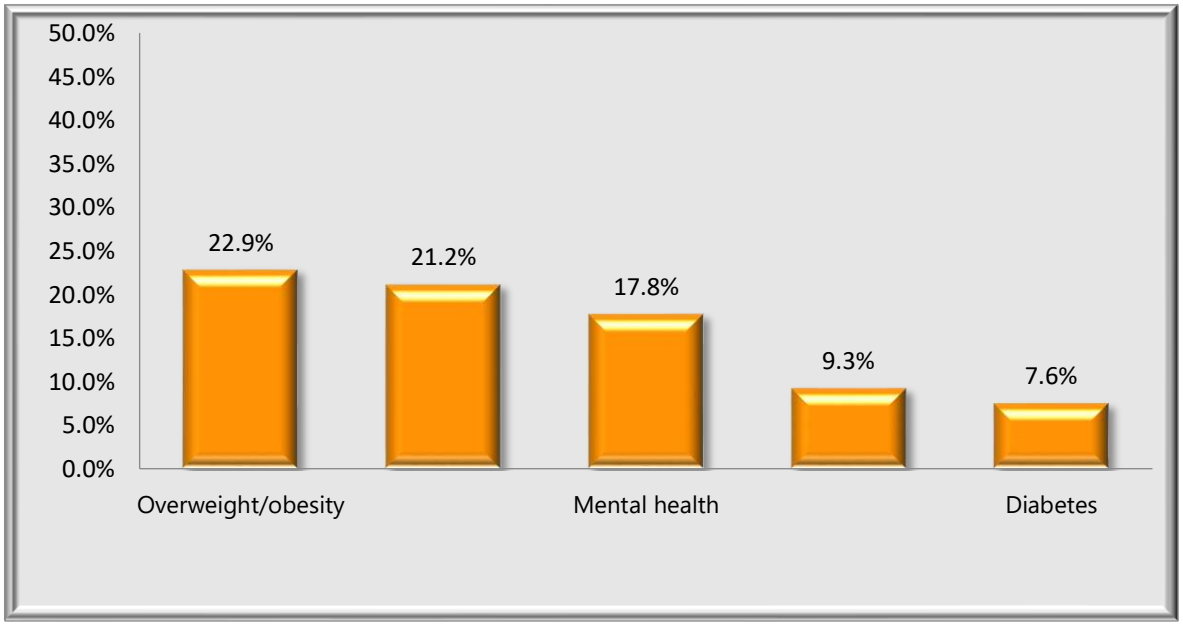
When asked to specify which health issue was the most significant, most identified overweight/obesity. Although overweight/obesity remains the top health issue in 2022, the percentage of key informants identifying it as most significant decreases from 30.8% in 2019 to 22.9%. The second most significant health issue noted is accessing health care services, followed by mental health. Unintentional injuries and violence are seen as significant despite not being listed among the 5 top pressing health issues in 2022.

Table 29: Comparison ranking of the most pressing key health issues (2022 and 2019)

Key Health Issue	2022		2019	
	Count	Percent of respondents who selected the issue*	Count	Percent of respondents who selected the issue*
Mental health	84	69.4%	17	65.4%
Overweight/obesity	80	66.1%	17	65.4%
Diabetes	76	62.8%	11	42.3%
Accessing health care services	60	49.6%	14	53.8%
Heart disease	58	47.9%	10	38.5%
Unintentional injuries and violence	45	37.2%	12	46.2%
Substance abuse	43	35.5%	7	26.9%
Cancer	31	25.6%	7	26.9%
Maternal, infant, and child health	27	22.3%	13	50.0%
Sexually transmitted diseases including	20	16.5%	4	15.4%
Oral health	9	7.4%	1	3.8%
Alzheimer's disease/dementia	8	6.6%	2	7.7%
Stroke	8	6.6%	2	7.7%
Teen pregnancy	8	6.6%	3	11.5%
Suicide	7	5.8%	0	0.0%
Other	5	4.1%	5	19.2%
Respiratory diseases	3	2.5%	1	3.8%
Tobacco use	3	2.5%	2	7.7%

*Respondents could select more than one option therefore the percentages may sum to more than 100.0%.

Figure 19. Ranking of most significant health issues in the community



Key informants were asked to share information regarding these key health issues and their reasons for ranking them this way. Mental health, substance abuse, obesity, cardiovascular disease, and community issues such as limited access to healthy food, poverty and homelessness are frequently discussed as key health issues.

Select Comments Regarding Key Health Issues:

- "There is a lack of access in some areas where there is a dire need. There has to be a more intentional effort with on hand teaching, learning and presentations on the less fortunate areas of our city."
- "Mental Health dysfunction leads to substance abuse, dependence, homelessness and even injuries. It does not have the priority over physical health conditions, culturally and medically despite data showing that many ailments stem from its dysfunction."
- "With poverty and lack of early detection the diseases are left undiagnosed until they are so far along it is harder to help with recovery and remission. And the cost of medicine is so high too many people have to decide between food or medicine."
- "Addressing the issue of access to health services will require a significant change in our community's mindset. This will require additional resources and a focused effort on the part of our entire community."
- "Overweight/obesity is largely due to the eating habits/popular foods in the south and specifically to our region and city. So many people, many children (where obesity begins) are living in food deserts where healthy options are just not available so they are eating what they can find or afford at a convenience store or dollar store."
- "Cardiovascular (heart) disease is the #1 issue both here in Memphis and the world. The causes are many - unhealthy eating (which can stem from food deserts and lack of access to healthy foods whether by location or funding), hypertension, diabetes, lack of exercise (which can stem from unsafe neighborhoods), smoking and vaping (vaping becoming a HUGE problem in our schools), stress, and the list goes on."
- "The poorest neighborhoods are surrounded by food that has no nutritional value."
- "Food insecurity and limited access to healthy food was a constant topic as schools and youth programs shuttered during the pandemic, revealing how dependent families were on these institutions for food."
- "Not nearly enough resources for mental health or for people with dual diagnosis."
- "The obesity in the community has a ripple effect of additional health issues especially in the African American community. The mindset that being obese is normal and in some cases is celebrated also contributes to the problem."
- "I know many people with mental health issues who use drugs to self-medicate because they lack the money for treatment plans."

Respondents were also asked to share information regarding what resources are available in the community to address the health issues identified. The comments reflect the tremendous efforts being made to address resource issues and to increase service provision, however the needs and associated problems are often just too great. Select responses are listed below.

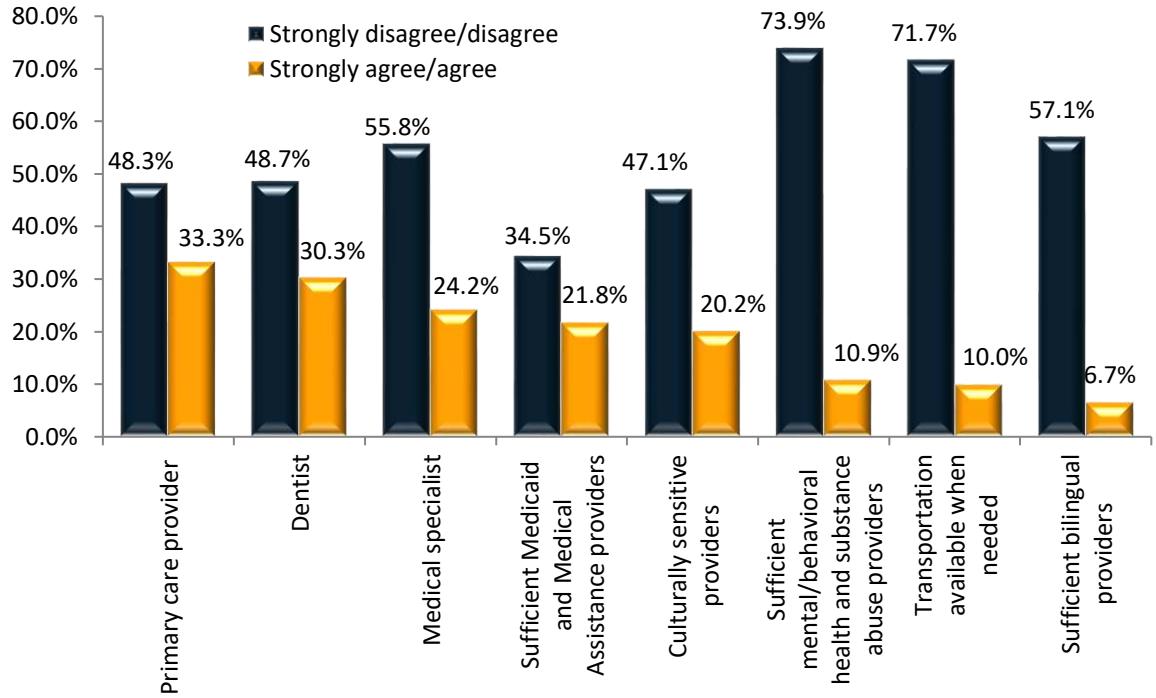
Select Comments Regarding Resources Available:

- "With Black mortality rates being so high, there has been an increase in POC (people of color) providers focused on POC mortality. Other organizations like CHOICES have led the charge in health and family planning."
- "I have not identified any resources in the community that addresses the mental health needs of individuals who fall in categories of domestic abuse, PTSD for the LGBTQI+ community, or for clergy."
- "Substance Abuse Centers to include 12 step programs both inpatient and outpatient basis; however, the community resources are falling short in the opioid epidemic such as fentanyl."
- "Until we are able to face poverty head on, we will be an unhealthy community. The quality of health care provided by our major hospital systems is quite high - the need in our community for services is just so great."
- "There are several health care and community organizations that provide healthy lifestyle programming, such as the Church Health Center, The Works, etc. Le Bonheur has specific initiatives to address childhood obesity. Coordinated School Health (public school system) also has school-based initiatives focused on childhood obesity."
- "I know there are great programs focused on access to healthy (affordable food), urban gardening, cooking and nutrition, but it still seems so many of our community's health challenges stem from the under-resourced people in our city who don't have access to healthy eating/lifestyles."

Access to Care and Barriers

Respondents were asked to select the t barriers that keep residents in the community from accessing health care. About one-third of respondents strongly agree or agree that community residents are able to access a primary care provider. The results are similar as it pertains to accessing a dentist. The large majority of respondents (73.9%) strongly disagree or disagree that there are a sufficient number of mental/behavioral and substance abuse providers in the area. Access to medical specialists is also difficult. Over half also disagree or strongly disagree that there are a sufficient number of bilingual providers. These results are echoed in the 2019 study.

Figure 20. Percentage of respondents who responded as "Strongly agree or agree" as compared to those who responded "Strongly disagree or disagree" with the health care access factors. *



*See Appendix A: Key Informant Survey Tool, for full factor and response options

The barrier to accessing health care that was most often cited is inability to pay out of pocket expenses (70.2%). Selected second is that basic needs are not met (58.7%), including food, water, shelter and employment, followed by transportation (57.9%). This barrier was selected as the most significant by 17.9% of all respondents.

The inability to navigate the health care system, the lack of health literacy and the lack of health insurance coverage were selected by a majority of respondents as barriers to accessing health care and the second and third most significant. When residents do not have the financial means to access care or a basic understanding of the health care system there can be a devastating effect on the community.

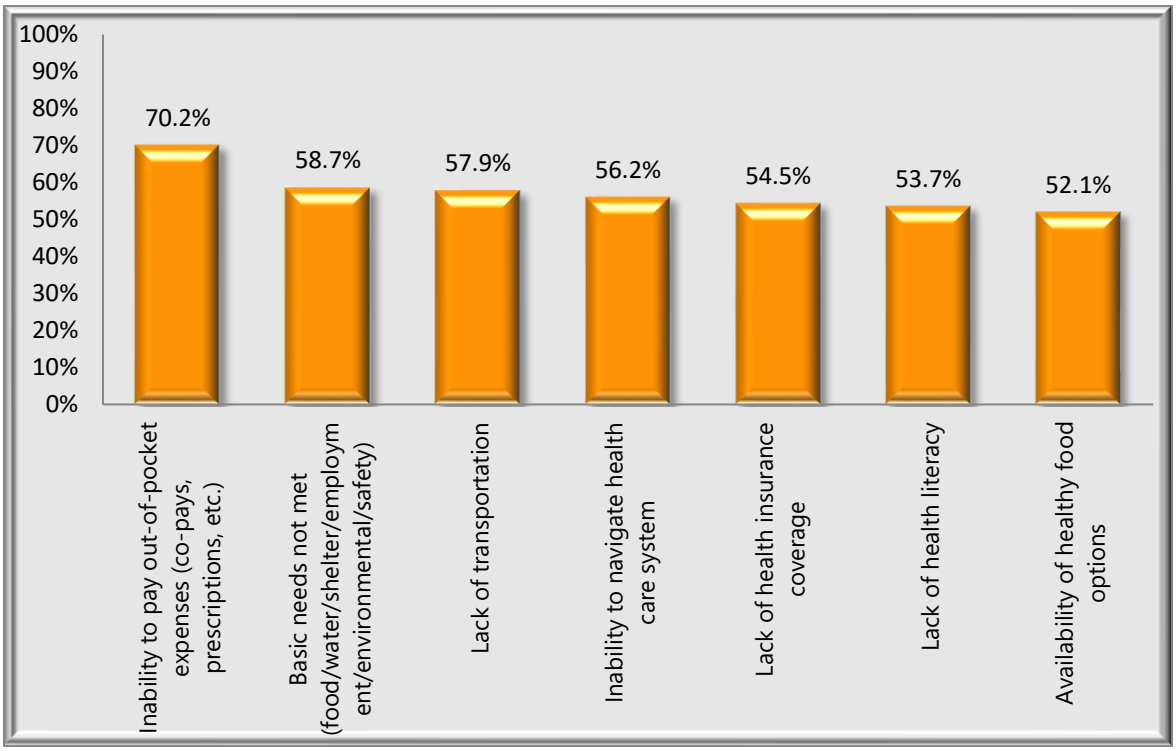
One Key Informant commented on the difficulty some community members have with understanding and navigating the health care system. "Accessing health services is extremely difficult for many of the families in our neighborhood because they are immigrants. Sometimes lack of social security numbers, or an unawareness of their rights and that they can ask for financial assistance creates a negative experience. This reinforces their internalized reticence to even attempt to access services in the first place. Translation services over the phone are impersonal and, once again, reinforce the sense that they better off just avoiding health care institutions, if possible."

Table 30: Most significant barriers

Key Health Barrier	Count	Percent of respondents who selected the issue*	Percent of respondents who selected the issue as the most significant
Inability to pay out-of-pocket expenses (co-pays, prescriptions, etc.)	85	70.2%	7.7%
Basic needs not met (food/water/shelter/employment/environmental/safety)	71	58.7%	17.9%
Lack of transportation	70	57.9%	5.1%
Inability to navigate health care system	68	56.2%	11.1%
Lack of health insurance coverage	66	54.5%	14.5%
Lack of health literacy	65	53.7%	15.4%
Availability of healthy food options	63	52.1%	4.3%
Lack of trust	57	47.1%	5.1%
Availability of health and wellness programs/education	53	43.8%	2.6%
Lack of preventive health care (screenings, annual check-ups, etc.)	50	41.3%	5.1%
Emotional/physical stress	46	38.0%	3.4%
Availability of providers/appointments	44	36.4%	3.4%
Time limitations (long wait times, limited office hours, time off work)	44	36.4%	1.7%
Lack of social support (family, friends, social network)	38	31.4%	1.7%
Language/cultural/racial/spiritual barriers	30	24.8%	0.9%
Lack of safe parks/recreation outlets	19	15.7%	0.0%
COVID-19	18	14.9%	0.0%
Other	1	0.80%	0.0%

*Respondents could select more than one option; therefore, the percentages may sum to more than 100.0%.

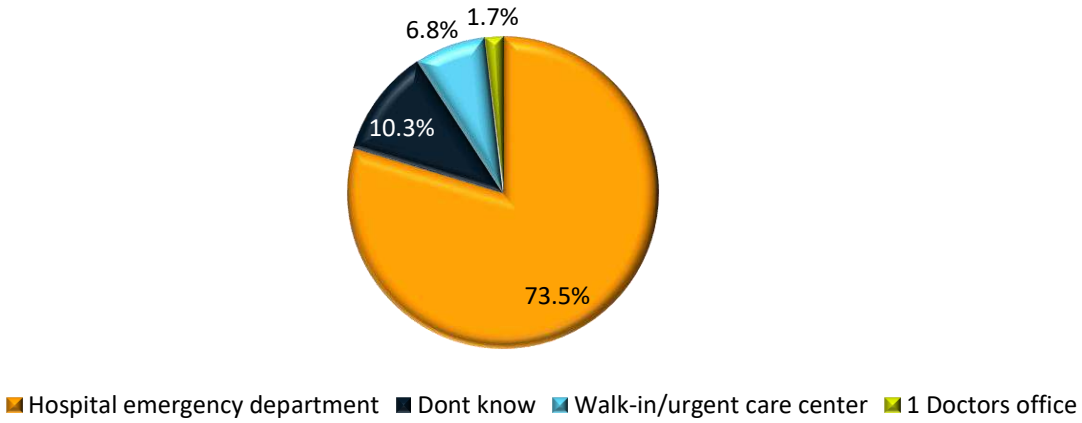
Figure 21. Most significant barriers keeping people in the community from accessing health care*



*Respondents could select more than one option therefore the percentages may sum to more than 100.0%.

When navigating the health care system becomes difficult and/or individuals are uninsured, 73.5% or key informants report that they go to the hospital emergency department when they are in need of medical care. This is an improvement from the 2019 CHNA in which 84.6% perceived this to be true. However, the statistic is still very high. Unnecessary emergency room visits may cause an undue financial and personnel strain on the emergency department and community health system.

Figure 22. Destination for most uninsured and underinsured when in need of medical care.



As a result of the barriers discussed, many populations are underserved. These populations were ranked by Key Informants. American Indian/Alaska Natives, Asian/Pacific Islanders and Black/African American were identified as the most underserved in the community. Children and youth as well as the disabled were also found by, over half of the respondents, to be underserved.

Table 31. Underserved Populations

Underserved Populations	Count	Percentage
American Indian/Alaska Native	73	77.7%
Asian/Pacific Islander	59	62.8%
Black/African American	59	62.8%
Children/youth	53	56.4%
Disabled	49	52.1%
Families	26	27.7%
Hispanic/Latino	23	24.5%
Homeless	23	24.5%
Immigrant/refugee	20	21.3%
LGBTQ+ community	15	16.0%
Low income/poor	8	8.5%
Men	3	3.2%
Women	3	3.2%
Seniors/elderly	3	3.2%
Uninsured/underinsured	2	2.1%
Other	1	1.1%

Additionally, respondents were asked to share information regarding barriers to health care. Barriers related to low-income were mentioned most often. Select responses are listed below.

Select Comments Regarding Most Significant Barriers:

- "Without good public transportation, people are not going to be able to get to and keep the jobs they need to cover basic expenses."
- "Health care is underutilized because most persons aren't aware or educated on the best way to navigate it."
- "The poorest areas of Memphis really struggle with having access to healthy food, as well as residents not knowing how to prepare it in a healthy way even if they're able to access it. Many of our health issues as it relates to eating and lifestyle are generational problems. It's about breaking habits, and sometimes traditions, to really see change."
- "Barriers are based on your social and economic status. Poor people have the most barriers to care."
- "The health care system is too complex for most to navigate on their own. Having support in navigation as well as in accessing resources is critical."
- "Memphis has such significant poverty issues, our residents have limited transportation, limited access to healthy foods and limited funds for any medical expenses. In addition, meeting basic needs takes precedence over preventive care."
- "Unless there is a health emergency, all of the obstacles to care may be overwhelming. Well-visits and preventative care and screenings may not be happening."
- "Median income for the community is low which effects the willingness to pay for certain services regardless of need."

Social Determinants of Health

Key informants were asked to rate the quality of the five key areas of Social Determinants of Health within the community. The findings reveal important areas in which the community struggles and excels, as well as the underlying causes of other key health issues.

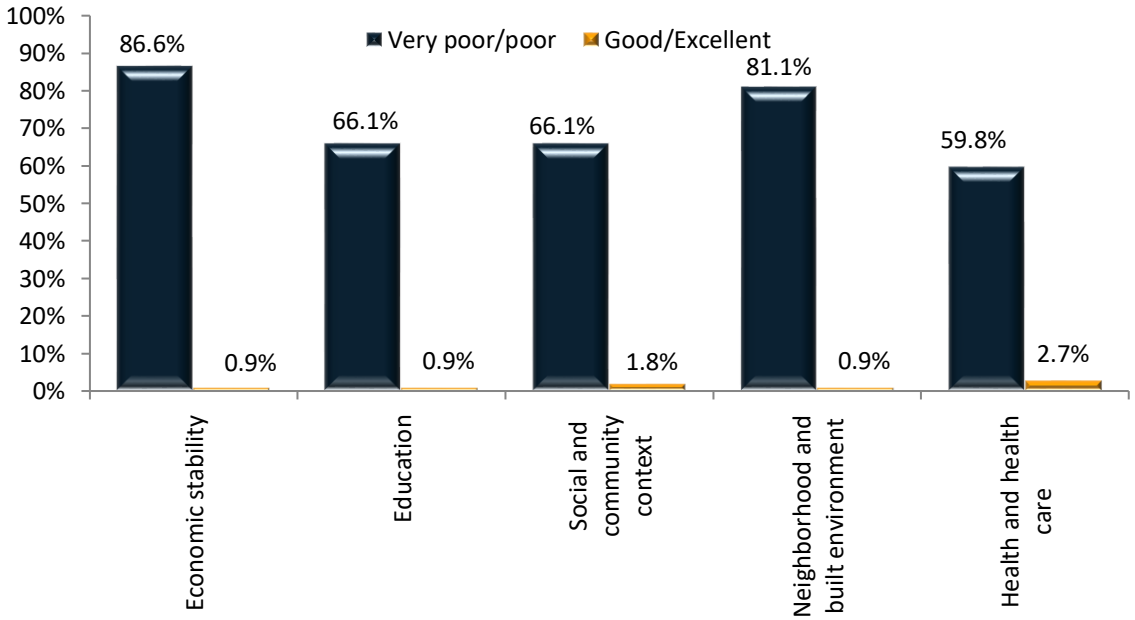
Almost all respondents rated these social determinants of health as "Very Poor" or "Poor." Economic stability (86.6%) and neighborhood and the built environment (81.1%) were selected as the social determinants of health which were worst for quality (when "Very Poor" and "Poor" are combined). Economic stability and neighborhood and the built environment are closely related to the barriers which limit or prevent access to health care.

No determinants were rated excellent and only 2.7% rated health care access and quality as "Good". Interestingly, health and health care access and quality had the highest percentage of respondents that selected "Average" (37.5%). However, 59.8% reported access to health care including primary care doctors and health literacy to be "Very Poor" or "Poor".

Table 32: Percentages of respondents who selected each rating of social determinant

Social Determinant	Percent of respondents who selected the rating					
	Very Poor	Poor	Average	Good	Excellent	N/A
Economic stability (poverty, employment, food security, housing stability)	34.8%	51.8%	11.6%	0.9%	0.0%	0.9%
Education (early childhood education and development, enrollment in higher education, high school graduation, language, and literacy)	17.9%	48.2%	33.0%	0.9%	0.0%	0.0%
Social and community context (social cohesion, civic participation, perceptions of discrimination and equity, incarceration/institutionalization)	12.5%	53.6%	30.4%	1.8%	0.0%	1.8%
Neighborhood and built environment (access to foods that support healthy eating patterns, quality of housing, crime and violence, environmental conditions, transportation)	26.1%	55.0%	18.0%	0.9%	0.0%	0.0%
Health and health care access and quality (access to health care, access to primary care, health literacy)	12.5%	47.3%	37.5%	2.7%	0.0%	0.0%

Figure 23. Percentage of respondents who responded as "Very Poor" or "Poor" as compared to those who responded "Good or Excellent" with the Social Determinant factors. *



*See Appendix A: Key Informant Survey Tool, for full factor and response options

II. Health Care Services

Questions were posed to key informants related to the availability (or lack thereof) of health care resources and services. These include emergency and preventative care, affordable medical and specialty care, healthy food, case management and social services such as housing, transportation and bilingual services, federally qualified health centers, mental health and substance abuse services, health education and outreach. Key informants were asked to rate these areas as to whether services are Missing, Lacking, Not Affordable, Need Being Met, or Don't Know.

Available Resources/Services

Access to resources and services appears to be a significant issue in the community. The percentage of respondents who perceive these resources and services to be available is fairly low. At best, one-third of respondents found that the need for emergency services and almost 29% perceive that the need for corporate health screenings and education are being met. As it relates to the primary care services being available, 16.7% believe this need is being met. This is somewhat consistent with the finding mentioned earlier which respondents agree or strongly agree about one-third of time that primary care doctors are accessible when needed.

Table 33. Top five available health care resources/services

Health care Resource/Service	Percentage of respondents who stated the "Need Being Met"	Percentage of respondents who stated "Missing"
Emergency care	33.7%	2.9%
Corporate health screenings/education	28.8%	4.8%
Federally qualified health centers	19.2%	7.7%
Food distribution	17.5%	3.9%
Primary care services	16.7%	4.9%

Missing and Lacking Resources/Services

Key informants identified mental health services, transportation, healthy food options, free/low-cost dental care and health education/information/outreach as "Missing" resources and services in the community. Substance abuse services and prescription assistance were mentioned in 2019. Once again, mental health services (identified as a top health issue) as well as access to healthy food are "Missing" and are of great need.

Top services selected by key informants as "Lacking" are advocacy for social needs, substance abuse services, transportation, sexual healthcare and case management/social service support. Importantly, two of these categories (advocacy and case management) address the lack of assistance in navigating the health system.

Figure 24. Top health care resource/services "Missing" in the community

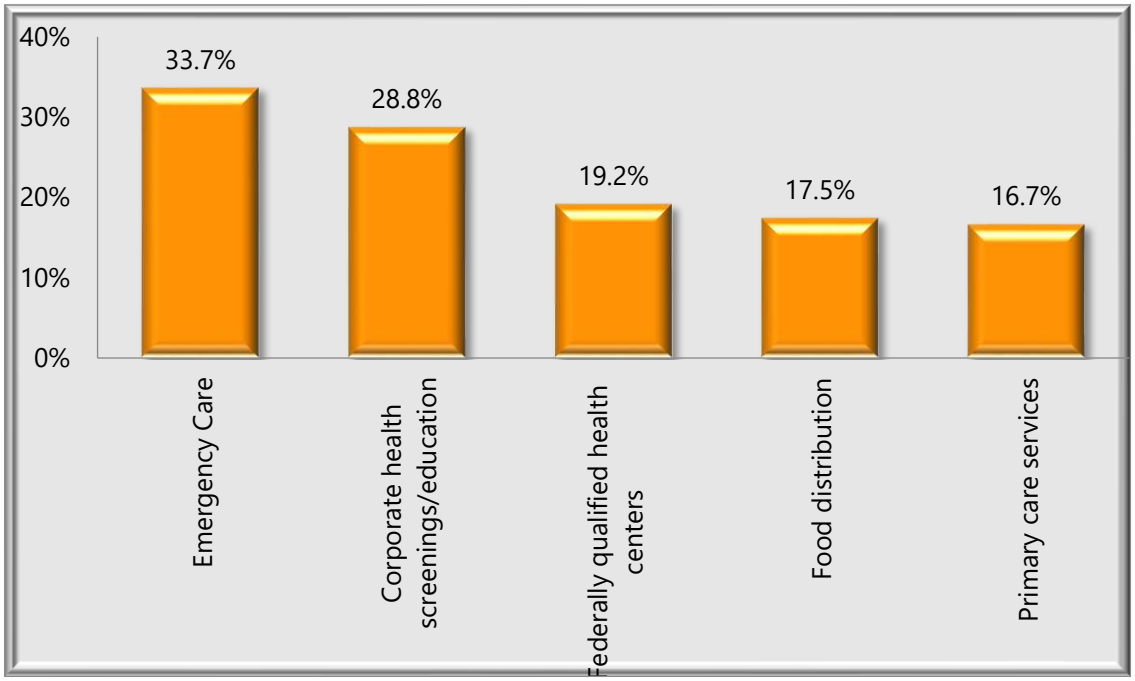
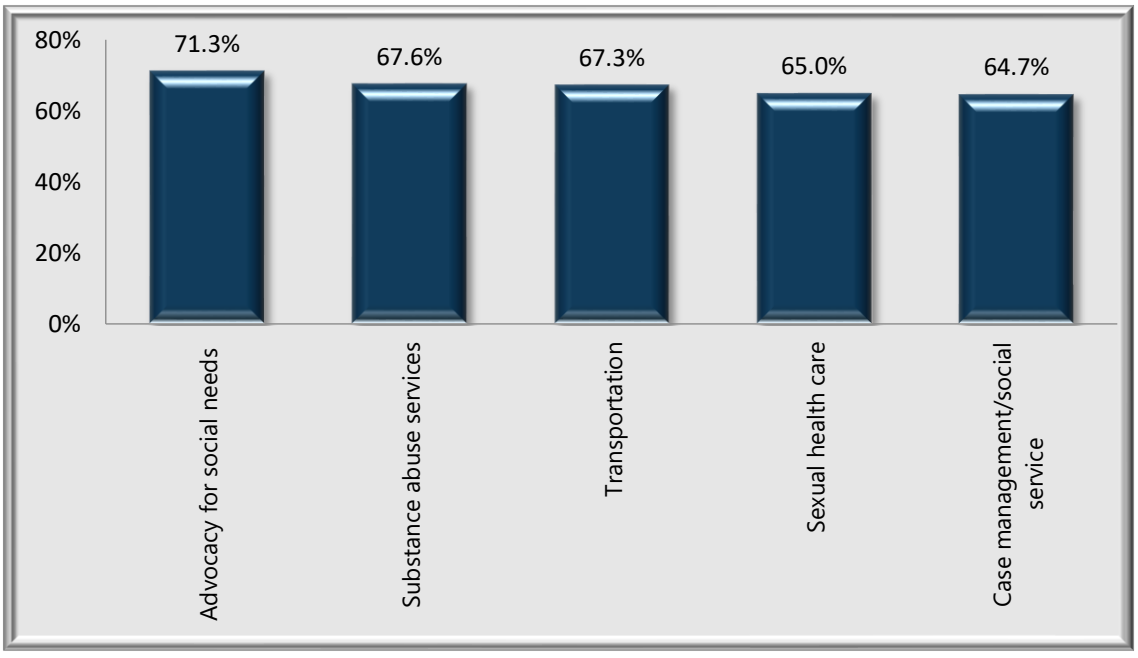


Figure 25. Top healthcare resource/services "Lacking" in the community



Respondents were asked to share information regarding Health care Resources and Services. Select responses are listed below.

Select Comments Regarding the Need and Accessibility of Health care Resources and Services:

- "Our community has many hospitals, clinics, health care providers and emergency services. Our issue is that these services are difficult if not impossible for our community to access. Poverty is the key driver for this access issue."
- "Many people who work cannot take time off to go to a doctor or service provider during their working hours. Many struggle with safe, dependable transportation to get there."
- "Memphis is a high-risk community. Health providers must be able to meet the needs of Memphis, where Memphis lives. Too often we believe a commercial or advertisements are reaching people. We now live in a trauma filled community, and mental health issues are at an all-time high."
- "Health providers must connect with their communities. Faith communities, social clubs, and grocery stores, shopping malls are great avenues to breach the gap in health care disparities. Memphis churches and community centers should provide support groups for their local communities. (i.e., Grief Support, AA Groups, Divorce Recovery, Trauma Support Groups, Victims of Domestic Violence Support Group, etc.)."

IV. Open-Ended Comments

Finally, key informants were given the opportunity to provide additional feedback in the form of open-ended comment fields. Many respondents took this chance to voice their concerns while also providing valuable information and insights into the community that they serve.

Key informants were first asked, *"What challenges do people in the community face in trying to maintain healthy lifestyles like exercising and eating healthy and/or trying to manage chronic conditions, such as diabetes or heart disease?"*

Many respondents focused on environmental challenges such as the lack of safe recreation space and the lack of (or difficulty accessing) parks with equipment and walking trails. Others focused on healthy lifestyles. Food deserts and the reliance on fast fried food as well as poverty contribute to the poor health of individuals, families, and communities. Cultural norms perpetuate unhealthy eating and infrequent exercise, and financial concerns create a scenario in which medications are not affordable and not used by those with chronic illnesses.

Select Comments regarding Challenges for People in the Community Trying to Maintain a Healthy Lifestyle:

- "Many people are in unskilled jobs and/or other manufacturing/logistical jobs that require them to work long hours to meet basic needs (housing/food) - this leaves little time for exercising and health eating."
- "Culturally our community does not value exercise, healthy eating, walking, outdoor recreation. Open space and park amenities are underused and often the best outdoor

amenities require a drive in the car to reach. Neighbors, family and friends tend (generally speaking) to set poor examples and not inspire others to shift their lifestyles."

- "Studies show that people who use public transit meet their daily exercise needs. Good transit would address several problems for us."
- "The challenges I have seen in the community are having the support system for accountability, living conditions and affordable housing and the cost of insulin."
- "Lack of education on the importance of preventative health screenings and the long-term effects of poor health and poor sexual health choices and how to navigate the system."
- "Fear of violence and unsafe areas do affect community members feeling comfortable exercising in their own neighborhoods."
- "There are providers, but a lack of primary care, transportation, and equitable quality prevent community level improvements in health outcomes."
- "Insurance coverage is a challenge, people knowing where to go and get primary care (in lieu of using the ER) is a challenge."
- "General lack of knowledge about what constitutes a healthy lifestyle and a community perception that obese people more attractive than lean folks."
- "Unsafe neighborhoods and no money for gym (can't exercise), food deserts and food insecure areas (can't eat healthfully) and chronic hypertension; smoking and vaping being pushed in our communities and in our schools."
- "Many people lack the funds to purchase their medicine essential for their health. For many it is a choice between paying their essential monthly bills or getting their prescriptions filled."
- "There are a few places to exercise, but no local park with equipment, safety, night lighting, and attractive places to gather for families with children. There are few classes on healthy eating and cooking. Fried food is preferred over vegetables. Families are not cooking healthy meals or watching what they eat. The corner stores sell junk food and people eat that stuff for a meal."
- "Health and other issues cannot be addressed as siloed policy and strategy concerns. In order for community health to improve, a comprehensive approach for improving social and economic mobility in the community needs to be developed."
- "Many areas are food deserts where there is the lack of healthy food or food is too expensive. Also, due to the crime rate parks and some neighborhoods are not safe enough to walk."
- "Education on how to manage chronic disease without medication, prevention, having access to healthy and affordable food options (is lacking)."
- "The challenge is to help people understand that we as a community can be healthy. Provide a voice and give examples through where Memphis Live would be key."
- "Low-income, not enough money in budget to cover healthcare expenses."

Next, key informants were asked, *"In your opinion, what is being done well in the community in terms of health and quality of life? (Community Assets/Strengths/Successes)."*

The responses from key informants stressed the excellent job that the hospitals, medical community, FQHCs[2], and nonprofit agencies are doing to address social determinants of health and educate the community on the importance of health maintenance. However, respondents emphasized that not everyone can access these resources (particularly in light of racial disparities) and that a more collaborative, system-wide approach that creates "boots on the ground" would work better. Many applauded the efforts made to reach the local communities with COVID vaccines and health information. They expressed a desire for this model to be replicated for other health concerns and chronic diseases.

Select Comments regarding What is Being Done Well in the Community:

- "Our local trauma hospital is doing all it can to go into community teaching what good health looks like and sharing what preventative measures can be taken to create successful communities. I do like how our health department seems to be evolving from expensive advertising to actual boots on the ground."
- "Regional One partners with local non-profits who are trying to lower heart disease and diabetes, they have the best trauma center in the area to deal with the gun violence we face, and they have excellent physicians who dedicate their time to make our community healthier."
- "The City of Memphis is working to keep the streets safe for exercise; non-profits spread valuable information regarding the importance of healthy eating (an issue being in the deep South), exercising, and advocating for your own health."
- "There are various small programs addressing each concern for social determinants of health. No large cohesive approach."
- "There was a strong push under Mayor Wharton to aggressively install separated bike lanes that run through all neighborhoods so kids could safely ride, adults to ride longer distances to commercial centers, and everyone could reach destinations simply and safely without needing access to a car."
- "Area hospices provide excellent end of life care. Home visitation programs for new mothers and babies are showing strong results."
- "There are good quality public spaces and especially green spaces which are frequently used. Better and more connected spaces would be used to an even greater degree."
- "Local non-profits like the American Heart Association are working tirelessly to distribute food and create healthy sustainable food sources, to create safe, free spaces for residents to exercise and to get as much health information out to the community regarding their lifestyles."
- "More resources are available for public health outreach and care since COVID-19. This collaboration across local and federal government should and must continue. Innovations in telehealth should also be considered for expanding outreach and care more permanently."
- "Memphis did an excellent job in providing COVID vaccines to the public. The same effort should be used for all health concerns."

[2] Federally Qualified Health Centers

- "There are a good number of agencies that are going into the community and into schools to attempt to educate people about a healthy life."
- "Coordination between churches and volunteer organizations seems strong. The Church Health Center is a huge asset."
- "Lebonheur and Regional One are great sources for healthcare. But the facilities for mental health are atrocious."
- "More FQHCs are being opened, allowing people to have more access to healthcare. Those facilities and others are also finding more grants to a financial backing to programs with underserved communities."

Key informants were then asked, *"What recommendations or suggestions do you have to improve health and quality of life in the community?"*

The idea of increasing collaboration and community wide strategies between all healthcare and social service providers was reiterated. Maximizing community events and existing care locations to always include health education and prevention screenings is suggested. Starting health education early with school children, improving mental health services, improving provider understanding of cultural differences, offering bilingual services, and prevention and screening services are among the key recommendations made.

Select Comments regarding Recommendations and Suggestions:

- "Putting nurses in schools; employing community health workers to visit patients in their homes; screening for SDOH (social determinants of health) in clinical settings and then linking to services."
- "A more cohesive strategy where funding and resources are pooled for bigger impact. "
- "On-going education about food choices, obesity and all the diseases that can result needs to happen early in school and be reinforced daily in the cafeteria at a school system-wide level!"
- "Reinstitute the aggressive bike-lane program. Every school and neighborhood should be linked with safe bicycle infrastructure to encourage an active lifestyle."
- "More collaboration between community hospitals and agencies is needed to address health issues."
- "We advertise, but most of them cannot read well and their internet access is limited so advertising looks good but is very ineffective."
- "There should be late hour clinics strategically located throughout the county where there is a high population of persons receiving Medicaid. Create mobile bathing stations for the homeless and while there, Regional One can take blood pressure, do heart rate, check dental and vision."
- "Eliminate food deserts, do a better job of promoting the importance of healthy choices and the detrimental effects when people don't make healthy choices."
- "There needs to be greater cultural competency, a stronger sense of welcome for non-English speaking families and improved access to health systems and resources regardless of your citizenship status or preferred first language."

- "Better integration of public health and private providers inside the education systems through formal 'full-service community schools'."
- "Expand access to preventative and ancillary services (transportation, education, etc.)."
- "Focus on public schools to improve health literacy understanding that the initiative in schools will filter into the homes."
- "Partnering with big companies to establish centers and facilities in dense populations to offer the resources they need free of charge."
- "More social workers to help people navigate the system. A campaign to reduce the unnecessary use of the ERs. Parent engagement to help get kid vaccines up overall."
- "Health booths at every community festival. Pop Up clinics at malls and grocery stores. Help people understand what they can do, and not just what they cannot do."
- "Provide free counseling services for PTSD and vets so they do not end up with substance abuse."
- "A safe place should be provided for us to walk, sit, exercise and socialize as well as nice places to eat."
- "There should be options to prevent mental health issues from becoming severe. We only offer critical services once the patient is in crisis mode."
- "More bilingual healthcare workers and facilities that service more than the Hispanic population (ex. Asian Americans, Indians Americans)."

Lastly, key informants were asked *"What effect COVID-19 has had on the health needs of the community? Did COVD-19 highlight any specific gaps/barriers in community health services?"*

COVID-19 has highlighted the disparities in the provision of health care services to already underserved populations and may have elevated their hesitancy to seek treatment. Restricted access to services, increased complexity in navigating the health care system and staff shortages create delays in seeking and receiving treatment. This is particularly acute in those with already existing medical conditions. Mental health issues have increased as a result of the isolation during quarantine and the loss of social and familial support systems. On a positive note, one respondent commented on an increase in hygiene practices among the population and another said that some people are now focused on improving their health.

Select Feedback About the Impact of COVID-19

- "It has been a burden and a blessing. The burden is COVID revealed just how sick some people are/were and some people are on a better health path up to and including weight loss."
- "COVID-19 has made access a bit more difficult for some services. Early closures, and restricted access due to supply and staffing shortages have caused difficulty."
- "It caused many medical procedures to be considered elective and therefore put off."
- "More people without jobs created more need for assistance with basic needs and affordable healthcare."

- "It has highlighted the hesitancy to engage with health care institutions until it becomes a crisis and the blindness of the community at large to these struggles and how they affect Latinx immigrant families."
- "Due to COVID, family support has decreased."
- "Visits to primary care dropped as many residents were fearful of any health care facility. COVID highlighted gaps such as the need of more skilled nurses, mental health issues that stemmed from quarantine and the stress the pandemic brought on overall."
- "COVID-19 has isolated our community and many people have lost a support group."
- "It discouraged outdoor activity."
- "COVID-19 highlighted health disparities between ethnic groups especially in the African American community where there needs to be more preventative care for diseases."
- "It revealed the gaps in care for poor and disabled citizens."
- "It certainly has laid bare the inequities and inconsistencies of health care between the haves and have nots."
- "COVID made a complex system more difficult to navigate. If you do not have phone access, transportation or health literacy you will struggle."
- "COVID-19 revealed the vulnerability of the health care delivery system to handle an overwhelming crisis."
- "COVID stopped some from seeking health care and may have exasperated some health conditions already present."
- "The pandemic further highlighted how deep the distrust was of health care and governmental public health authorities; adding to the disproportionate underutilization of existing health care capabilities."
- "The focus on hygiene improved and the acknowledgment of weaker immune systems."

APPENDIX A. SECONDARY DATA SOURCES

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APPENDIX B. SECONDARY DATA TERMINOLOGY

Definitions

Age-Adjusted Rate **-** Age-adjustment is a statistical process applied to rates of disease, death, injuries or other health outcomes, which allows populations with different age structures to be compared.

Behavioral Risk Factor Surveillance System (BRFSS) **-** Ongoing surveillance system with the objective to collect uniform, state-specific data from surveys on adults' health-related risk behaviors, chronic health conditions, and use of preventive services.

Crude Rate **-** Expresses the frequency in which a disease or condition occurs in a defined population in a specified period of time, without regard to age or sex.

Determinants of Health **-** The personal, social, cultural, economic and environmental factors that influence the health status of individuals or populations.

Family - Defined as a householder and one or more other people living in the same household who are related to the householder by birth, marriage, or adoption.

Frequency - Often denoted by the symbol "n," frequency is the number of occurrences of an event.

Health **-** A state of complete physical, mental, and social well-being and not just the absence of disease or infirmity.

Health Disparities - Indicate the difference in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exists among specific population groups.

Health Outcomes **-** A medical condition or health status that directly affects the length or quality of a person's life. These are indicators of health status, risk reduction, and quality of life enhancement.

Housing Unit **-** A house, an apartment, a mobile home, a group of rooms, or a single room occupied (or if vacant, intended for occupancy) as separate living quarters.

Household - All the people who occupy a housing unit, including related family members and all the unrelated people who may be residing there. Examples include college students sharing an apartment or a single male living alone.

Householder - One person in each household is designated as the householder. In most cases, the householder is the person, or one of the people, in whose name the housing unit is owned or rented (maintained). The two major categories of householders are "family" and "nonfamily."

Incidence Rate - Refers to the number of individuals who develop a specific disease or experience a specific health-related event during a particular time period.

Infant Mortality Rate - Defined as the number of infant deaths per 1,000 live births per year. Infant is defined as being less than one year of age.

Low Birth Weight (LBW) – Indicates a birth weight less than 5 pounds 3 ounces (2,500 grams).

Morbidity **-** Refers to the state of being diseased or unhealthy within a population.

Mortality **-** Number of deaths occurring in a given period in a specified population.

Neonatal Mortality Rate - Defined as the number of infant deaths from birth up to but not including 28 days of age per 1,000 live births per year.

Post-Neonatal Mortality Rate - Defined as the number of infant deaths occurring from 28 days up to but not including 1 years of age per 1,000 live births per year.

Poverty Guidelines - A version of the federal poverty measure issued each year in the *Federal Register* by the Department of Health & Human Services. The guidelines are a simplification of the poverty thresholds used for administrative purposes (i.e., determining eligibility for certain federal programs).

Preterm - Births delivered less than 37 completed weeks of gestation based on obstetric estimate of gestation.

Prevalence - The total number of individuals in a population who have a disease or health condition at a specific period of time, usually expressed as a percentage of the population.

Quality of Life - Degree to which individuals perceive themselves as able to function physically, emotionally, and socially.

Rate - A measure of the intensity of the occurrence or frequency with which an event occurs in a defined population. Rates are generally expressed using a standard denominator such as per populations of 1,000, 10,000 or 100,000.

Size of Household - Includes all the people occupying a housing unit.

Size of Family - Includes the family householder and all other people in the living quarters that are related to the householder by birth, marriage, or adoption.

Socioeconomic Status (SES) - A composite measure that typically incorporates economic, social, and work status. Examinations of socioeconomic status often reveal inequalities in access to resources.

Very Low Birth Weight (VLBW) - Indicates a birth weight less than 3 pounds 5 ounces (1,500 grams).

Vital Statistics - Systematically tabulated data derived from certificates and reports of births, deaths, fetal deaths, marriages, and divorces, based on the registration of these vital events.

Years of Potential Life Lost (YPLL) - A measure of premature mortality or death on a population, calculated as deaths that occur before some predetermined minimum or desired life span (usually age 75, which is the average life span).

Youth Risk Behavior Surveillance System (YRBSS) - A national school-based survey that provides ongoing surveillance to monitor health-related behaviors that contributes to the leading causes of death and disability among youth.

APPENDIX C. KEY INFORMANT SURVEY TOOL

Key Informant Online Questionnaire

HOLLERAN

INTRODUCTION

As part of its ongoing commitment to improving the health of the communities it serves, Regional One Health is conducting its triennial comprehensive Community Health Needs Assessment (CHNA). The results of the survey will be compiled and shared with our communities and used to inform our 2022 – 2024 CHNA Implementation strategy.

The survey should take about 10-15 minutes to complete. Please be assured that all of your responses will go directly to our research consultant, Holleran Consulting, and will be kept strictly confidential. Please note that while your responses, including specific quotations, may be included in a report of this study, your identity will not be directly associated with any quotations.

You have been identified as an individual with valuable knowledge and opinions regarding community health needs, and we appreciate your willingness to participate in this survey.

When answering the questions, please consider the community and area of interest to be the communities surrounding Shelby County.

KEY HEALTH ISSUES

1. Thinking of all the areas that you feel make up a healthy community, would you describe the communities surrounding Regional One Health as healthy?

   - ☐ Yes
   - ☐ No
   - ☐ Don't know

2. In general, how would you rate your community's overall health status?

   - ☐ Excellent
   - ☐ Good
   - ☐ Average
   - ☐ Poor
   - ☐ Very poor

3. What are the top **5** health issues you see in your community? (CHOOSE 5)

- ☐ Accessing health care services
- ☐ Alzheimer's disease/dementia
- ☐ Cancer
- ☐ Diabetes
- ☐ Heart disease
- ☐ Maternal, infant, and child health
- ☐ Mental health
- ☐ Oral health
- ☐ Overweight/obesity
- ☐ Other (specify):
- ☐ Respiratory diseases
- ☐ Sexually transmitted diseases including HIV/AIDS
- ☐ Stroke
- ☐ Substance abuse
- ☐ Suicide
- ☐ Teen pregnancy
- ☐ Tobacco use
- ☐ Unintentional injuries and violence including domestic violence, firearm-related violence, and motor vehicle accidents

4. Of those health issues mentioned, which **1** is the most significant? (CHOOSE 1)

- ☐ Accessing health care services
- ☐ Alzheimer's disease/dementia
- ☐ Cancer
- ☐ Diabetes
- ☐ Heart disease
- ☐ Maternal, infant, and child health
- ☐ Mental health
- ☐ Oral health
- ☐ Overweight/obesity
- ☐ Other (specify):
- ☐ Respiratory diseases
- ☐ Sexually transmitted diseases including HIV/AIDS
- ☐ Stroke
- ☐ Substance abuse
- ☐ Suicide
- ☐ Teen pregnancy
- ☐ Tobacco use
- ☐ Unintentional injuries and violence including domestic violence, firearm-related violence, and motor vehicle accidents

5. What resources are available in the community to address the health issues you identified?

6. Please share any additional information regarding these health issues and reasons to support your response in the box below:

ACCESS TO CARE & BARRIERS

7. On a scale of strongly disagree through strongly agree, please rate each of the following statements about **Health Care Access** in the community.

Strongly Disagree←→Strongly Agree

Residents in the area are able to access a primary care provider when needed. (Family Doctor, Pediatrician, General Practitioner)	☐ Strongly Disagree ☐ Disagree ☐ Neither Agree nor Disagree ☐ Agree ☐ Strongly Agree
Residents in the area are able to access a medical specialist when needed. (Cardiologist, Dermatologist, Neurologist, etc.)	☐ Strongly Disagree ☐ Disagree ☐ Neither Agree nor Disagree ☐ Agree ☐ Strongly Agree
Residents in the area are able to access a dentist when needed.	☐ Strongly Disagree ☐ Disagree ☐ Neither Agree nor Disagree ☐ Agree ☐ Strongly Agree
There are a sufficient number of providers accepting Medicaid and Medical Assistance in the area.	☐ Strongly Disagree ☐ Disagree ☐ Neither Agree nor Disagree ☐ Agree ☐ Strongly Agree
There are a sufficient number of bilingual providers in the area.	☐ Strongly Disagree ☐ Disagree ☐ Neither Agree nor Disagree ☐ Agree ☐ Strongly Agree
Providers in the area are culturally sensitive to race, ethnicity, and cultural preferences of patients.	☐ Strongly Disagree ☐ Disagree ☐ Neither Agree nor Disagree ☐ Agree ☐ Strongly Agree
There are a sufficient number of mental/behavioral health and substance abuse providers in the area.	☐ Strongly Disagree ☐ Disagree ☐ Neither Agree nor Disagree ☐ Agree ☐ Strongly Agree
Transportation (public, personal, or other service) for medical appointments and other services is available to area residents when needed.	☐ Strongly Disagree ☐ Disagree ☐ Neither Agree nor Disagree ☐ Agree ☐ Strongly Agree

8. What are the **MOST** significant barriers that keep people in the community from accessing health care when they need it? (Select all that apply)

- ☐ Availability of health and wellness programs/education
- ☐ Availability of healthy food options
- ☐ Availability of providers/appointments
- ☐ Basic needs not met (food/water/shelter/employment/environmental safety)
- ☐ Emotional/physical stress
- ☐ Inability to navigate health care system
- ☐ Inability to pay out-of-pocket expenses (co-pays, prescriptions, etc.)
- ☐ Lack of health insurance coverage
- ☐ Lack of health literacy
- ☐ Lack of preventive health care (screenings, annual check-ups, etc.)
- ☐ Lack of safe parks/recreation outlets
- ☐ Lack of social support (family, friends, social network)
- ☐ Lack of transportation
- ☐ Lack of trust
- ☐ Language/cultural/racial/spiritual barriers
- ☐ Time limitations (long wait times, limited office hours, time off work)
- ☐ None/no barriers
- ☐ Other (specify):

9. Of those barriers mentioned, which **1** is the most significant? (CHOOSE 1)

- ☐ Availability of health and wellness programs/education
- ☐ Availability of healthy food options
- ☐ Availability of providers/appointments
- ☐ Basic needs not met (food/water/shelter/employment/environmental safety)
- ☐ COVID-19
- ☐ Emotional/physical stress
- ☐ Inability to navigate health care system
- ☐ Inability to pay out-of-pocket expenses (co-pays, prescriptions, etc.)
- ☐ Lack of health insurance coverage
- ☐ Lack of health literacy
- ☐ Lack of preventive health care (screenings, annual check-ups, etc.)
- ☐ Lack of safe parks/recreation outlets
- ☐ Lack of social support (family, friends, social network)
- ☐ Lack of transportation
- ☐ Lack of trust
- ☐ Language/cultural/racial/spiritual barriers
- ☐ Time limitations (long wait times, limited office hours, time off work)
- ☐ None/no barriers
- ☐ Other (specify):

10. Please share any additional information regarding barriers to health care in the box below:

11. Are there specific populations in this community that you think are not being adequately served by local health services?

- ☐ Yes
- ☐ No

SURVERY LOGIC → <u>IF YES:</u> Which populations are underserved? (Select all that apply)

- ☐ American Indian/Alaska Native
- ☐ Asian/Pacific Islander
- ☐ Black/African American
- ☐ Children/youth
- ☐ Disabled
- ☐ Families
- ☐ Hispanic/Latino
- ☐ Homeless
- ☐ Immigrant/refugee
- ☐ LGBTQ+ community
- ☐ Low income/poor
- ☐ Men
- ☐ Women
- ☐ Seniors/elderly
- ☐ Uninsured/underinsured
- ☐ Other (specify):

12. In general, where do you think **MOST** uninsured and underinsured individuals living in the area go when they are in need of medical care? (CHOOSE 1)

- ☐ Doctor's office
- ☐ Health clinic/FQHC
- ☐ Hospital emergency department
- ☐ Walk-in/urgent care center
- ☐ Don't know
- ☐ Other (specify):

SOCIAL DETERMINANTS OF HEALTH

Social Determinants of Health, defined by Healthy People 2030, are conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, function, and quality-of-life outcomes and risks.

13. On Please rate the quality of the following 5 key areas of **Social Determinants of Health** within the community using a scale of very poor through excellent. An N/A option is provided if you have no experience with the area or have no opinion.

Very Poor ←→ Excellent

Economic stability *poverty, employment, food security, housing stability*	☐ Very Poor ☐ Poor ☐ Average ☐ Good ☐ Excellent ☐ N/A
Education *early childhood education and development, enrollment in higher education, high school graduation, language and literacy*	☐ Very Poor ☐ Poor ☐ Average ☐ Good ☐ Excellent ☐ N/A
Social and community context *social cohesion, civic participation, perceptions of discrimination and equity, incarceration/institutionalization*	☐ Very Poor ☐ Poor ☐ Average ☐ Good ☐ Excellent ☐ N/A
Neighborhood and built environment *access to foods that support healthy eating patterns, quality of housing, crime and violence, environmental conditions, transportation*	☐ Very Poor ☐ Poor ☐ Average ☐ Good ☐ Excellent ☐ N/A
Health and health care *access to health care, access to primary care, health literacy*	☐ Very Poor ☐ Poor ☐ Average ☐ Good ☐ Excellent ☐ N/A

MISSING RESOURCES/SERVICES

14. For each **Healthcare Resource/Service** listed, please select whether you think it is missing (not available), lacking (available but not enough to meet needs) or not affordable (price may be a barrier in accessing service) within the community. If you think the service is available and affordable, please select the need being met.

Healthcare Resources/Services	Missing	Lacking	Not Affordable	Need Being Met	Don't Know
Advocacy for social needs (food security, housing, education, employment, etc.)					
Bilingual services					
Case management/social services					
Corporate health screenings/education programs (on-site for employees)					
Emergency care					
Federally qualified health centers (FQHCs)					
Food distribution					
Free/low cost dental care					
Free/low cost medical care					
Health education/information/outreach					
Healthy food options					
Home health care services					
Housing assistance					
Prescription assistance					
Mental health services					
Multicultural/bilingual healthcare providers					
Preventive health screenings (blood pressure, diabetes, stroke, etc.)					
Primary care services					
Specialty care services (cardiologist, neurologists, etc.)					
Substance abuse services					
Support group services					
Sexual health care					
Transportation					

15. Please share any additional information regarding the need and accessibility of healthcare resources and/or services for individuals living in the community in the box below:

OPEN-ENDED: CHALLENGES & SOLUTIONS

16. What challenges do people in the community face in trying to maintain healthy lifestyles like exercising and eating healthy and/or trying to manage chronic conditions, such as diabetes or heart disease?

17. In your opinion, what is being done ***well*** in the community in terms of health and quality of life? (Community Assets/Strengths/Successes)

18. What recommendations or suggestions do you have to improve health and quality of life in the community?

19. What effect has COVID-19 had on the health needs of the community? Did COVD-19 highlight any specific gaps/barriers in community health services?

DEMOGRAPHICS

Please answer the following demographic questions.

20. Which one of these categories would you say BEST represents your community affiliation? (CHOOSE 1)

- ☐ Business sector
- ☐ Childcare/youth services
- ☐ Community member
- ☐ Education
- ☐ Faith-based/cultural organization
- ☐ Government/housing/transportation sector
- ☐ Health care/public health organization
- ☐ Mental/behavioral health organization
- ☐ Non-profit/social services
- ☐ Other (specify):

21. Are there any specific populations within the community that your organization serves? (Select all that apply)

- ☐ American Indian/Alaska Native
- ☐ Asian/Pacific Islander
- ☐ Black/African American
- ☐ Children/youth
- ☐ Disabled
- ☐ Families
- ☐ Hispanic/Latino
- ☐ Homeless
- ☐ Immigrant/refugee
- ☐ LGBTQ+ community
- ☐ Low income/poor
- ☐ Men
- ☐ Women
- ☐ Seniors/elderly
- ☐ Uninsured/underinsured
- ☐ Other (specify):

22. My organization collaborates with other organizations/institutions on local efforts to improve health in the community.

- ☐ Yes
- ☐ No
- ☐ Don't know

CLOSING

Regional One Health and its partners will use the information gathered through this survey in guiding their community health improvement activities and work with partnering organizations. Please share any other feedback you may have for them below:

Thank you! That concludes the survey.

APPENDIX D. KEY INFORMANT PARTICIPANTS

Name	Agency
Abbey Cowan	Memphis Scholarship Opportunity Trust (MOST)
Alex Henley	Shelby County Mayor's Office
Althea Greene	Memphis-Shelby County Schools
Amber Covington	Equus Workforce Solutions
Ann Marie Wallace	Baptist
Anna Mullins Ellis	New Memphis Institute
Asia Digss Meador	Meritan, Inc.
Brian J. Wilks	Equus Workforce Solutions
Cathy Pope	MidSouth Food Bank
Daphne McDonald	Speaking Life Healthcare
Demar Roberts	First Choice Sales and Marketing Group, Inc.
Dr. Bianca Sweeten	Midtown Pediatrics of Memphis
Dr. Cyrilyn Walters	Regional One Health/UTHSC
Dr. Jara Best-Jones	LeBonheur Pediatrics
Dr. Jessica Ruffin	Adams-Patterson Gynecology & Obstetrics
Dr. Kendra Sheppard	Dedicated Senior Medical Center
Dr. Kenneth Robinson	United Way of the Mid-South
Dr. Kimberly Brown	St. Francis Hospital
Dr. LaTonya	St. Francis Hospital
Dr. Laura Spraberry	UTHSC/Regional One Health
Dr. Mark Berryhill	Region One Health
Dr. Michelle Kitson	Methodist LeBonheur Healthcare
Eli Morris	Hope Church
Estella Mayhue-Greer	Mid-South Food Bank
Gale Jones Carson	MLGW
Gwendolyn Wilson	Region One Health
Jennilyn Utkov	Methodist/LeBonheur
Jenny Bartlett-Prescott	Church Health Center
John Lawrence	EDGE (Economic Development Growth Engine)
Joycen Dorse Coleman	Memphis-Shelby County Schools
Jozelle Booker	Mid-South Minority Business Continuum
Kate Staggs	American Heart Association
Katy Spurlock	The Urban Child Institute
Kendra Hotz	Rhodes College

Kiki Hall	Catholic Charities of West Tennessee
Marian Levy	University of Memphis School of Public Health
Mark Sturgis	Seeding Success
Mary Wu Tullis	Baker Donelson
Mayor Keith McDonald	City of Bartlett Government
Mayor Mike Palazzolo	City of Germantown
Michael Phillips	Su Casa Family Ministries
Monica Brodie	Region One Health
Nicole Thomas	Nicallyss Creative Group
Pastor D'Arcy Deveaux,	Region One Health
Reggie Crenshaw	Leadership Memphis
Rev. Don Gilbert	Region One Health
Rev. Dr. Jody Hill	Memphis Theological Seminary
Rev. Evelyn Taylor	Region One Health
Rob Hughes	Porter-Leath
Rufus Smith	Hope Church
Sadie Cushman	Shelby County Schools
Shawna Herring	Cummins
Tabitha Prince-Glenn	Peer Power Foundation

APPENDIX E. STRATEGY SESSION PARTICIPANTS -JUNE 30, 2022

First Name	Last Name	Title	Work Area
1. Wanda	Banks	Director, Case Management	Case Management
2. Sheena	Freeman	Director, Guest Services	Guest & Telephone Services
3. Lilly	Cooper	Director, Nursing Administration for	Nursing Administration
4.	Shephard,	Staff Physician	Women's Services - OBGYN
5. Angela	Adair	Director, Outpatient Women's Services, Ambulatory Services	Outpatient Women's Services, Amb Svcs Admin
6. Cyrilyn	Walters, MD	Staff Physician	General Internal Medicine-ROMC
7. Megan	Williams	Director, Complex Care Program	Center for Population Health & Clinical
8. D'Arcy	Deveaux	Senior Organization Development Consultant	HR - Organizational Development
9. Natasha	Donerson	Director, Business Development & Market	Business Growth Center
10. Lori	Evans	Manager, Customer & Community Engagement	Patient Experience/Community
11. Summer	Hardy	Manager, Volunteer & Patient Experience	Patient Experience/Volunteer
12. Tish	Towns	EVP/Chief Administrative Officer, Exec Admin	EVP/CAO

APPENDIX F. IMPLEMENTATION STRATEGY PARTICIPANTS – AUGUST 29, 2022

First Name	Last Name	Title	Work Area
1. Wanda	Banks	Director, Case Management	Case Management
2. Sheena	Freeman	Director, Guest Services	Guest & Telephone Services
3. Lilly	Cooper	Director, Nursing Administration for	Nursing Administration
4.	Shephard, MD	Staff Physician	Women's Services - OBGYN
5. Angela	Adair	Director, Outpatient Women's Services, Ambulatory Services	Outpatient Women's Services, Amb Svcs Admin
6. Cyrilyn	Walters, MD	Staff Physician	General Internal Medicine-ROMC
7. Megan	Williams	Director, Complex Care Program	Center for Population Health & Clinical
8. D'Arcy	Deveaux	Senior Organization Development Consultant	HR - Organizational Development
9. Natasha	Donerson	Director, Business Development & Market	Business Growth Center
10. Lori	Evans	Manager, Customer & Community Engagement	Patient Experience/Community
11. Summer	Hardy	Manager, Volunteer & Patient Experience	Patient Experience/Volunteer
12. Tish	Towns	EVP/Chief Administrative Officer, Exec Admin	EVP/CAO

APPENDIX G. 2022 IMPLEMENTATION STRATEGY OUTCOMES

2022 IMPLEMENTATION STRATEGY OUTCOMES

Regional One Health Implementation Plan

Priority Area #1: Community-wide Collaboration

Overarching Goal: To increase collaboration between Regional One Health, local providers and other community organizations to address the healthcare needs in the community, in addition to providing education and prevention services.

Community-wide Collaboration			
Goal	Objective	Key Indicators	Outcome Measure
Increase partnerships with other community organizations focusing on LEP (limited English proficiency)	• Expand programs and relationships with other organizations to promote health literacy	• Regional One Health's participation or support of in community programs for the LEP population • Number of partnerships • Number of referrals to community programs • Availability of health literacy and promotional materials	• The number of LEP programs • The number of partnerships • Attendance at each LEP program • The number of referrals made to community programs • The number of English and bilingual Health literacy impressions
Increase partnerships with other community organizations focusing on chronic disease management	• Support and build upon programs and relationships with other organizations focused on chronic disease management and improving health literacy among targeted population	• Participation or support of community programs offered for patients in need of chronic disease management • Increase the number of partnerships • Increase the number of referrals to community programs	• Program participation and/or supported, in-kind or financially • The number of partnerships • Attendance at each chronic disease focused program • The number of referrals made • Health literacy impressions
Increase partnerships with other community organizations focusing on other prioritized needs as identified in the CHNA	• Enhance relationships with other organizations focused on other social services to help eliminate barriers to needed health and social services addressing community health needs	• Participation in or support of community programs offered for patients in need of health and social services sponsored by Regional One Health • Number of partnerships • Number of referrals to community programs	• The number of partnerships • Attendance at each Community Sponsored program • The number of referrals made to community partners

Priority Area #2: Access to Health and Supportive Services

Overarching Goal: To improve access to health and supportive services by identifying resources and services that will reduce the barriers that residents face making it difficult to receive basic and affordable healthcare services and to navigate the healthcare system as a whole.

Access to Health and Supportive Services			
Goal	Objective	Key Indicators	Outcome Measure
Improve patient access to needed health and supportive services	• Work with internal stakeholders to identify if language/interpretive services are required by the patient to eliminate delays in care • Develop a resource guide to assist patients in accessing needed supportive services to help improve their quality of life and health outcome.	• The number of requests for and/or usage of interpreters scheduled in advanced of a patient's visit • Number of LEP patient appointments with in-person interpretive services • Resources shared with operators • Development, dissemination of use of resource guide	• The number of appointments • LEP patient experience scores • Reduction in clinic visit wait-times
Improve the communication and access regarding existing resources available for transportation	• Identify and partner with transportation providers to reduce transportation barriers to care • Ensure that patients have access to, and knowledge of transportation resources available in the community • Identify barriers that inhibit patient's access to healthcare services • Identify partners that help patients get to appointments	• The number of partnerships with non-emergency transportation companies • The number of vouchers provided for public transportation	• The reduction of no-shows related to transportation barriers • The number of rides provided to get to appointments • The number of rideshare appointments

Access to Health and Supportive Services			
Goal	Objective	Key Indicators	Outcome Measure
Support patients of Regional One Health with transportation challenges who need other non-emergency transportation to and from medical appointments and assist in addressing barriers to optimal health	• Expand the transportation program of Ride Health	• Increase the number of patient trips provided by Ride Health	• The number of rides provided to patients by Ride Health

Priority Area #3: Mortality and Chronic Disease Management

Overarching Goal: Develop programs and services for education, early detection and intervention addressing the top leading causes of death in our county; heart disease, malignant neoplasm, and accidents.

Mortality and Chronic Disease Management			
Goal	Objective	Key Indicators	Outcome Measure
Identify high risk patients in the system to manage their chronic disease and mortality	• Increase education and awareness around designated chronic disease • Reduce recidivism around victims of violence • Offer support group to help manage chronic diseases	• Standardized processes to identify patients with, or at risk, for developing chronic disease • The mortality rate of chronic diseases • Health outcomes of targeted populations	• The number of health fairs and community events • The number of graduates from Hospital Violence Intervention Program (HVIP) • Chronic disease mortality rate • Chronic Disease management care outcomes amongst targeted population (i.e. A1c levels, # of patients with controlled hypertension)
Create campaigns that provide chronic disease management education through multiple channels.	• Raise awareness to help manage chronic diseases •	• Change in health outcomes • Number of patients reached through health promotion campaigns	• Health outcomes • Community education program attendance • Impressions from social media campaigns
Early identification of cancer screenings for men and woman	• Increase the number of mammograms and colonoscopies for cancer screenings	• The number of screenings	• The number of patients served • The number of early detections for breast cancer and colon cancer
Identify patients with high-risk chronic conditions subject to food insecurities and impacted by lack of good nutrition	• Facilitate access to healthy food choices through collaboration with community partners	• The number of food partnerships formed • The improvement in healthy food availability	• The number of patients served by partnering organizations

Priority Area #4: Maternal and Child Health

Overarching Goal: Reduce the rate of infant, neonatal, and post-neonatal mortality and low birthweight in children born in Shelby County.

Maternal and Child Health			
Goal	Objective	Key Indicators	Outcome Measure
Improve access to pre-natal care	• Ensure expectant mothers receive pre-natal care • Provide access to prenatal education and other support services • Expand access to supportive pregnancy services	• Pregnant women seen by their provider in the first trimester • Expectant moms participation in childbirth education classes	• Number of new OB-appointments seen within the first trimester • Number of ob.-appointments scheduled for each pregnant woman during her pregnancy • Number of participants in childbirth education classes • Number of participants completing childbirth education classes • Other supportive pregnancy services offered and attended
Lower the number of women who have low birthweight babies	• Increase the number of births of babies that weigh more than 2500 grams • Increase attendance at childbirth classes	• Attendance at childbirth classes which address proper nutrition, health, and pre-natal care	• The number of low birthweight babies • The number of attendees at childbirth classes • The number of consults to providers when needed

APPENDIX H. 2019 IMPLEMENTATION STRATEGY OUTCOMES

Regional One Health Implementation Plan 2019 - 2021

Community Health Need	**Goal/Initiative**	**N - New** **E - Existing Programs/ Initiatives** **P - Potential**	**Partners working on the issue in the County**	**Expected Evaluation of Impact to Community Health Need**	**2019 - 2021 Status/Results**
Access To Healthcare	Facilitate increased access to vulnerable patient populations in securing prescribed medications	**E:** Regional One Health S. Third Pharmacy **E:** Expansion of medication assistance program for vulnerable older adults **E:** One Health	• Regional One Health Foundation • S. Third Primary Care Clinic • Regional One Health Pharmacy	• Number of prescriptions written at S. Third Primary Care and filled at the Regional One Health Pharmacy • Number of patients 65 years of age and older enrolled in Medicare Part D receiving financial assistance with their prescription costs • Number of prescriptions filled by Regional One Health outpatient pharmacy for One Health enrollees • Number of Pharmaceutical Medication Assistance Program (PMAPs) applications completed	Regional One Health served a total of **5,394** patients in FY2019: 983 FY2020: 1,736 FY2021: 2,675 The outpatient pharmacy filled a total of **12,022** prescriptions for One Health enrollees: FY2019: 4,406 FY2020: 3,476 FY2021: 4,140 Patient Medication Assistance Program (PMAP) completed **918** total applications: FY2019: 311 FY2020: 357 FY2021: 250

Access To Healthcare	Assist patients in improving their health status by providing services which address social barriers to holistic health	**E:** One Health **E:** Adult Special Care Clinic	• Shelby County Social Service Agencies • Shelby County Community Foundations • Regional One Health Foundation • Government Agencies • Ryan White	• Number of patients served by One Health Program • Number of One Health enrollees connected with community agencies • Number of Adult Special Care patients receiving support with their utilities	Regional One Health's Center for Population Health's Complex Care Program (One Health) served a total of **508** patients from 2019-2021. The One Health program connected **670** enrollees with community agencies. Regional One Health continues to operate its Adult Special Care Center, and has maintained the Center's state designation as a Center of Excellence. The Center assisted **1,103** patients with utilities support and provided **3,049** patients with non-emergent transportation.

Access to Healthcare	Support patients of Regional One Health, with transportation challenges, who are in need of other non-emergent transportation, to and from medical appointments, and assist with addressing barriers to optimal health.	**E:** One Health Ride Health Pilot **E:** Adult Special Care transportation vouchers **P:** Explore non-emergent transportation solutions for patients receiving care in a Regional One Health primary care clinic	• Explore potential partnerships with local rideshare companies • Provide transportation vouchers to target patient populations	• Number of One Health enrollees using Ride Health transportation services ○ Number of trips provided ○ Average distance of trips ○ Number of bus or taxi vouchers distributed • Explore establishing partnerships to support non-emergent transportation to and from primary care appointments at Regional One Health primary care locations. ○ Reduction in patient no-show rates in primary care	The One Health program provided 1,614 enrollees with transportation services from 2019-2021. Number of trips provided: 5,888 Average distance: 6.92 miles Number of bus/taxi vouchers: 229

				• Number of times patient transportation following a primary care appointment is delayed and primary care appointments canceled or missed because of transportation issues • Number of patients provided assistance with non- emergent transportation through the Adult Special Care Clinic	
Access to Healthcare	Provide wrap around services to patients to assist with maintaining their health	**E:** Adult Special Care **E:** One Health Food Pantry **E:** One Health Housing **E:** One Health Screening for health benefits **E:** One Health Income **E:** One Health: Substance Use Disorder SUD	• Local grocery stores • Mental Health Providers • Shelby County Social Service Agencies • Cash Savers Vouchers for fresh fruits and vegetable • United Healthcare • Mid-South Foodbank • Regional One Health Foundation Board • Community Alliance for the Homeless	**Adult Special Care:** • Number of Patients receiving case management support services • Number of food vouchers/cards issued to Adult Special Care patients **One Health:** • Number of unique individuals served with food boxes • Number of vouchers issued • Number of patients screened for SNAP benefits	ASC provided **5,309** patients with case management support and **2,223** patients with food vouchers/cards. **1,667** individuals were provided with food boxes. **2,391** vouchers were issued. **508** patients were screened for SNAP benefits.

			• Door of Hope Promise • Mid -South Sober Living • Community Service Agency (CSA) • MIFA • QRS • Social Security Administration SOAR • Hospitality Hub Hope Works • Social Security Administration • Alliance Healthcare Services • Serenity House Mid-South sober living • First Step Recovery • CAAPS	• Number of homeless enrollees permanently housed • Number of One Health patients receiving temporary or transitional housing • Number of utility payments made • Number of patients linked to health care insurance • Number of patients screened and approved for Social Security Income • Number of patients assisted with job training • Number of patients linked to job opportunities • Number of patients with SUD referred for Medication Assisted Treatment or treatment for alcohol use disorder	**37** enrollees were provided with permanent housing and/or received temporary/transitional housing. **150** utility payments were made for enrollees (no yearly data available) **274** patients were linked to health care insurance. **274** patients were screened and/or approved for SSI. **82** patients assisted with job training. **113** patients were linked to job opportunities. **105** patients with SUD referred to Medication Assisted Treatment for alcohol use disorder.

Health Literacy	Educate the community regarding Healthy Living, with prioritized focus on nutrition	**E:** Community Health Fairs **E:** Regional One Health Community Health Day(s) **N:** Initiation of outpatient medical nutrition therapy service for diabetic patients **P:** Explore partnership to address food vulnerabilities, reducing obesity and promotions on healthy eating	• Regional One Health • Shelby County Health Department • American Heart Association • Regional One Health Spiritual Care Council • Mid-South Food Bank • The Outreach Program • Common Table Health Alliance • Metropolitan Inter-Faith Association	• Initiation of outpatient medical nutrition therapy service by December 31, 2019 • Number of Regional One Health patients served through the medical nutrition therapy service • Number of patients in Regional One Health primary care clinics receiving assistance with accessing quality foods through a Regional One Health established partnership. • Number of meals packaged and provided to Mid-South Food Bank • Number of lives touched through health fairs supported and sponsored by Regional One Health • Number of individuals served through the One Health food pantry and distributed vouchers	**33,721** meals provided to Mid-South Food Bank.* **4,058** individuals were served through food pantry or received vouchers. Due to the COVID pandemic, ROH did not sponsor any health fairs 2019-2021.

Health Literacy	Educate families regarding prenatal care, benefits of breastfeeding, how to care for a newborn, and parenting	**E:** Childbirth education; March of Dimes family support; Baby and Children Expos and Centering Pregnancy Program	• Regional One Perinatal Center • Regional One Maternal Fetal Medicine • Shelby County Health Department • March of Dimes • Regional One OB/GYN providers • Shelby County Schools • Hollywood Primary Care • Others to be determined	• Establishment of a second Centering Pregnancy location • Number of expectant mothers participating in the Center Pregnancy Support Classes • Number of expectant mothers enrolled in Regional One Health prenatal education and childbirth program • Percentage of mothers who are breastfeeding at discharge • Number of persons reached at community events with a specific focus on maternal and infant health • Number of infants receiving milk from the established Milk Depot	From 2019-2022, Regional One Health had a total of **761** participants enrolled in childbirth education program. Below is a breakdown: 2019: 259 2020: 268 2021: 235 In 2019, approximately **200** persons were reached through various community events. Due to the global pandemic in 2020 & 2021, no events were held or attended. The Newborn Center (NBC) saw 6% of their newborns discharged on breastmilk in 2019 and saw an increase to 21% in 2020 and 22% in 2021.

					The number of NICU infants who received donor milk: 2019: 68 2020: 77 2021: 62 The Well Baby Nursey (WBN) reported: Exclusive Breastfeeding: 14.50% (2019) 17% (2020) average of 16% (2021) Some breastfeeding: 56.50% (2019) 60% (2020) 56% (2021)
Mental Health	Regional One Health does not provide mental health services but is committed to assisting their patients with obtaining access to needed behavioral health services.	**E:** One Health Connect	• Regional One Health • Alliance Health • Cocaine Alcohol Awareness Program (CAAP) • Case Management Inc.	• Identification of community resources to assist mental health patients • Percentage of One Health patients with a behavioral health need who receive treatment	Percentage of patients with behavioral health needs who receive treatment: 2019 – 68% 2020 – 58% 2021 – 69%

			• Shelby County Mental Health Providers • Shelby County Social Service Agencies	• Number of patients/clients from Adult Special Care, primary care clinics and HVIP referred to behavioral health providers	ASC referred **443** for behavioral health providers.
Violence	Assist victims of violence who present to Regional One Health's Trauma Center to secure job placement, shelter, food, and other support services as needed	**E:** HVIP-Violence Intervention Program **E:** TBI-Brain Injury Program	• 901 BLOC • Crime Victim's and Rape Crisis Center • GED Programs • Local colleges and universities • NAMI - National Association for Mental Illness • Moms Demand Action • Memphis Police Department • Family Safety Center	• Percent of potential clients enrolled in the HVIP program • Active clients enrolled in HVIP • Number of active HVIP clients securing employment or completing educational training, annually	Regional One Health HVIP's program saw a total of **20%** potential clients. Currently, there are **17** clients enrolled in the HVIP program. There are a total of **75** active HVIP clients securing employment or completing annual educational training.

APPENDIX I. 2016 IMPLEMENTATION STRATEGY OUTCOMES

Regional One Health

Implementation Strategy Outcomes

Community Health Need	Objectives/Program Description(s)	Programs/ Initiatives*	Existing/Potential Partnerships	Expected Measures and/or Outcomes	2016 – 2019 Results
Access to Healthcare	Back To School health fair, providing screenings for students returning to school HVIP: violence intervention program Project Phoenix: patient through-put analysis Interview all self-pay patients to see if they meet certain criteria for state/federal programs Disability Vendor: collaborates with MedAssist to assist patients following catastrophic injuries to help patients get social security and disability MVA Vendor: follow auto accident patients with interviews and collect auto insurance information, they review patient to see if they qualify for any state/federal program	**E:** HVIP (provide bus vouchers and taxi service for appointments); MedAssist; MVA Vendor; Newborn and Presumptive TennCare eligibility enrollment; PFS Charity Program; PMAP (Patient Medication Assistance Program) **N:** Community Day at South Third; Project Phoenix; Disability Vendor; One Health	Riverview K8 School SCHD Lead Testing SNAP Dental Exams	Reduction in patient wait times at Project Phoenix Reduction in Shelby County uninsured rate Reduction in Level 1 Emergency Department visits	Regional One Health's Community Education Fair at S. Third provided health information, as well as eye exams/hearing tests/dental cleanings to approximately 300 individuals. Patient Medication Assistance Program (PMAP) has served 291 patients in FY 2019, equating $70,752.87 in medicines provided to patients. PFS (Patient Financial Services) Charity Program served 3,711 patients totaling in $217,012,148 Disability Vendor has assisted 385 patients

Child and Family Health	Various classes to address the childbirth process, nutrition of the baby and mother, breastfeeding process, and how to care for a newborn ▪ Early Prenatal Classes, Preparing for childbirth classes, Breastfeeding Classes, Nutrition/ Fit4Mom/ Yoga, Dynamic Dads, Newborn Care Classes	**E:** Childbirth Education; March of Dimes Family Support; Hollywood/March of Dimes Supportive Pregnancy Program; Meal Packing Events; Baby and Kids Expo	March of Dimes A Step Ahead Foundation Austin Milk Bank MidSouth Food Bank	Reduction in infant mortality Increase knowledge of prenatal education and infant safety Increase percentage of mothers breastfeeding at discharge	Regional One Health has offered 56 tours of the birth facility, as well as childbirth classes since the 2nd quarter of 2019. Meal Packing Events: Regional One Health has packaged 30,000 meals in partnership with MidSouth Food Bank for distribution to Memphians Milk Depot Donations ▪ 11 donors in 2018 ▪ Total ounces from donors = 6,742
Health Literacy	DSME: course aimed at educating patients with Diabetes in an effort to make them self-sufficient and able to properly care for themselves at home Health Fairs: offers health education materials to community partners, including Diabetes, heart health and breast health Trauma: outreach staff work with community partners to educate around injury prevention and safety TBI: concussion awareness and education of family members, as well as trains/teaches other clinicians how to work with TBI patients		Area high schools and colleges New Memphis LITE Memphis NAHSE (National Association for Health Service Executives) Merck: provides Equity of Care health education materials which are distributed	Improvement in self-management of Diabetes and patient compliance Reduction in visits to the Level 1 Emergency Department Decrease disparities within healthcare by increasing health education and awareness Increase access to	DSME: 289 patients educated 2,180 clients served (an average of 190 clients per quarter) 2,871 trauma-informed staff trained (an average of 258 per quarter)

	Community Engagement (job readiness) in partnership with organizations like NAHSE, engage with students to help prepare them for the workplace by trainings geared toward improving interviewing skills		throughout the community	healthcare through job readiness	
Sexually Transmitted Diseases	STI Counseling and condom distribution by kits containing male condoms, female condoms, dental dams and lubricant	**E:** Adult Special Care	Friends for Life A Step Ahead Foundation	76% of ASC patients are virally suppressed, performance measure is 80%	▪ 2017: 403 kits distributed ▪ 2018: 180 kits distributed ▪ 2019 (Jan-April): 56 kits distributed
Violence	HVIP: Violence Intervention Program - work with victims of violence who present to Regional One Health's Trauma Center ▪ Assists patients with job placement, shelter, food, and other services as needed TBI: Traumatic Brain Injury Program - works with individuals who have acquired a TBI ▪ Assists patients with support groups, and other services as needed	**E:** HVIP-Violence Intervention Program; TBI-Brain Injury Program; Intimate Partner Screening; Block Party for Peach (Frazier Community)	901 BLOC Crime Victim's and Rape Crisis Center GED Programs Local colleges and universities NAMI - National Association for Mental Illness Moms Demand Action Memphis Police Department	Reduction in repeat intentional injuries Reduction in Level 1 Emergency Department visits Decrease retaliation referrals to safe places Reduction in unemployment levels of HVIP and TBI patients Increase education levels of HVIP and TBI patients	HVIP staff has reviewed more than 700 victims of violence who presented to Regional One Health in 2019. ▪ 360 of those individuals have been screened and were presented with the opportunity to receive assistance from a trained-informed staff member ▪ 17 clients enrolled during FY 2019

			Family Safety Center		

* N=New, E=Existing Programs/ Initiatives, P=Potential

APPENDIX J. 2013 IMPLEMENTATION STRATEGY OUTCOMES

Regional One Health's 2013 – 2016 Community Health Needs Assessment

Prioritized Community Health Need	Objectives/Program Description(s)	Programs/ Initiatives*	Existing/Potential Partnerships	Expected Measures and/or Outcome	2013 - 2016 Status/Results
Teen Pregnancy	Community based program providing education regarding early prenatal care for pregnant teens and emphasizing staying in school. The program also educates adolescents on pregnancy prevention.	**E:** Sunrise Program	University of Tennessee Health Sciences Center (UTHSC) State of Tennessee	Reduction in teen pregnancy rate	Regional One Health is continuing to provide support and education to young mothers through the Sunrise Program. The teenage pregnancy rate is declining. This decline is attributed to a number of factors and initiatives throughout the community. The Sunrise Program is one of several initiatives. Approximately 180 young moms are served each year.
Infant Mortality	The focus of the Regional Perinatal Center is to improve birth outcomes and decrease infant mortality. The center serves numerous needs in its work to reduce infant mortality and improve birth outcomes, including education and	E: Regional Perinatal Center; Sunrise Program; NICU Community Outreach;	Shelby County Health Department Healthy Memphis Common Table***	Reduction in infant mortality rates by reducing the number of	Regional One Health is continuing to partner with several organizations and agencies to support healthy deliveries and reduce the community's Infant Mortality

	training to healthcare professionals throughout the region. Centering Pregnancy Program provides prenatal care and education in a group setting focused on women with previous preterm issues, demographic and social risk factors. NICU Community Outreach Program provides parenting classes, childbirth classes and prenatal education classes both at Regional Medical Center and in the community. Lactation Peer Counselors are volunteers who meet with new moms to help them understand breastfeeding alternatives. Milk Depot: in partnership with Mothers Milk Bank, Regional One Health has opened a repository where nursing mothers can donate milk. Worth the Wait Program, through the March of Dimes, focuses on the elimination of elective deliveries before 39 weeks gestation through patient and provider education. Safe to Sleep Program focuses on reducing the risk for SIDS and other sleep-related deaths, such as suffocation.	Worth the Wait; Safe to Sleep Program Lactation Peer Counselors N: Milk Depot	UTHSC Tennessee Department of Health March of Dimes Mother's Milk Bank	births before 39 weeks gestation Reduction in the number of sleep related deaths by focusing on prenatal education	Rate (IMR). Regional One Health continues to maintain a strong partnership with the March of Dimes by providing both human and financial support and partnering on initiatives to address infant mortality, pre-term deliveries and other pregnancy related matters. The IMR is Shelby County has declined significantly during the last decade, and while it is still higher that the national rate of 6.7, progress has been and is still being made. • In 2015, 75% of our NICU families received supportive educational materials • 615 family members were educated through our Family Support Program during our 101 Core Curriculum education sessions • 477 families and babies and 48 staff members logged more than 260 skin to skin holding hours during our 2015 Kangaroo-a-Thon, a program designed to promote and educate on the practice of skin- to-skin-holding

					• Annually 3,700 new moms receive education through the Safe to Sleep Program • More than 100 expectant mothers participate in the Worth the Wait program, annually
HIV/AIDS	Regional Medical Center's Adult Special Care Center provides primary and specialty care; mental health services; medical case management and pharmacy services for HIV/AIDs patients.	**E:** Ryan White Grant funding; Tennessee Center of Excellence; 24-hour HIV screenings in the ED; Wrap Around Services; and Transportation services **N:** Coordinated Public Awareness Campaign	Ryan White Planning Council Tennessee Department of Health Shelby County Health Department	Reduction in HIV/AIDs death rate Improvements in chronic disease management	Regional One Health continues to operate its Adult Special Care Center, and has maintained the Center's state designation as a Center of Excellence. • From 2010 – 2014, the HIV rate in Shelby County declined by 5 percentage points. • During 2015 – 2016, Regional One Health partnered with other organizations to launch coordinated community-wide HIV/AIDs awareness campaigns. The 2016 campaign targeted HIV patients and encouraged better compliance with treatment plans. • Approximately 10,000 medical office visits are provided, annually. • More than 15,000 wrap around visits are provided each year.

Diabetes	Diabetes education program is designed to provide patients and families with educational and counseling on nutrition, exercise, wound care, foot care and self-management skills – Closing the Gap Regional One Health's Pharmacy Residency Training Program includes a seven month rotation in the accredited Diabetes Education Program through which pharmacists and pharmacy students teach patients and community resident how to manage their disease through behavior changes and medication management. Community Outreach staff works as part of the Mobilizing for Action through Planning and Partnership (MAPP) to develop strategic collaborative community programs aimed at creating a healthier community.	**E:** Outpatient Education; Pharm D Program; M Power Program; and Closing the Gap (Patient Centered-Medical Home)	Healthy Memphis Common Table*** Healthy Shelby UTHSC United Healthcare Blue Cross/Blue Shield of Tennessee	Decrease in diabetes prevalence and mortality	Through the Closing the Gap Program more than 6,500 patients are served, annually. • During 2014 -2016, Regional One Health provided approximately 1,800 glucose and BP screenings in the community • Participated in more than 78 community health fairs from 2014 – 2016
Breast Cancer	Take Care/Be Aware Program – Breast Care Clinic provides clinical and radiological imaging services (digital mammography) for prevention and early detection of breast cancer. Community outreach staff participates with workgroups dedicated to creating community programs targeting continuing education and awareness of breast cancer.	**E:** Breast Screenings	American Cancer Society Susan G. Komen Foundation	Reduction in breast cancer deaths Reduction in breast cancer incidence Increase in breast cancer early detection	Regional One Health has continued its partnerships with the Susan G. Komen Foundation, increasing its employees' involvement with efforts to support the mission and work of the foundation. • Regional One Health has continued to provide free breast cancer screening to targeted populations. • For the period 2-13 –2015, approximately 3,677

					individuals were screened through the Take Care/Be Aware Program.
Colorectal Cancer	Gastroenterology Clinic provides clinical education and lower G.I. screenings for prevention and early colorectal cancer detection.	**E:** Screenings offered in accordance with U.S. Preventative Task Force	Tennessee Cancer Coalition Tennessee Department of Health	--	N/A
Adult Obesity/Overweight	Healthy Church Challenge encourages healthy eating, exercise and weight-loss through a city-wide campaign with churches and providers. *Explore opportunities to partner with and support the efforts of Memphis Mobile Market to provide a sustainable source of healthy foods in Memphis "food deserts". Spiritual Health and Wellness Committee: Regional One Health staff works with a committee of spiritual leaders to develop programs which educate their members with regard to health concerns. Community Outreach staff participate in community health fairs to offer health screenings, and provide health education.	**E:** Healthy Church Challenge Partnership. **P:** Memphis Mobile Market N: Regional One Health Spiritual health and Wellness Council	Healthy Memphis Common Table UTHSC Medical Students Association Blue Cross/Blue Shield – Tennessee Local Churches	Reduction in rate of adult obesity Increase adult physical activity Decrease in prevalence of heart disease, stroke and diabetes Increased access to better food choices Improved health and wellness literacy	In 2014, Regional One Health partnered with Blue Cross/Blue Shield and several local churches on the Healthy Church Challenge. The intent of the program was to provide health education materials and challenge congregations to live healthier lives. The program also featured a competition among the participating churches. Regional One Health provided the pre- assessment and post- challenge results for the congregations of the participating churches. More than 300 lives were touched through these efforts. During the past 3 years, Regional One Health and the Spiritual Health and Wellness Ministers Council has sponsored to community wide Spiritual Health and Wellness Conference involving faith

					community from throughout the region. More than 100 people from the various faith communities have attended the conferences.
Injury Prevention	Fire Safety and Burn Prevention programming focused on educating age-appropriate audiences on preventing residential, motor vehicle, electrical and chemical fires and burns. Falls Prevention programming focuses on educating seniors and their caregivers on risks and safety measures to reduce the number of falls and falls-related injuries. Inhalation Injuries programming which provides education to firefighters, emergency medical personnel and non-burn emergency department staff regarding chemical inhalations. Playground Safety Program provides education regarding injuries associated with climbing playground equipment. SOAR Peer Volunteer/ Counselor offers peer volunteer emotional support to burn patients.	**N:** SOAR (Currently training and orienting volunteers.)	Tennessee Department of Health City of Memphis Schools Shelby County Schools**	--	Regional One Health continues to support and host monthly Memphis Area Brain Injury Support Group. Meetings are held monthly, and the average number of participants per month is 20. Regional One Health has held educational seminars on Seat Belt Safety and Staying Health and Independent (SHAI). SHAI sessions are held at senior living facilities through the community.
Education	Regional One Health uses its resources and expertise to help improve educational status and health literacy in the community. Initiatives are facilitated through the Speaker's Bureau, community outreach programs, and volunteer services. Regional One Health works with local high schools in helping rising juniors and seniors in preparing for	**E:** Partnership with several schools in the community; Teen Volunteer Program and Speaker Bureau	Leadership Memphis Memphis Leadership Academy*** University of Memphis; Rhodes,	Increased literacy levels Increased High School Graduation rates	Regional One Health has maintained it's committed to dedicating both financial and human resources to improving education. • During the past three years, the organization has started a Speaker's Bureau that serves as health education

	life post school by providing exposure to various health careers, post-secondary educational opportunities and skills readiness. Regional One Health will explore opportunities with secondary and post-secondary institutions of learning to provide health education and awareness of health careers, with an identified education partner.		Lemoyne-Owen College City of Memphis/Shelby County Schools Science, Technology and Engineering Charter Schools	Post-Secondary education preparation Health careers on-the-job exposure/ experience	resource for various groups, including schools. Topics bureau representatives range from health careers preparation to healthy living. More than 20 employees volunteer for the Speaker Bureau, and the volunteers have been deployed to more than 10 speaking engagements during the past 2 years. • Regional One Health has also maintained its existing relationship with two local previously affiliated schools and in 2016 began a new relationship with a K-8 school, placing more than 100 volunteers in the schools to mentor, provide teacher support and tutor. • Regional One Health has continued to invest in and grow its Teen Volunteer program. More than 60 students have participated in the program within the last three years.
Violent Crime/Homicide/Firearm-related Deaths	Hospital Based Violence Intervention, Rx for Change, was a new pilot partnership with THE MED*** Foundation and several community entities. It was established for the purpose of reducing gang violence among youth and young adults. Violence	**E:** HBVIP	Regional One Health Foundation*** City of Memphis	Reduction in the violent crime rates in youths and young adults	The HBVIP has been operational for three years. After the 1st year pilot, Regional One Health decided to maintain the program. The program has been expanded to

	Intervention Specialists that work in conjunction with case management, security, community outreach, trauma and emergency services and pastoral care to identify and implement strategies for working with youth and young adults affected by handgun violence or violent crimes. The intervention specialists serve as liaisons between young crime victims and community, social and educational resources to prevent re-injury rates.		Memphis Fast Forward Community Based Gang & Violence Prevention Organizations	Reduction in violence in the home Reduction in gang and drug activity Reduction in re- injury return rates at Regional One Health	add additional staff, as well in 2015 Blue Cross/Blue Shield award the organization a grant to support the program. Today, HBVIP is funded 100% by operational dollars. The program has been designated as a member of National Network of Hospital Violence Intervention programs. Since the creation of the program, more than 100 individuals have been served. Regional One Health has touched more than 300 lives through hosting Bully, Conflict Resolution and Gun Violence & Police Interaction community educational programs. Through the organization support and participation of the National Youth Violence Prevention Rally and Walk, more than 100 lives were touched.
Lung Health	Explore partnering with the American Lung Association on initiatives to improve lung health.	**E:** Regional One Health funds FFS program. Provides materials, quit smoking tools, and staffing to facilitate program	American Lung Association	Decrease exposure to second hand smoke, poor air quality and other contributing factors to poor lung health	Regional One Health has partnered with the Regional Charter of the American Lung Association, to sponsor Freedom from Smoking (FFS) Program. The program is offered to community members and employees, and is designed to help individuals quit smoking.

				through education and awareness	

* N=New, E=Existing Programs/ Initiatives, P=Potential

(**) Memphis City and Shelby County School Districts merged creating the Shelby County Schools.

(***) Name change of organization during time period of 2013 to 2016.

(--) No data available.