2019

Community Health Needs Assessment

Rutherford County, Tennessee

Saint Thomas Rutherford Hospital

Saint Thomas Health

Ascension

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Executive Summary

Saint Thomas Health and its member hospitals conducted Community Health Needs Assessments (CHNAs) of the communities it serves during the 2019 fiscal year. These assessments identify unmet health needs of the community and provide reference for each of the hospital's response to the needs (implementation strategy), aligning Saint Thomas Health's initiatives, programs and activities to improve the health of communities served.

Saint Thomas Health's commitment to Health Care That Leaves No One Behind goes well beyond delivering the highest quality care and medicine. It's a commitment to improving health both inside and outside hospital walls and within the community with special attention to the poor and vulnerable. This means working closely with each community we serve, partnering with residents, businesses, school systems, local government and other health and human service providers, to identify and address key local needs that affect the health of individuals and communities. Saint Thomas Health's Mission, Vision and Values are the key factors influencing their approach and commitment to addressing community health needs through community benefit activities.

Community Served

The community served for purposes of this needs assessment is defined as Rutherford County, Tennessee. This geographic region is considered to fairly represent the community served by the partners, and includes the poor, vulnerable and underserved within the community.

In defining the community served for the CHNA, the partnering organizations chose to select a geographic county/region to focus the assessment. Rutherford County primary service area for Saint Thomas Rutherford Hospital with 64.4% of inpatient cases and 75.7% of ED Cases originating in Rutherford County.

Cases Originating in Rutherford County			
Hospital	**Inpatient Cases**	**Outpatient Cases**	**ED Visits**
Saint Thomas Rutherford	64.4%	72.1%	75.7%

Many facts and circumstances were considered in defining the community, including:

- region served by collaborating entities;
- areas of populations that included the underserved, low-income and minority groups;
- potential for collaboration/partnering with other organizations;
- availability of health information for the area selected; and
- location of collaborating entities.

Objectives

The objectives of the CHNA and subsequent hospital specific implementation strategies are:

1. Provide an unbiased comprehensive assessment of Rutherford's County's health needs and assets;

2. Use the CHNA to collectively identify priority health needs for Saint Thomas Rutherford Hospital, Rutherford County Health Department's, Rutherford County Wellness Council, and Vanderbilt University Medical Center community benefit and community health improvement activities;

3. Provide an objective assessment of the community, upon which the collaborating entities may continue partnering to support and improve health within the county; and

4. Fulfill Internal Revenue Service regulations related to 501(r)(3) non-profit hospital status for federal income taxes.

Summary of data and community input

The process included a systematic review of existing reports from other agencies, a review of secondary health data, interviews of community representatives and leaders, online community survey, listening sessions and a community summit. The collaborating team received input from public health experts, including the local public health department.

Secondary Data Summary – Key Findings

Demographic/Socioeconomic

- County is experiencing rapid growth
- Over 90% of residents have high school education
- 10% of residents live in poverty; 15.7% of children live in poverty (40% of these children below 200% Federal Poverty Line)
- Poverty and education vary by geography and race

Social Determinants

- Average home values have increased $57,000 in 3 years
- 175-275 households have no vehicle access
- Roughly 29% of low-income population has limited food access
- Violent crime rate is 436.8 per 100,000 population, compared to the nation at 379 per 100,000 population
- Senior population projected to increase 125%

Access to Care

- 13.4% of the overall population in Rutherford County are uninsured, compared to the nation at 14.8%

Morbidity/Mortality

- Cancer and heart disease remain the leading causes of death with 45% of all deaths attributed to these diseases

Birth Outcomes

- Infant mortality has increased in Rutherford County; in 2015 the rate was 4.8 deaths per 1,000 live births and in 2018 the rate was 6.3 deaths per 1,000 live births
- Large racial disparities continue to exist for all birth outcomes
- Teen pregnancy and birth rates continue to decline

Behavioral Risk Factors

- Rutherford's opioid prescribing rates are 82.2 per 100 persons, compared to the nation at 58.7 per 100 persons
- Rutherford smoking rate (20%) remains higher than HP2020 target (12%)
- 33% of Rutherford adults are obese
- High School Youths
  - Continue to use tobacco products; increase in smokeless tobacco
  - 40% of students are overweight or obese

Mental and Emotional Health

- Rutherford's adults average 4.2 poor mental health days each month, compared to the nation's 3.7 poor mental health days
- For every 1,270 persons there is 1 mental health provider, compared to the national rate of 520 persons to 1 mental health provider
- 13.4% of adults do not feel like they have adequate emotional support

Primary Data Summary

Listening Sessions– 4 sessions held, 60 participants total

Top 5 identified Themes and Concerns:

- Housing and homelessness
- Impacts of population growth
- Resource accessibility & awareness
- Community cohesion/networks
- Racism/stigma

Interviews of Community Leaders and Representatives – 26 interviews conducted

Community Assets**:**

- Community Engagement
- Population Growth
- Education System

Community Concerns:

- Housing not meeting needs
- Growth challenges
- Equity

Health/Health Care Concerns:

- Affordable Care
- Mental Health/Addiction
- Lifestyle/Behaviors

Challenges/Barriers:

- Lack of resources
- Need for increased collaboration
- Existing culture of heath – hard to change

"Magic Wand" (If there was one health improvement action you could make right now):

- Affordable living
- Built environment
- Overall equity

Common Themes:

- Need for increased coordination, collaboration, and communication

Online Community Survey – 1,027 total respondents

Survey participation included every zip code within Rutherford County. Demographic for survey participants:

- 22% aged 35 or less, 58% are 36-55, 20% 56+
- 77% Female
- 84% Employed
- 49% household income <$75,000
- 77% College Grad or higher
- 16% live in household with 4 or more people
- 15% are veterans or live with a veteran

Systematic Review

5 existing reports from other agencies during 2015-2017 focusing on low-income and vulnerable populations were reviewed and summarized. Recurring themes:

- Housing/Homelessness
- Social Determinants of Health (Poverty, Lacking Education, Access to Parks and Recreational Centers, Outdoor Activities, Health disparities, Violence/Crime) Wellness and Disease Prevention (Obesity, Heart Disease, Physical Inactivity, Diabetes Management)

Identified Community Health Needs

Saint Thomas Health, Saint Thomas Rutherford Hospital, Vanderbilt University Medical Center and Rutherford County Health Department presented the results of the data review and community input on December 12th, 2018 at Patterson Park Community Center in Rutherford County. The meeting attendees represented a broad spectrum of the community, including those focusing on the underserved population. They were asked to provide collective input into the needs of the community. Summit hosts from Saint Thomas Health, Saint Thomas Rutherford Hospital, Vanderbilt University Medical Center and Rutherford County Health Department also consulted the Rutherford County Wellness Council for feedback regarding final interpretation of these results.

The prioritized unmet health needs identified for Rutherford County, Tennessee:

Mental Health/Substance Abuse

Access to Basic Needs

Concentration on Housing

Enhance Resources & Services

Nutrition and Obesity

The CHNA partners are grateful to those who have participated and partnered with us in this assessment. Saint Thomas Rutherford Hospital and Saint Thomas Health will use the CHNA to guide in the development of an Implementation Strategy. Both the CHNA and the associated Implementation Strategy will be approved by the leadership of both Saint Thomas Rutherford Hospital and Saint Thomas Health. Additionally, the CHNA and Implementation Strategy will be made available to the public via a PDF on the website and welcome public comment. There were no comments related to the 2016 CHNA report and Implementation Plan.

Introduction

This Community Health Needs Assessment (CHNA) publication serves as the documented CHNA for Rutherford County Health Department, Rutherford County Wellness Council, Saint Thomas Rutherford Hospital, Saint Thomas Health and Vanderbilt University Medical Center for fiscal year 2019 for the community of Rutherford County, Tennessee.

With the passing of the Affordable Care Act in 2010, additional requirements for non-profit hospitals were implemented through the Internal Revenue Service. One of the requirements is for non-profit hospitals to conduct community health needs assessments.[1] The assessments, performed at least every three years, should include input from the community and influence the hospital's implementation strategy for community benefit. Additionally, CHNAs and corresponding implementation plans are posted for the public and welcome comments from community members. There were no comments submitted regarding the 2016 Saint Thomas CHNA report.

In 2016, Rutherford County Health Department, Rutherford County Wellness Council, Saint Thomas Rutherford Hospital, Saint Thomas Health, and Vanderbilt University Medical Center worked together to assess the current health needs of Rutherford County, Tennessee. This partnership has continued for the 2019 Community Health Needs Assessment. This updated assessment of unmet health needs will provide a basis for addressing the health needs of the county and act as a reference for each of the partnering organizations community health improvement plan/implementation strategy to ensure alignment with the needs of the community.

Rutherford County Collaborations

Saint Thomas Rutherford Hospital, Saint Thomas Health, Vanderbilt University Medical Center, Rutherford County Health Department, Rutherford County Wellness Council and the Circle of Engagement collaborated on components of the planning and data collection process including interviews, listening sessions, and community surveys, secondary data collection, and community summits for Rutherford County.

[1] Internal Revenue Service (2019) New Requirements for 501(c)(3) Hospitals Under the Affordable Care Act. Retrieved from: https://www.irs.gov/charities-non-profits/charitable-organizations/requirements-for-501c3-hospitals-under-the-affordable-care-act-section-501r

Description of Partners

- **Saint Thomas Rutherford Hospital and Saint Thomas Health (Ascension)**

  Saint Thomas Rutherford Hospital, established in 1927, is a 286-bed hospital located in Murfreesboro, Tennessee. It provides emergency services and comprehensive inpatient and outpatient care including orthopedics, surgical oncology, and other medical and surgical specialties.

  Saint Thomas Health is Middle Tennessee's faith-based, not-for-profit health care system united healing community. Saint Thomas Health is focused on transforming the healthcare experience and helping people live healthier lives, with special attention to the poor and vulnerable. In Middle Tennessee the system includes nine hospitals: Saint Thomas Midtown Hospital, Saint Thomas West Hospital, and Saint Thomas Hospital for Specialty Surgery in Nashville; Saint Thomas Rutherford Hospital in Murfreesboro; Saint Thomas Hickman Hospital in Centerville; Saint Thomas DeKalb Hospital in Smithville; Saint Thomas Highlands Hospital in Sparta; Saint Thomas River Park Hospital in McMinnville; and Saint Thomas Stones River Hospital in Woodbury. A comprehensive network of affiliated joint ventures, medical practices, clinics and rehabilitation facilities complements the hospital services. Saint Thomas Health is a member of Ascension's ministry.

  Ascension (www.ascension.org) is a faith-based healthcare organization dedicated to transformation through innovation across the continuum of care. Ascension is committed to delivering compassionate, personalized care to all, with special attention to persons living in poverty and those most vulnerable. In FY2018, Ascension provided nearly $2 billion in care of persons living in poverty and other community benefit programs. Ascension includes approximately 156,000 associates and 34,000 aligned providers. Ascension's Healthcare Division operates more than 2,600 sites of care – including 151 hospitals and more than 50 senior living facilities – in 21 states and the District of Columbia, while its Solutions Division provides a variety of services and solutions including physician practice management, venture capital investing, investment management, biomedical engineering, facilities management, clinical care management, information services, risk management, and contracting through Ascension's own group purchasing organization.

  Saint Thomas Health is committed to providing care to the communities it serves, with attention to the poor and vulnerable. Saint Thomas Health's mission provides a solid foundation and guidance for its work as a caring ministry of healing, including its commitment to community service and to provide access to quality healthcare for all. The Saint Thomas Mission, Vision and Values are the key factors influencing their approach and commitment to addressing community health needs through community benefit activity.

Mission

Rooted in the loving ministry of Jesus as healer, we commit ourselves to serving all persons with special attention to those who are poor and vulnerable. Our Catholic health ministry is dedicated to spiritually centered, holistic care, which sustains and improves the health of individuals and communities. We are advocates for a compassionate and just society through our actions and our words.

Vision

As an integrated ministry, we will help people lead healthier lives, transforming the healthcare experience through trusted personal relationships and holistic, reverent care.

Values

We are called to:

- Service of the Poor - Generosity of spirit, especially for persons most in need
- Reverence - Respect and compassion for the dignity and diversity of life
- Integrity - Inspiring trust through personal leadership
- Wisdom - Integrating excellence and stewardship
- Creativity - Courageous innovation
- Dedication - Affirming the hope and joy of our ministry

- **Rutherford County Health Department**

The Rutherford County Health Department is one of the largest rural local health departments out of the ninety-five (95) rural and metropolitan counties operating under the Tennessee Department of Health. The mission of the Tennessee Department of Health is to protect, promote and improve the health and prosperity of people in Tennessee. Its values are centered on sharing integrity, excellence, compassion, teamwork, servant leadership and mutual respect amongst its customers and staff.

The Rutherford County Health Department was established in 1923 in Murfreesboro, Tennessee as a single facility where the historic location still stands today. To date, it has expanded to two facilities located in Murfreesboro and Smyrna Cities, which serve the entire Rutherford county population. Together, the two facilities offer thirty-seven (37) examination rooms, five (5) community education rooms, two (2) demonstration kitchens, two (2) lactation rooms, and a two-chair dental clinic operatory that provides comprehensive oral health services. The Rutherford County Health Department provides an array of public health services including:

- communicable disease prevention and treatment

    - surveillance, prevention and treatment for influenza; tuberculosis; food-borne disease; sexually transmitted disease and HIV/AIDS

- health promotion, education and resource intervention
    - Women, infants and children (WIC); breastfeeding; and social service support for new mothers, children with chronic conditions and special needs, education for healthy populations and persons living with chronic diseases, focused on population health through Primary Prevention Initiatives.

- health screening
    - Breast, cervical, and prostate cancer screening; referrals for imaging services, Well Child exams as well as many preventive services and health screenings.

- patient-centered medical home for the uninsured and underserved
    - immunizations; primary care; family planning services and pharmacy assistance

- vital records and statistics
    - birth and death certificates; paternity acknowledgement; voter registration; TENNcare presumption; epidemiology

The Murfreesboro facility spans approximately 35,000 square feet. It operates with seventy employees that annually provide 38,000 patient encounters. The Smyrna facility was expanded during 2012 to approximately 10,000 square feet to support the operations of eleven employees who annually serve 14,000 patient encounters.

- **Vanderbilt University Medical Center**

In Rutherford County, Saint Thomas partnered on the CHNA with Vanderbilt University Medical Center (VUMC), another local non-profit hospital system. Vanderbilt University Medical Center Vanderbilt University Medical Center (VUMC) is an academic not-for-profit health care system in Middle Tennessee.

The regional system includes four (4) hospitals all located in Nashville, TN: Vanderbilt Adult Hospital; Monroe Carell Jr. Children's Hospital at Vanderbilt; Vanderbilt Psychiatric Hospital; and Vanderbilt Stallworth Rehabilitation Hospital. A comprehensive network of clinics and medical services complement the hospital services.

- Vanderbilt Adult Hospital is the region's only Level 1 Trauma Center and Burn Center. It provides emergency room services and comprehensive inpatient and outpatient care, including transplantation and oncology services.
- Monroe Carell Jr. Children's Hospital at Vanderbilt is the region's only level 1 pediatric trauma unit. It is a teaching and research facility and provides comprehensive inpatient and outpatient care including neonatal services.
- Vanderbilt Psychiatric Hospital provides an age-appropriate, restorative environment for mental health care. In addition to adult care, the Vanderbilt Psychiatric Hospital is the only inpatient mental health provider for young children in Middle Tennessee and offers highly specialized services for children and teens.
- Vanderbilt Stallworth Rehabilitation Hospital, established in 1993, is an 80-bed inpatient rehabilitation hospital that offers comprehensive inpatient rehabilitation services designed to return patients to leading active and independent lives.

- **Rutherford County Wellness Council**

The council is an independent advisory organization whose purpose is to improve the physical, mental, emotional, and social health of Rutherford County. Current areas of focus include active living neighborhood, healthy children, workplace wellness, and aging well. The Council consists of members who live in and/or serve the health of the county. Members represent a broad interest of the community, including those that are underserved, vulnerable, and/or impacted by poverty. Council meetings are open to the public.

- **Circle of Engagement**

The Circle of Engagement (COE) was comprised of a group of leaders in Rutherford County that have a strong impact in the community. The COE provided guidance to the core planning team throughout the design process, data collection, and needs prioritization for the 2019 Community Health Needs Assessment in Rutherford County. The COE met every other month throughout the Needs Assessment process, and this group also aided in community mobilization to help drive participation and build relationships. VUMC collaborated with the Rutherford County Health Department and Saint Thomas Health on the COE. The COE was also comprised of community partners from Matthew Walker CHC, MTSU, United Way, Interfaith Dental Clinic, Primary Care and Hope Clinic, Prevention Coalition for Success, Veterans Affairs, and Coordinated School Health. A list of individual COE community members can be seen in the table below.

Methodology

In Rutherford County, Saint Thomas collaborated with Vanderbilt University Medical Center (VUMC) and the Rutherford County Health Department to collect data for the CHNA. The information gathered in Rutherford County consisted of a systematic review of existing reports, a comprehensive review of secondary data, and primary data. Primary data were collected through a variety of sources including interviews, community listening sessions, and an online community survey. The information and data were then presented at the Community Summit in Rutherford County on December 11th, 2018 at Patterson Park with a special attention to underserved, low-income, and minority populations. Community members at the Summit used this data to prioritize four health needs in their county.

Systematic Review

A systematic review was conducted to examine existing reports relevant to community health and healthcare in Rutherford. These existing reports were summarized using health equity as a framework. Five existing reports from 2015-2017 were reviewed. The target geography and populations were identified for each report, and the health topics discussed were summarized. Information was categorized into "health equity buckets" utilizing best practices and reoccurring themes were determined.

Secondary Data Analysis

A comprehensive secondary data review was conducted using publicly available data. Indicators included in the review were selected by Saint Thomas Rutherford Hospital, Saint Thomas Health, Vanderbilt University Medical Center and Rutherford County Health Department. Recommendations from the Centers for Disease Control and Prevention (CDC) and the Catholic Health Association were also considered. The requirements of the Internal Revenue Service (IRS) were reviewed and feedback from the Circle of Engagement was included. The identified indicators included demographics and socioeconomic status, social determinants of health, access to care, and health status. Health status referred to morbidity and mortality, birth outcomes, behavioral risk factors, and mental and social health.

Primary Data Analysis

Listening Sessions

In Rutherford County, 4 listening sessions were held with an overall total of 60 participants. Saint Thomas Health, Saint Thomas Rutherford Hospital and Vanderbilt University Medical Center collaborated with the Rutherford County Health Department and Circle of Engagement on recruitment for the listening sessions. Listening sessions were held at Journey Home, 2 at First Baptist Church, and a Spanish-speaking session at the Rutherford County Health Department. The facilitators used a template

(**Appendix C**) to guide topics including community assets, issues and concerns, barriers to addressing issues, and priorities**.** A short survey was distributed at the beginning of each session to obtain demographic information about the participants. Information collected at the listening sessions was then entered into the electronic database called REDCap, and thematic analysis was conducted using a team of four reviewers represented by Saint Thomas Health, Vanderbilt University Medical Center and graduate students from Vanderbilt University and Middle Tennessee State University.

Community Interviews

Interviews were conducted with 26 key stakeholders, community representatives, and leaders. These individuals represented a range of sectors including public health, government/ public sector, health care, education, faith community, private non-profits, academia, and business. The focus of these interviews was on the broad interests of the community and on serving low-income, minority, or underserved populations. Interviews were conducted in pairs with an interviewer and were recorded. The interview protocol included 5 open-ended questions found in **Appendix B**. The questions specifically asked about assets, community concerns, health and health care, and barriers and challenges. The final question was, "if you had a magic wand, what top initiatives would you implement in your community in the next three years?" Interview data was then entered into the electronic database REDCap, and thematic analysis was conducted using teams of four.

Online Community Survey

The online community survey (English and Spanish) was an electronic 63-item of open and closed ended questions, **Appendix D**. The survey was distributed by the health system networks, community networks, and schools. 1,027 responses were fielded from the community survey with 979 respondents living in Rutherford County. Many questions were adapted from the Behavioral Risk Factor Surveillance System (BRFSS) and other validated sources. The closed-ended question included topics of demographics, self-rated health status, children's health and resource availability, well-being, housing, transportation, healthy food, domestic violence, and substance abuse. Open-ended questions focused on health issues for children, issues related to health care access and insurance, and characteristics of a healthy community.

Community Health Summit

The results of the systematic review, secondary data, listening sessions, online community survey and interviews with community leaders were presented, in collaboration with Saint Thomas Rutherford Hospital, Saint Thomas Health, Vanderbilt University Medical Center and Rutherford County Health Department to the community on December 11th, 2018 at Patterson Park Community Center. The 47 meeting attendees provided collective input into the needs of the community. More information regarding the Rutherford Health Summit can be found in the Primary data section of this report.

Special attention to vulnerable populations

All interviews, surveys, secondary data analysis, and community review of findings were conducted with the goal of obtaining an assessment of health needs and assets that not only represent the broad interests of Rutherford County, Tennessee but also pay special attention to the underserved, low-income and minority and vulnerable populations.

Limitations of the CHNA

The objective of the CHNA was to provide a comprehensive assessment of the health needs of Rutherford County. However, assessment limitations are acknowledged by the partners and collaborators who conducted in this CHNA.

Secondary data limitations: The assessment took into consideration many aspects affecting health, including the social determinants of health: however, not all health process and outcome measures available through secondary health data were reviewed due to the broad focus of the assessment. In some cases, comparable benchmarking was not available due to timeframe, and there were measurement definition differences between data sources.

Interview limitations/Listening Sessions: Every effort was made to include representation from all sectors of the community.

Online community survey limitations: By design, the site was created to obtain health input from members of the community who represent underserved, minority and/or vulnerable populations. Majority (84%) were gainfully employed with an average income of $75,000 a year, therefore, the participants of the community survey do not represent the most vulnerable populations. The assessment was designed to provide a prioritized list of health needs but not to provide an in-depth understanding of barriers to health for each identified need nor specific interventions to address the identified health needs.

Evaluation of Actions Taken to Address Needs Since the 2016 CHNA

A summary from the implementation strategies developed following the 2016 CHNA report are included in **Appendix G**.

Systematic Review

Introduction

This systematic review is a summary of health and health-related studies that provide information, data, and common themes presented in various reports published in Rutherford County, TN. The purpose of the review is to examine existing data relevant to community health and identify strengths, assets, and areas of improvement regarding the health and healthcare in the community.

The reports included in the Rutherford County review included the Community Health Improvement Plan for 2016-19, the Consolidated Plan 2015-20 and its corresponding Action Plan for 2017-18, Murfreesboro 2035, A Strategic Framework for Ending Involuntary Homelessness in Rutherford County, Drive your County to the Top Ten, and Rutherford County Health Watch.

This review uses best practices related to health equity outcomes to ensure that the populations and communities at higher risk for adverse health outcomes are included in this review process. Some of the major health equity "buckets" that were considered in the various reports include: economic security and financial resources, livelihood security and employment opportunity, adequate, affordable and safe housing, environmental quality, and availability and utilization of medical care.

Themes

Rutherford County is one of the most populous counties in Tennessee and encompasses the City of Murfreesboro, as well as other small cities, towns, and unincorporated communities. Rutherford County is less than 30 miles south of Davidson County and the metropolitan Nashville area. Due to this, Murfreesboro and all of Rutherford County is continuing to grow in population and becoming a major hub for economic and social growth. However, with these changes and opportunities, come challenges and obstacles that must be addressed.

One of the top themes addressed in various reports regarding Rutherford County was affordable housing and homelessness. Due to the constant growth, the demand for affordable single-family house is rising every day with an unmatched supply. Many families and young adults are unable to find affordable housing or housing that meets their financial needs. Additionally, many adults living in Rutherford county are cost-burdened, meaning 30% or more of their income is spent on housing. These difficult living conditions make homelessness more likely. There is also a burden and concern for veterans and those living with disabilities to find affordable and accessible housing to meet their needs.

The second top theme addressed was social determinants of health, which included poverty, education (or lack thereof), access to parks and recreation/outdoor activities, health disparities, and violent crime. The Centers for Disease Control and Prevention (CDC) defines social determinants of health as conditions in the places where people live, learn, work, and play affect a wide range of health risks and outcomes. The systematic review found that single mother families, veterans, minorities, and those living with disabilities are most affected by a lack of societal resources in their communities. Understanding the need for improvement of the community resources helps to ensure all people can lead healthier lives.

The third theme gathered from this review was wellness and disease prevention, which included a focus on high obesity rates, heart disease, physical inactivity, and diabetes management. Many of these health problems are affecting residents in Rutherford County and are easily preventable. However, some groups are more equipped to take preventative measures. Resources like parks and recreation centers allow for easy exercise opportunities. Additionally, sidewalks, public transportation, and safety can all help to ensure that someone is able to walk or run in their own neighborhoods.

Secondary Data Results

Demographics and Socioeconomics

Rutherford County is home to approximately 317,157 individuals as of 2017. Rutherford is a relatively young county with a median age of 33, compared to the state (38) and the nation (37). Seniors (people aged 65 years and over) make up 10.1% of the population. Rutherford County is growing in racial and ethnic diversity at a rate similar to the nation and the state. **Figure 1** shows the relatively low percentage of residents that are Hispanic (7.6%) and households where a language other than English is spoken at home (10.1%) when compared to the nation (21.3%). Veterans make up almost 9% percent of the population in Rutherford County which is slightly higher than that of the nation (8.0%) and about 10% of the population has reported having a disability. This percentage is lower than what is reported for the state (15.4%) and the nation (12.5%). [2]

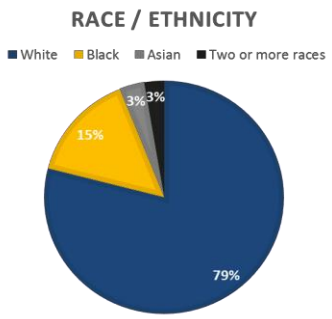

Figure 1: Race/Ethnicity in Rutherford County, Census Bureau (2018).

Projected Population and Job Growth

Rutherford County is experiencing rapid growth with a 21% increase in population between 2010 and 2017 which is almost three times faster than the state. **Figure 2** displays an estimated 42% increase in population between 2015 and 2035 with a 46% increase in jobs during the same time.[3] Of note, the unemployment rate in Rutherford County is 2.6% which is lower than both the State (3.5%) and National rates (4.2%). [4]

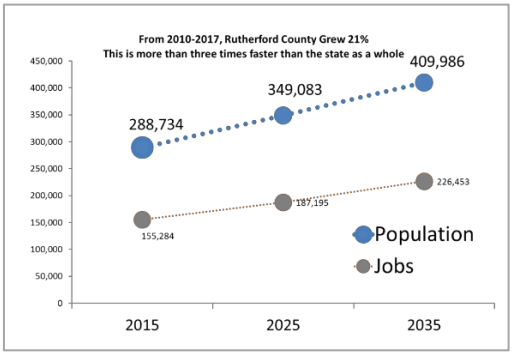

Figure 2: Rutherford County Job and Population Projections, Nashville Planning Organization (2019).

[2] US Census Bureau. (2018). *QuickFacts, 2017 American Community Survey*. Retrieved from https://www.census.gov/quickfacts/fact/table/rutherfordcountytennessee,US/PST045217

[3] Nashville Metro Planning Organization. (2019). *Growth Trends & Forecasts Regional Profile.* Retrieved May 2018 from http://www.nashvillempo.org/growth/

[4] US Census Bureau. (2018). *QuickFacts, 2017 American Community Survey*. Retrieved from https://www.census.gov/quickfacts/fact/table/rutherfordcountytennessee,US/PST045217

Poverty

Poverty is one of the most critical indicators of future health and well-being according to leading health agencies such as the World Health Organization (WHO). Poverty creates barriers to accessing resources included health services, healthy food, and other necessities that contribute to health status.

The Federal Poverty Level is a measure of income used to determine poverty status, and in 2018, the Federal Poverty Level was $12,140 for an individual and $25,100 for a family of four. In Rutherford County, 11.8% of residents live in poverty. While this is much lower than both the State (16.7%) and the Nation (14.6%), this still represents 1 out of every 10 people. Poverty is more prevalent in some geographic area of Rutherford County as seen in **Figure 3**. The darkest color blue indicates areas with highest rates of poverty (up to 55.6%).

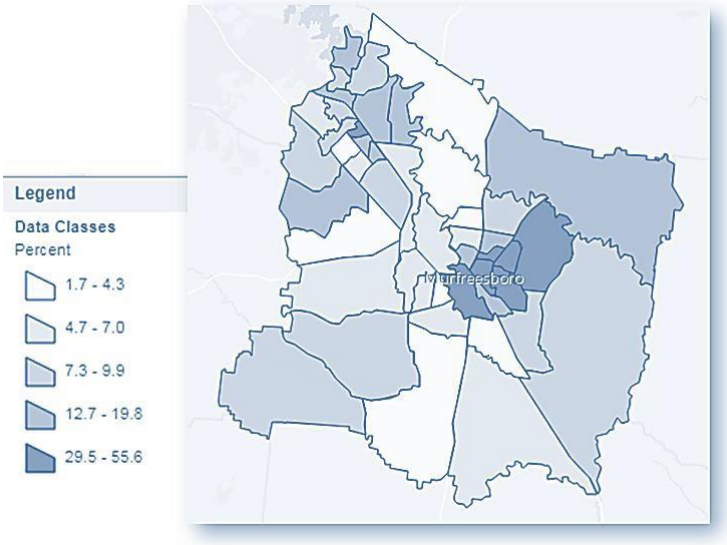

Figure 1: Poverty in Rutherford County, Census Bureau (2018).

The prevalence of poverty also varies by race. In Rutherford County, individuals that identify as "Some Other Race" have the highest percentage of individuals experiencing poverty (22.8%) with Black or African Americans having the second highest percentage (19%). **Figure 4** denotes the percentage of each race that is below the Federal Poverty Level and illustrates that the rates in Rutherford County are significantly different compared to that of the state and the nation. It is noted that a small population in Rutherford County, Native Hawaiian/Pacific Islanders, with 32.7% living in poverty.[5]

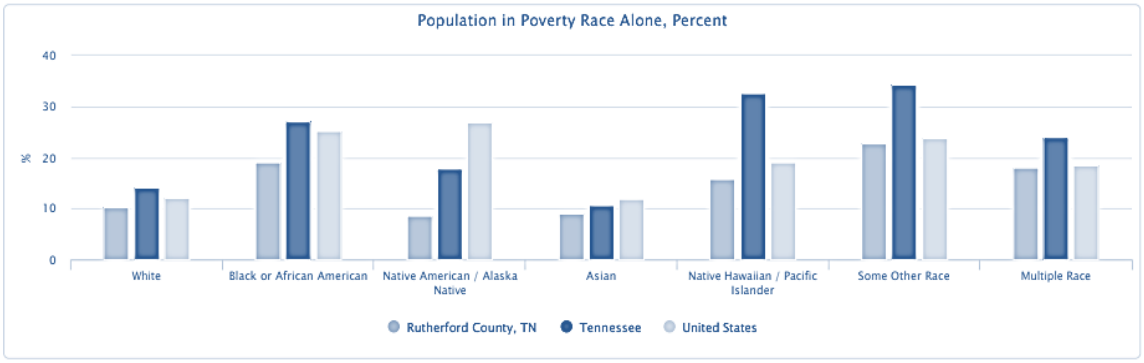

Figure 4: Populations in Poverty, Census Bureau (2018).

The challenges of poverty also extend to children, with 15% living in poverty. This equates to more than 10,000 children in Rutherford County. Rutherford County has less children living in poverty when compared to the state (24.25%) and the nation (20.31%).[6]

Education

In Rutherford County, 9.15% of residents over the age of 25 not having a high school diploma (or equivalency) or higher which equates to almost 17,000 people but is lower than both the state (13.5%) and the nation (12.7%). As with poverty and other SDOH, the rates for lacking a high school diploma also vary by geography and by race. In Rutherford County, 8.4% of Whites do not have a high school diploma compared to 10.64% of African Americans. [7]

Educational attainment is linked with improved health behaviors, longer life, and positive health outcomes. The rate of graduation serves as an indicator for increasing the percent of population with a high school diploma. The Tennessee Department of Education and Kids Count note that 95.3% of students graduated on time between 2016 and 2018 in Rutherford County, which is better than the state (89.1%) and the nation (84%). There are increasing trends in the number of people graduating on time as these graduation rates have increased about 2-3% at the county, state, and national levels. [8]

[5] US Census Bureau. (2018). *Poverty Status in the Past 12 Months, 2017 American Community Survey*. Retrieved from https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_S1701&prodType=table
[6] Community Commons. (2019). *Poverty-Children Below 100% FPL.* Retrieved in May 2018 from https://assessment.communitycommons.org/board/chna?page=3&id=408&reporttype=libraryCHNA
[7] The Annie E. Casey Foundation KIDS COUNT. (2017). *Graduation Rates.* Retrieved from http://www.datacenter.aecf.org
[8] National State Center for Education Statistics. (2018). *Graduation Rates.* Retrieved from http://nces.ed.gov/ccd/tables/ACGR_2010-11_to_2012-13.asp

Employment

Opportunities for quality employment can help ensure financial stability that impacts the ability to live in healthy neighborhoods, purchase healthy food, and access other factors that support health. In Rutherford County, there is a high percentage of the community that is employed. The unemployment rate (2.5%) is lower than both the state (3.3%) and the nation (4%). Many county residents work in surrounding counties. **Figure 5** from the U.S. Census Bureau estimates the number of residents that commute in and out of the city.[9] Approximately 53,000 people commute in and about 74,000 people exiting the county make up about 57% of the workforce. The heat map in **Figure 6** depicts where these commuters are going. While many residents do stay within the county lines for work, many residents work in Davidson, Williamson, Cannon, and others with some traveling as far as Montgomery County (Clarksville, TN). [10]

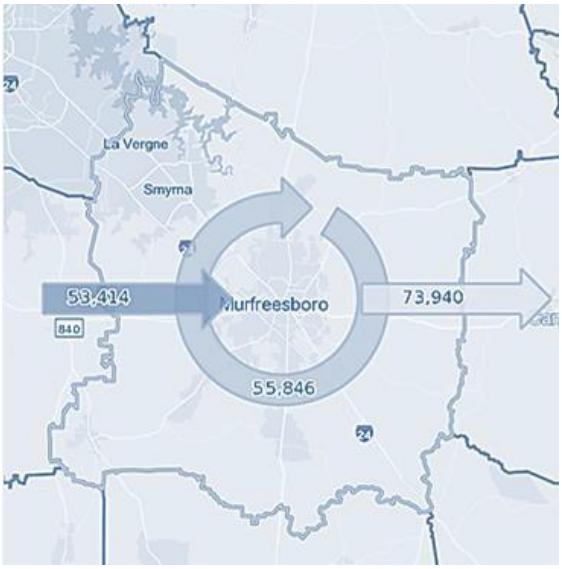

Figure 5: Employment Forecast, Nashville Planning Organization (n.d.).

Figure 6: On the Map Employment, Census Bureau (2018).

[9] Nashville Metro Planning Organization. (n.d.) *Population & Employment Forecast for the Nashville Area MPO.* Retrieved from http://www.nashvillempo.org/growth/

[10] U.S Census Bureau, Center for Economic Studies. (2018) *OnTheMap (Employment).* Retrieved on November 12, 2018 from http://onthemap.ces.census.gov/

Senior Population

The Tennessee Commission on Aging and Disability projected in 2017 that the senior population in Rutherford County would increase 125% between 2017 and 2030. This means that agencies serving this population will need to strategically build capacity and resources to meet a growing demand for their services over time, including in-home support, nutrition, transportation, and others, to ensure this population can enjoy the highest possible quality of life into older adulthood.[11]
The projected growth in the senior population is illustrated in **Figure 7**, showing the percent increase in Tennessee and Rutherford County between 2017 and 2030.

Figure 7: Project Senior Growth, Tennessee Commission on Aging and Disability

Social Determinants of Health

Health is shaped by factors like income and education. According to the World Health Organization, the circumstances "in which we are born, grow, live, work, and age" are called Social Determinants of Health, and these are related to the "distribution of money, power, and resources" within a community. "The social determinants of health are mostly responsible for health inequities – the unfair and avoidable differences in health status seen" within a community. In addition to factors like education, social determinants can encompass the social environment, the physical environment, resources available in communities, economic opportunity, food access, and more.[12]

Housing

According to the American Community Survey (2013-2017), there are 106,673 occupied housing units in Rutherford County, and average household size is 2.82 persons for owners and 2.62 persons for renters, which is higher than both the state (2.57 persons for owners, 2.45 persons for renters) and the nation (2.7 persons for owners and 2.52 persons for renters).[13] County-wide, 82.6% of residents live in the

[11] Tennessee Commission on Aging and Disability. (2017). *Tennessee State Plan on Aging October 1, 2017-September 31, 2021.* Retrieved from https://www.tn.gov/content/dam/tn/aging/documents/TN_State_Plan_on_Aging_2017-2021.pdf

[12] World Health Organization. (n.d.). *Social Determinants of Health.* Retrieved from https://www.who.int/social_determinants/sdh_definition/en/

[13] U.S. Census Bureau. (2019). *Selected Housing Characteristics, 2017 American Community Survey 5-year estimates.* Retrieved from https://factfinder.census.gov/

same house as one year ago, compared to 85.4% in the nation and the 85.2% in state.[14] This indicator helps describe "residential stability and the effects of migration" within a community.[15]

The availability of a safe, affordable housing stock has a direct bearing on health. Poor quality housing can contribute to the risk of injury and to other illness through poor maintenance, leaks, toxic factors in the environment (such as lead), increased risk of infectious/contagious disease through overcrowding, and psychological distress. Furthermore, a shortage of affordable housing can put families under intense stress. According to the Robert Wood Johnson Foundation: "The lack of affordable housing affects families' ability to meet other essential expenses, placing many under tremendous financial strain. High housing-related costs place an economic burden on low-income families, forcing trade-offs between food, heating and other basic needs. One study found that low-income people with difficulty paying rent, mortgage or utility bills were less likely to have a usual source of medical care and more likely to postpone treatment and use the emergency room for treatment. Another study showed that children in areas with higher rates of unaffordable housing tended to have worse health, more behavioral problems and lower school performance." [17]

Figure 8 and Figure 9 both represent the American Community Survey 1-year 2014 and 2017 1-year Estimates, over the three-year period between 2014-2017, median home values in Tennessee increased by about $24,000; in the USA, median home values increased by about $36,000; and in Rutherford County, median home values increased by $57,000. This is more than double the rate of increase of home values in Tennessee.[16]

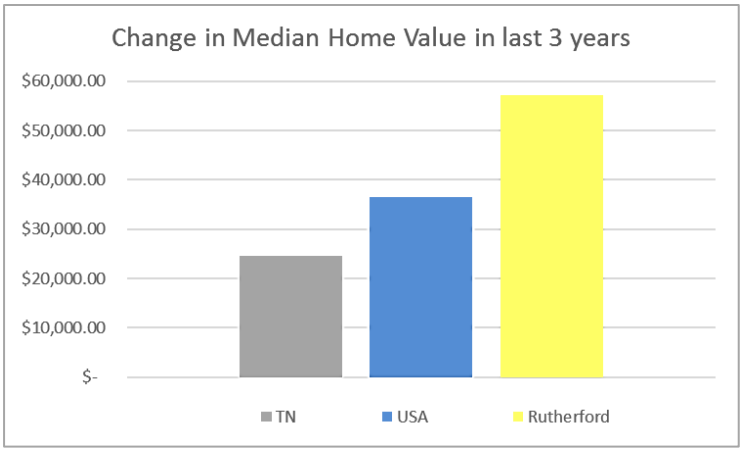

Figure 8: Median Change in Home Value, US Census Bureau (2019).

[14] U.S. Census Bureau. (2019). *Population 60 Years and Over in the United States 2013-2017 ACS 5-Year Estimates.* Retrieved from https://factfinder.census.gov/

[15] U.S. Census Bureau. (n.d.). *Why We Ask: Residence One Year Ago.* Retrieved February 12, 2019 from https://www.census.gov/acs/www/about/why-we-ask-each-question/migration/

[17] Robert Wood Johnson Foundation. (2011). *Housing and Health.* Retrieved from https://www.rwjf.org/en/library/research/2011/05/housing-and-health.html

[16] US Census Bureau. (2018). *Median Value (Dollars), 2011, 2014, 2017 American Community Survey 1-year estimates*. Retrieved from https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t#none

A household is considered cost-burdened if it spends more than 30% of annual income on housing costs. According to the City of Murfreesboro Consolidated Plan from 2015-2020, cost-burden "is the housing characteristic linked most closely with instability and the risk of homelessness."[17] According to the U.S. Department of Housing and Urban Development, "Families who pay more than 30 percent of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care."[18]

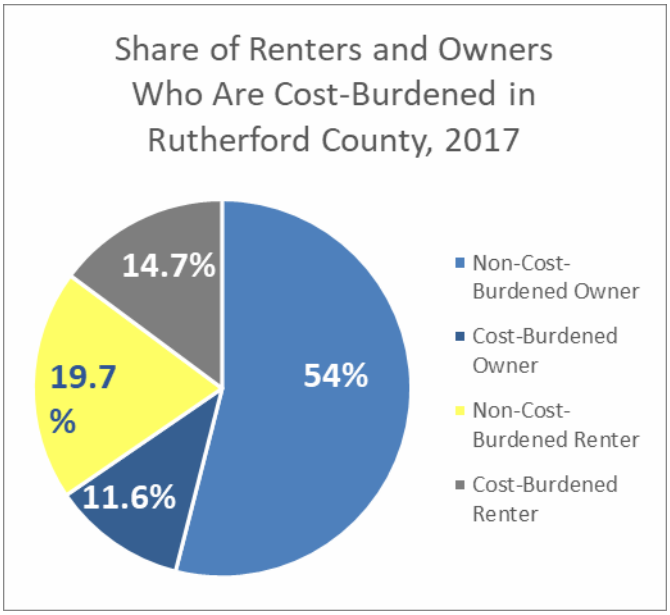

Figure 9 shows the share of homeowners versus renters in Rutherford County. Of the 106,673 occupied housing units in the county as of 2017, 65.6% were owner-occupied (both blue segments combined) and 34.4% were renter-occupied (both yellow segments combined). The darker yellow segment shows the share of renters who were cost burdened (43% of renter households, or 14.7% of households overall), and the darker blue segment shows the share of homeowners who were cost-burdened (17.5% of homeowner households, or 11.6% of households overall). Between renters and owners, 26.3% of Rutherford households overall are cost-burdened.[19]

Figure 9: Rutherford County Cost Burden Residents (2018).

Homelessness

Rutherford County conducts a Point-in-Time count, an annual one-night tally of those in shelters and those who are unsheltered throughout the county. The 2018 Point-in-time Count indicated that 283 individuals in Rutherford County were experiencing homelessness. This is thirty-three fewer than at the same time in 2017, though many believe this is a low estimate of the total homeless population.[20]

[17] City of Murfreesboro Community Development Department. (2015). *City of Murfreesboro Consolidated Plan 2015-2020.* Retrieved from http://www.murfreesborotn.gov/DocumentCenter/View/2278/2015-2020-Consolidated-Plan?bidId=
[18] U.S. Department of Housing and Urban Development. (n.d.) *Affordable Housing.* Retrieved February 11, 2019 from https://www.hud.gov/program_offices/comm_planning/affordablehousing/
[19] U.S. Census Bureau. (2018). *Selected Housing Characteristics, 2017 American Community Survey 5-year estimates*. Retrieved from https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t#none
[20] National Homeless Information Project. (2017). *Point-In-Time Count Homeless Estimates: Comparison between 2016 and 2017.* Retrieved from http://www.nhipdata.org/local/upload/file/2016-2017%20coc%20pit%20comparison.pdf

While the Point-in-Time count identifies those, who are in shelters and unsheltered, many argue that this is the narrowest definition of homelessness as it does not include those who are doubled up with friends or family/couch surfing, those staying in motels, or those in other institutions.[21]

The Murfreesboro City and Rutherford County school systems estimate that 1,480 students met the definition of homeless in the 2017-2018 school year as specified by the U.S. Department of Education.

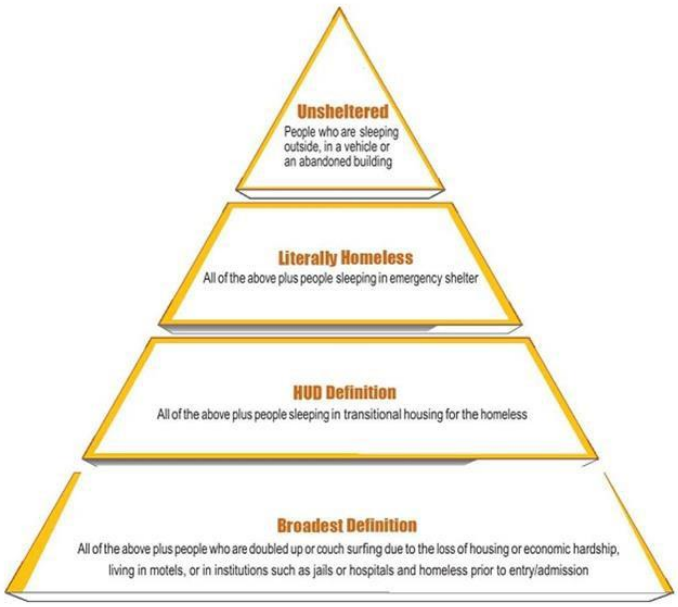

Figure 21: Federal Homeless Definitions, Youth.Gov (n.d.)

Figure 11 represents "The U.S. Department of Education definition of homeless youth. Defined as youth who 'lack a fixed, regular, and nighttime residence' or an 'individual who has a primary nighttime residence that is a) a supervised or publicly operated shelter designed to provide temporary living accommodations; b) an institution that provides a temporary residence for individuals intended to be institutionalized including welfare hotels, congregate shelters, and transitional housing for the mentally ill; or c) a public or private place not designed for, or ordinarily used as, a regular sleeping accommodation for human beings.' This definition includes both youth who are unaccompanied by families and those who are homeless with their families."[22]

Transportation

The built environment and transportation options affect people's health and their ability to make healthy choices. Not only does a robust transit system ensure people can easily access essential resources and services needed to support their health, such as groceries, employment opportunities, and medical offices, active transit, in the form of walking, biking, and taking public transportation, encourages movement and physical activity. Public transportation can also help to improve air quality by taking individual cars off the roads and can help reduce stress due to traffic. Better transit options can also alleviate the burden of long solo commutes to work. Reduced commutes can offer people more social and family time, which supports mental health. Finally, well-designed transit options can support equity by bringing options within reach of vulnerable populations.[23]

[21] Nashville Metropolitan Development and Housing Agency. (2018). *Results of 2018 Point in Time (PIT) Count Released.* Retrieved from http://www.nashville-mdha.org/wp-content/uploads/2016/09/PIT-COUNT-Press-Release-04172018.pdf
[22] Youth.gov. (n.d.) *Federal Definitions.* Retrieved from http://youth.gov/youth-topics/runaway-and-homeless-youth/federal-definitions

[23] Centers for Disease Control & Prevention. (2014). *Transportation and Health.* Retrieved February 12, 2019 from https://www.cdc.gov/healthyplaces/healthtopics/transportation/default.htm

Rutherford County is served by the Rover bus service, whose low-cost fares and multiple routes serve as a primary means of transportation for many. Rover routes are concentrated in the urban Murfreesboro core, meaning those on the periphery of the county have no access to public transit, making much of Rutherford County car-dependent. Refer to **Figure 12**[24] to see the Rover bus routes.

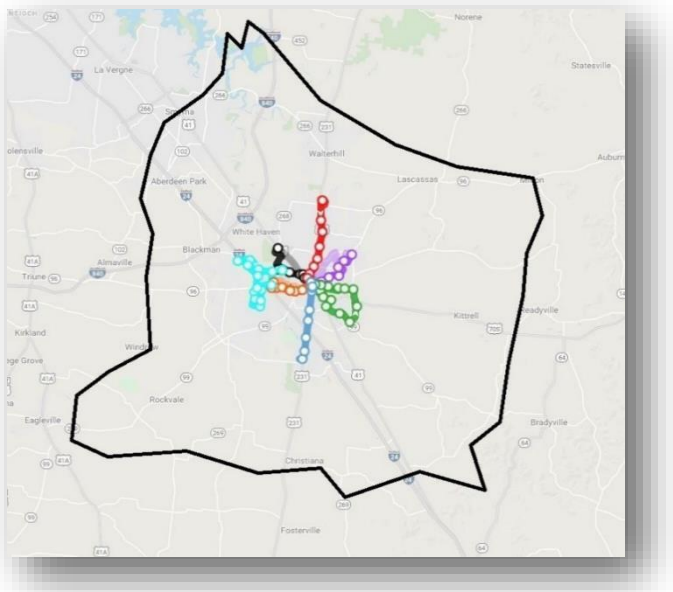

Figure 12: Rover Bus Routes in Rutherford County, City of Murfreesboro (n.d.).

Rutherford County residents spend significant time sitting in the car, with 85% of workers driving alone to work[25] and less than 2% walking, biking, or taking public transit to get to their jobs.[26] In fact, according to the US Department of Transportation, across Tennessee, only 4.5% of walking and biking trips are at least 10 minutes long, indicating sustained exercise. This puts Tennessee in the 5th percentile nationwide for active transit that represents sustained exercise.[27]

Mean travel time to work in Rutherford County is 28.1 minutes[28] and 42% of workers who commute alone drive more than 30 minutes to work. According to County Health Rankings, this measure "is an indicator of community design and infrastructure that discourages active commuting and social interactions".[29]

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[24] City of Murfreesboro. (n.d.). *Rover Route Map.* Retrieved November 12, 2018 from: http://63.137.71.220/RouteMap/Index
[25] University of Wisconsin Population Health Institute. (2018). *2018 County Health Rankings.* Retrieved from http://www.countyhealthrankings.org/app/tennessee/2018/rankings/rutherford/county/outcomes/overall/snapshot
[26] Community Commons. (2018). *Percent of workers who walk or bike to work, 2016 American Community Survey 5-year estimates.* Retrieved June 1, 2018 from https://assessment.communitycommons.org/CHNA/report?page=3&id=408&reporttype=libraryCHNA
[27] U.S. Department of Transportation (n.d.) *Transportation and Health Indicators.* Retrieved June 1, 2018 from https://www.transportation.gov/transportation-health-tool/indicators
[28] US Census Bureau. (2017). *Workers Commuting by Public Transportation, 2016 American Community Survey 5-year estimates.* Retrieved from https://factfinder.census.gov/
[29] University of Wisconsin Population Health Institute. (2018). *2018 County Health Rankings.* Retrieved from http://www.countyhealthrankings.org/learn/explore-health-rankings/what-and-why-we-rank/health-factors/physical-environment/housing-transit/long-commute-driving-alone

Figure 13 shows the percentage of households in each census tract in Rutherford County with no vehicles available. According to American Community Survey 2017 5-year estimates, the darkest census tracts, between 12.4%-17.2% of households have no vehicle available, and large census tracts on the edges of the county, outside of the reach of the Rover routes, have between 5.4%-9.3% of households with no vehicle available.[30]

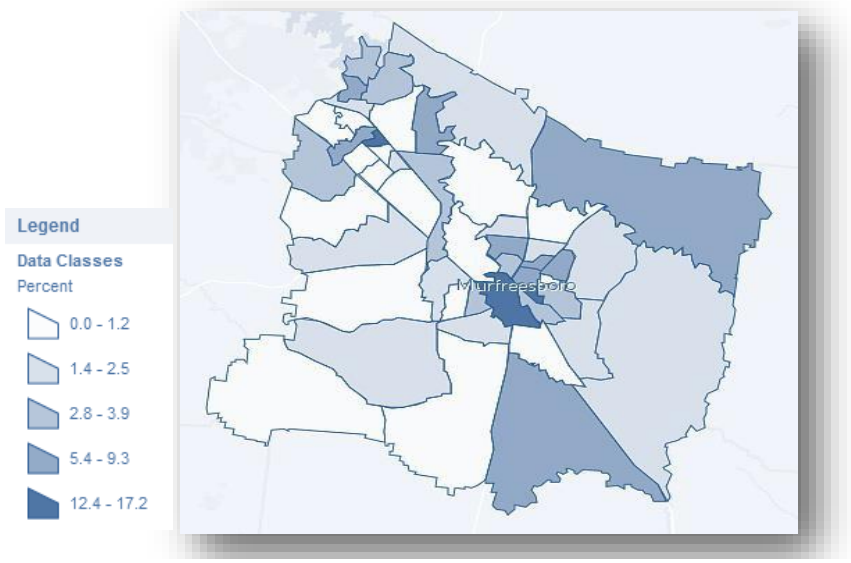

Figure 13: Rutherford Households Without a Car by Census Tract. U.S. Census Bureau (2018).

Food Access

The built environment and access to transportation influence the choices people make regarding what they eat. Lower-income and rural neighborhoods often have increased access to fast food and other unhealthy options, while facing low access to groceries and other markets that carry fresh produce and other options that support healthy choices.[31]

Overall, 28.6% of Rutherford County's low-income population also faces low food access, "defined as living more than ½ mile from the nearest supermarket, supercenter, or large grocery store."[32] **Figure 14** illustrates census tracts in Rutherford County where these low-income, low food access households are concentrated, with the darkest colors representing areas with over 50% of low-income residents facing low food access.[33]

[30] US Census Bureau. (2019). *Selected Housing Characteristics, 2017 American Community Survey 5-year estimates.* Retrieved from https://factfinder.census.gov/
[31] Robert Wood Johnson Foundation. (n.d.) *Healthy Food Access.* Retrieved February 12, 2019 from https://www.rwjf.org/en/library/collections/healthy-food-access.html
[32] Community Commons. (2018). *Food Access – Low Income & Low Food Access*. Retrieved February 12, 2019 from https://www.communitycommons.org/board/chna
[33] Community Commons. (2018). *Food Access – Low Income & Low Food Access*. Retrieved February 12, 2019 from https://www.communitycommons.org/board/chna

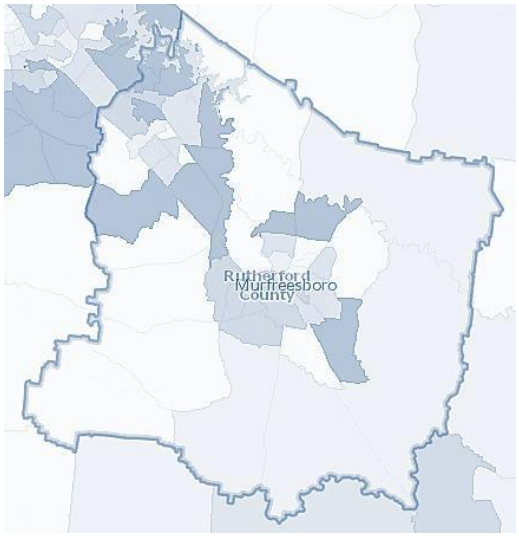

Figure 14: Rutherford Food Access by Census Tract. U.S. Census Bureau (2018).

In terms of access to fast food, Rutherford County exceeds both the state and the nation with a rate of 91.01 fast food establishments per 100,000 people.[34]This rate has risen steadily over the last several years. Studies have shown that an environment rich in fast food options is linked to a higher likelihood of obesity and diabetes for residents and students who live and study nearby.[35]Pockets of need are geographically concentrated within the county, suggesting that place matters in terms of residents' ability to make healthy choices. **Figures 15 & 16** outline the fast food restaurant abundance.

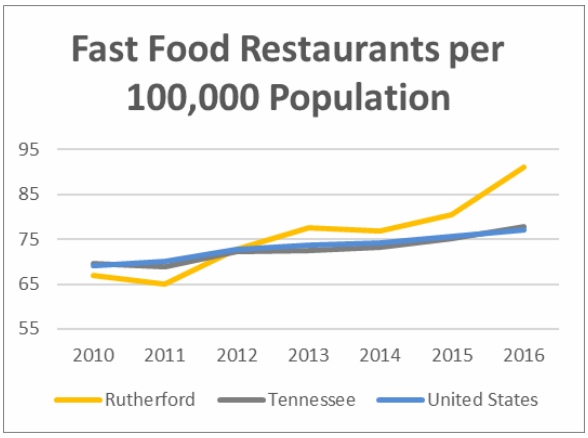

Figure 15: Fast Food Restaurants per 100,000 Population, Community Commons (2019).

Figure 16 Fast Food Restaurants per 100,000 Population, Community Commons (2019).

[34] Community Commons. (2018). *Food Access – Low Income & Low Food Access*. Retrieved February 12, 2019 from https://www.communitycommons.org/board/chna

[35] Office of Disease Prevention and Health Promotion. (2019). *Access to Foods that Support Healthy Eating Patterns*. Retrieved February 20, 2019 from

Violence

Community Commons states that "Violent crime includes homicide, rape, robbery, and aggravated assault."[36] Safety is a social determinant that affects inequities in health outcomes. This could be through reduced life expectancy due to gun violence, residual trauma from witnessing violent events around one, or reduced likelihood to exercise due to fear of violence.[37]

Figure 17 shows that Rutherford County has a higher rate of violent crime than the nation, but lower than Tennessee overall at 436.8 violent crime offenses reported by law enforcement/100,000 residents.[38]

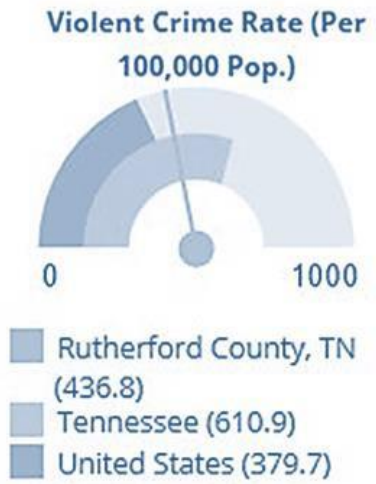

Figure 17 Violent Crime Rate Per 100,000 Population, Community Commons (2019).

Research has shown that child abuse and neglect have long-term ramifications, affecting a child's physical, psychological, and behavioral development into adulthood and creating lasting impacts throughout society.[39]

Rates of substantiated child abuse and neglect cases in Rutherford County have remained consistent over the last several years, hovering between 3.2 and 3.9 cases per 1,000 children in Rutherford County per year. This is lower than the state rate of 4.9 cases per 1,000 children.[40]

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[36] Community Commons. (2018). *Violent Crime Rate Per 100,000 Population.* Retrieved November 12, 2018 from https://assessment.communitycommons.org/CHNA/report?page=3&id=408&reporttype=libraryCHNA
[37] Office of Disease Prevention and Health Promotion. (2019). *Crime and Violence.* Retrieved November 12, 2018 from https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources/crime-and-violence

[38] Community Commons. (2018). *Violent Crime Rate Per 100,000 Population.* Retrieved November 12, 2018 from https://assessment.communitycommons.org/CHNA/report?page=3&id=408&reporttype=libraryCHNA
[39] U.S. Department of Health & Human Services, Administration for Children & Families, Children's Bureau. (n.d.) *Long-Term Consequences of Child Abuse and Neglect.* Retrieved February 25, 2019 from https://www.childwelfare.gov/topics/can/impact/long-term-consequences-of-child-abuse-and-neglect/
[40] The Annie E. Casey Foundation Kids Count Data Center. (2018). *KIDS COUNT National Indicators.* Retrieved May 1, 2018 from https://datacenter.kidscount.org/data#USA/1/0/char/0

Emerging research on Adverse Childhood Experiences (ACEs), or traumas sustained by children before the age of 18, indicates the lifelong impact of these events on a person's health and socioeconomic outcomes. ACEs range from divorce/separation to incarceration of a parent to mental illness in the home to physical violence and neglect. A high ACE score is a strong predictor of health problems in adulthood. Regarding the original ACE study, which brought the impact of these childhood traumas to the forefront, the Substance Abuse and Mental Health Services Administration states, "As researchers followed participants over time, they discovered that a person's cumulative ACEs score has a strong, graded relationship to numerous health, social, and behavioral problems throughout their lifespan, including substance use disorders."[41]

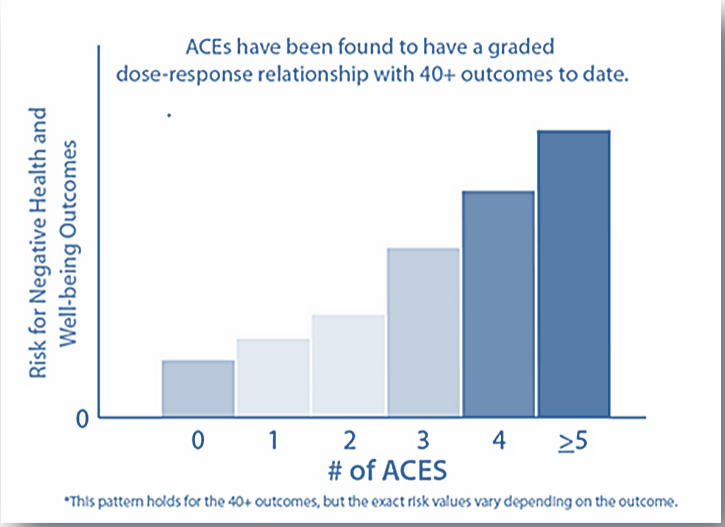

Figure 18: Correlation of ACE Score and Life Outcomes, CDC (2016).

Figure 18[42] represents state-level ACE data (there is not yet county-level data on ACEs for Rutherford County) indicating that in the areas of divorce/separation, incarceration, and economic hardship, Tennesseans fall in the highest quartile nationwide in terms of the prevalence of these childhood traumas.[43] Some nonprofit and health organizations in Rutherford County are starting to screen for ACEs as a part of their intake process, and there is hope that there will be county-level data on them in the near future.

[41] U.S. Department of Health & Human Services Substance Abuse and Mental Health Services Administration. (2018). *Adverse Childhood Experiences.* Retrieved February 26, 2019 from https://www.samhsa.gov/capt/practicing-effective-prevention/prevention-behavioral-health/adverse-childhood-experiences

[42] Centers for Disease Control and Prevention. (2016). *About Adverse Childhood Experiences.* Retrieved February 26, 2019 from https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/aboutace.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Facestudy%2Fabout_ace.html

[43] Child Trends. (2014). *Research Brief: Adverse Childhood Experiences: National and State-Level Prevalence.* Retrieved from https://www.childtrends.org/wp-content/uploads/2014/07/Brief-adverse-childhood-experiences_FINAL.pdf

Access to Health Care

Access to appropriate healthcare is a critical factor that affects health outcomes. According to Healthy People 2020, "Access to comprehensive, quality health care services is important for promoting and maintaining health, preventing and managing disease, reducing unnecessary disability and premature death, and achieving health equity for all Americans."[44]

Insurance Coverage – Adults

Most people enter the healthcare system through insurance coverage.[45] Though uninsured rates are at historic lows, there are still populations with no access to insurance. This is largely due to cost and to other restrictions – for instance, immigrant eligibility restrictions or income restrictions. Populations most at risk for not having insurance are low-income adults and people of color. Lack of insurance can be a major deterrent in seeking necessary care, and when care is postponed, conditions can go undetected or untreated, and outcomes can be severe.[46]

The age group with the highest uninsured rates nationwide is working-age adults between 19 and 64, which is likely due to the public insurance options available for low-income children and those over 65.[47]

In Rutherford County, 13.4% of working-age adults age 19-64 are uninsured. This is lower than both the state (15.9%) and national (14.8%) rates of uninsured. **Figure 19** shows where in Rutherford County these uninsured adults 19-64 reside by census tract, with the darkest tracts having rates of between 24.3%-28.2% uninsured.[48]

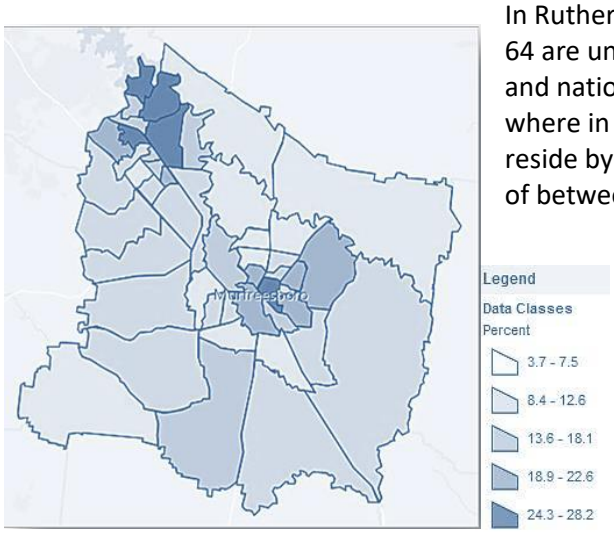

Figure 19: Percent of Population Age 19-64 Uninsured by Census Tract, US Census Bureau, (2017).

[44] Office of Disease Prevention and Health Promotion. (2014). *Access to Health Services.* Retrieved November 15, 2018 from https://www.healthypeople.gov/2020/topics-objectives/topic/Access-to-Health-Services
[45] Office of Disease Prevention and Health Promotion. (2014). *Access to Health Services.* Retrieved November 15, 2018 from https://www.healthypeople.gov/2020/topics-objectives/topic/Access-to-Health-Services
[46] Henry J. Kaiser Family Foundation. (2019). *The Uninsured and the ACA: A Primer - Key Facts about Health Insurance and the Uninsured amidst Changes to the Affordable Care Act.* Retrieved January 9, 2019 from https://www.kff.org/uninsured/report/the-uninsured-a-primer-key-facts-about-health-insurance-and-the-uninsured-under-the-affordable-care-act/
[47] U.S. Census Bureau. (2017). *Selected Characteristics of Health Insurance Coverage in the United States, 2013-2017 American Community Survey 5-Year Estimates*. Retrieved from https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml
[48] U.S. Census Bureau. (2017). *Health Insurance Coverage in the United States: 2017 – Current Population Reports.* Retrieved from https://www.census.gov/content/dam/Census/library/publications/2018/demo/p60-264.pdf

Racial disparities in insurance coverage are present in Rutherford County. According to the 2017 American Community Survey 5-year estimates, in Rutherford County, 33.7% of Hispanic or Latino residents lack insurance, while whites of non-Hispanic origin are uninsured at a rate of 7.4% overall. **Figure 20** below outlines these racial disparities.[49]

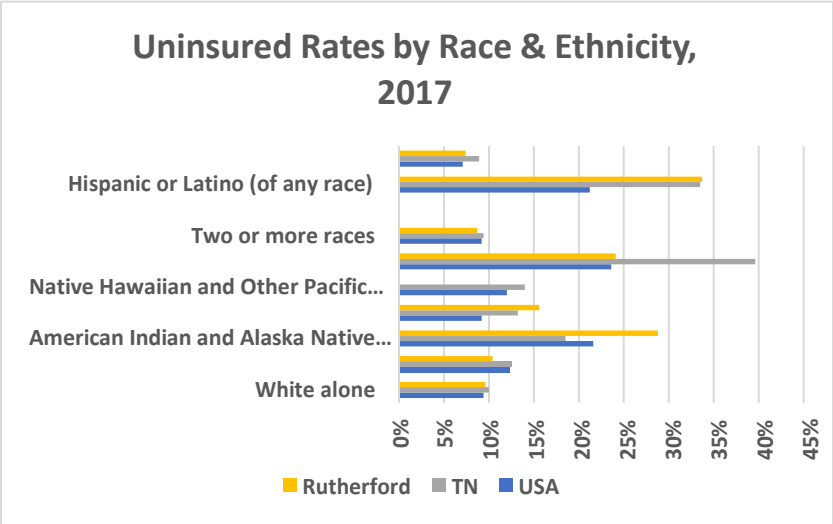

Figure 20: Uninsured Rates by Race & Ethnicity, US Census Bureau, (2017).

Insurance Coverage – Children

Children's uninsured rates are also at an all-time low nationally. In all instances, children with no insurance are significantly less likely to have access to a usual source of care, to receive a well-child checkup, or to receive a specialist visit.[50] **Figure 21**, from the Kaiser Family Foundation, represents the likelihood of a child receiving care depending on their insurance status.

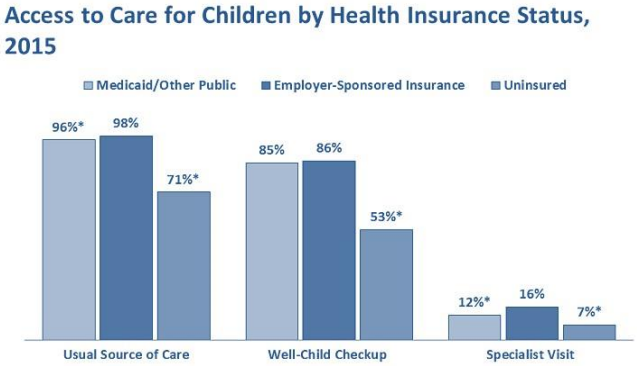

Figure 21: Key Issues in Children's Health Coverage*, Kaiser Family Foundation, (2017).*

[49] U.S. Census Bureau. (2017). *Selected Characteristics of Health Insurance Coverage in the United States, 2013-2017 American Community Survey 5-Year Estimates*. Retrieved from https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml

[50] Henry J. Kaiser Family Foundation. (2017). *Key Issues in Children's Health Coverage.* Retrieved January 9, 2019 from https://www.kff.org/medicaid/issue-brief/key-issues-in-childrens-health-coverage/

In Rutherford County, 5.5% of children under 19 years of age are uninsured. This is higher than the state rate overall (4.8%) and slightly lower than the national rate (5.7%). **Figure 22** shows where in the county these children reside, with the darkest census tracts having between 18.3% and 29.2% of children without insurance.[51]

Figure 22: Uninsured by Census Tract, Population under Age 19, US Census Bureau (2017).

Provider Ratios

Access to care depends not only on insurance coverage, but on the availability of providers nearby. Therefore, provider ratios (which are the number of primary care, dental, and mental health providers available for the population) are important indicators to consider. Sufficient availability of primary care providers, defined as M.D.s and D.O.s specializing in general practice, family medicine, internal medicine, and pediatrics, is a key factor in preventive health and in receiving proper referrals to specialists when necessary. In Rutherford County, there is 1 primary care provider for every 2,300 residents. This is less favorable than the state ratio over all (1:1,380), and the ratio of the top 10% of counties nationwide (1: 1,030).[52]

Access to dental care is a crucial factor in health, and shortage of providers continues to affect much of the nation. Rutherford County does better than the state overall (1: 1,892) with 1 provider for every 1,860 citizens but is still short of the rate in the top 10% of counties, which is one dental provider for every 1,280 residents.[53]

[51] U.S. Census Bureau. (2017). *Selected Characteristics of Health Insurance Coverage in the United States, 2013-2017 American Community Survey 5-Year Estimates*. Retrieved from https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml
[52] University of Wisconsin Population Health Institute. (2018). *Primary care physicians.* Retrieved from http://www.countyhealthrankings.org/app/tennessee/2018/measure/factors/4/map
[53] University of Wisconsin Population Health Institute. (2018). *Dentists.* Retrieved from http://www.countyhealthrankings.org/app/tennessee/2018/measure/factors/88/map

Finally, access to mental healthcare has grown in demand, and Rutherford County has one mental health provider (defined as psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, mental health providers that treat alcohol and other drug abuse, and advanced practice nurses specializing in mental health care) for every 1,269 residents. The table below shows how Rutherford continues to lag both the state (1:742) and the top 10% of counties, which have a ratio of 1: 330.[54]

Table #1 Provider Ratios, County Health Rankings, 2018:

	Primary Care Providers	Dentists	Mental Health Providers
	**1:2300**	**1:1860**	**1:1270**
	1:1382	**1:1892**	**1:742**
	1:1030	**1:1280**	**1:330**

There are racial disparities across Tennessee in the way people can access care. **Figure 23**, based on data from the 2017 BRFSS shows Tennesseans who needed to see a doctor in the past year but could not due to cost. Roughly 18% of Hispanic respondents needed to see a doctor but couldn't due to cost, while nearly 20% of black and 13% of white Tennesseans weren't able to see a doctor due to cost. Other races and mixed races couldn't see a doctor due to cost at much higher rates (26.5% and 35.5% respectively).[55]

Access to a consistent primary care physician is a crucial piece of preventive care. **Figure 24** shows 21% of white and 25% of black residents don't have anyone they consider to be their personal health care provider. This number is highest for Hispanic residents with 37% who don't identify one person who is their doctor.[56]

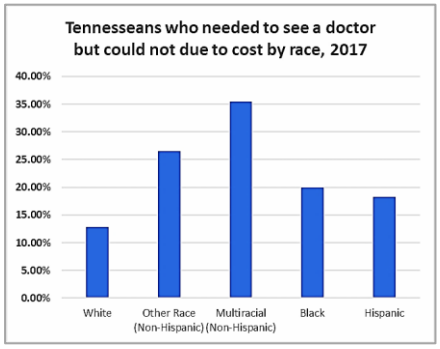

Figure 23: Tennesseans who needed to see a doctor but could not due to cost by race, TN Dept of Health, (2017).

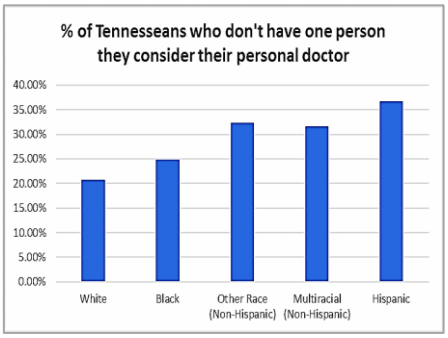

Figure 24: Tennesseans who don't have a personal doctor by race, TN Dept of Health, (2017).

[54] University of Wisconsin Population Health Institute. (2018). *Mental health providers.* Retrieved from http://www.countyhealthrankings.org/app/tennessee/2018/measure/factors/62/map

[55] Tennessee State Department of Health. (2017). *Behavioral Risk Factor Surveillance System Tennessee Core Questions Data Report.* Retrieved from https://www.tn.gov/content/dam/tn/health/documents/brfss/2017_Core_Sections.pdf

[56] Tennessee State Department of Health. (2017). *Behavioral Risk Factor Surveillance System Tennessee Core Questions Data Report.* Retrieved from https://www.tn.gov/content/dam/tn/health/documents/brfss/2017_Core_Sections.pdf

Health Status

Morbidity/Mortality

The World Health Organization reports that the global burden of disease has shifted over the last century from infectious disease to chronic disease.

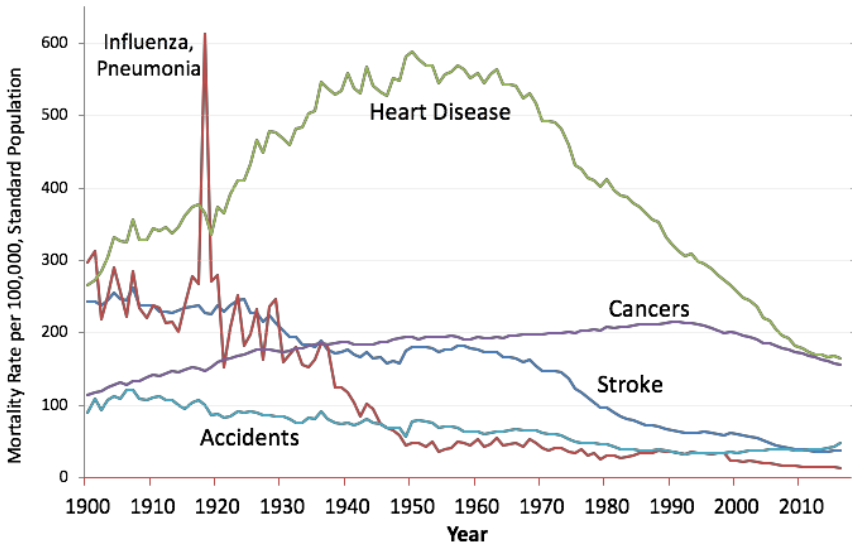

Figure 25: World Mortality Rate, World Health Organization (2018).

Figure 25 shows the top five leading causes of death in the United States from 1900-2016. In the early 1900's, the leading causes of death in the US were infectious diseases such as Influenza/Pneumonia, Tuberculosis, Diarrhea/Enteritis/Ulcerative Colitis, but also included Health Disease and Stroke. More than a century later, the leading causes of death have shifted to be more of the chronic diseases such as Heart Disease and various Cancers. This data illustrates how the conditions in which we live, work, and play impact how we are affected by disease. [57]

[57] Centers for Disease Control and Prevention: CDC Wonder. (2018). *CDC Wonder.*

Percentage of Deaths
Rutherford County (2014-2016)

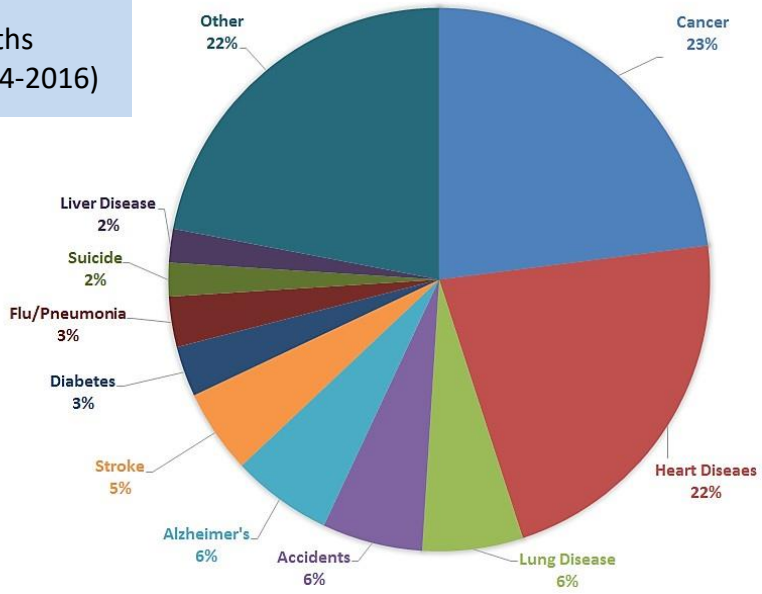

Figure 26: Rutherford County Percentage of Deaths, Center for Disease Control

Figure 26 shows the leading causes of death in Rutherford County are consistent with state and national trends. Between the years of 2014-2016, there were ~5,500 deaths in Rutherford County for which there is data. Cancer (23%) and Health Disease (22%) make up the largest portion of deaths at 45%. Other leading causes include Lung Disease (6%), Accidents (6%), Stroke (5%), Diabetes (3%), Flu/Pneumonia (3%), Suicide (2%), and Liver Disease (2%). Overall, these 10 leading causes of death comprise more than three quarters (78%) of deaths in Rutherford County. The other category represents any causes of death outside of these leading causes.[58]

Birth Outcomes

Infant Mortality

Infant mortality in the United States continues to be a significant health issue, although it has been on the decline over the last century. During this time, however, the racial disparity in infant mortality has continued to widen, with black babies dying at almost 2.5 times the rate of white babies. Rutherford County's infant mortality rate of 6.3 deaths per 1,000 live births has been on the rise.[59] In 2015, the rate was 4.8 deaths per 1,000 live births.[60] While Rutherford County rates are worse than the United States overall in infant mortality, it continues to rank better than the state of Tennessee. The racial disparity

[58] Centers for Disease Control and Prevention: CDC Wonder. (2018). *CDC Wonder.*

[59] Centers for Disease Control/National Center for Health Statistics. (2017). *Infant Health*. Retrieved from https://www.cdc.gov/nchs/fastats/infant-health.htm
Kids Count Data Center. (2018). *Infant mortality by race in the United States.* Retrieved from https://datacenter.kidscount.org/data/tables/21-infant-mortality-by-race#detailed/1/any/false/870,573,869,36,868,867,133,38,35,18/10,11,9,12,1,13/285,284

[60] TN Dept of Health. (2017). *Number of Infant Deaths with Rates per 1,000 births, by race of mother.* Retrieved from https://www.tn.gov/content/dam/tn/health/documents/TN_Infant_Mortality_Rates_-_2016.pdf

rates of infant mortality in the United States and Rutherford County is shown in **Figure 27**. Rutherford County has a rate of 13.9 deaths per 1,000 live births for blacks and 4.6 deaths per 1,000 live births for whites. [61]

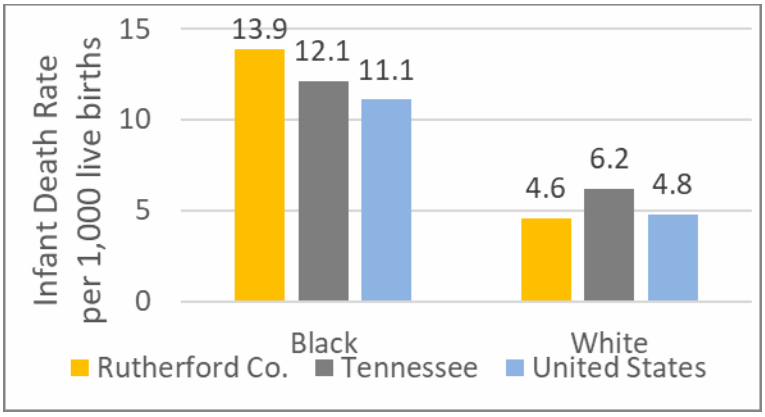

Figure 27: Rutherford Obesity Trends, County Health Rankings, 2018.

Teen Pregnancy

Teen pregnancy increases the risks of pregnancy. Some of the increased risks associated with teen pregnancy include low birth weight, higher infant mortality rates, and premature births.[62] Since 2007, teen pregnancy rates in Rutherford County and across the state of Tennessee have been on a sharp decline. Rutherford County has seen a 66% decline in rates, while Tennessee has seen a 59% decline.[63] Rutherford County's teen pregnancy rate of 9.7 per 1,000 is lower than Tennessee's rate of 13.7 per 1,000.[64]

Behavioral Risk Factors

There are several behavioral factors that influence health outcomes. This category encompasses what the TN State Health Department calls "The Big 4": physical inactivity, excessive caloric intake, tobacco and nicotine addiction, and other substance use disorders. Together, these 4 categories of behaviors drive the top 10 causes of death in the state.[65]

[61] TN Dept of Health. (2017). *Number of Infant Deaths with Rates per 1,000 births, by race of mother.* Retrieved from https://www.tn.gov/content/dam/tn/health/documents/TN_Infant_Mortality_Rates_-_2016.pdf
[62] KIDS Count Data Center. (2017). *Teen Pregnancy in Tennessee.* Retrieved from https://datacenter.kidscount.org/data/tables/3000-teen-pregnancy#detailed/2/any/false/871,870,573,869,36,868,867,133,38,35/any/10133,13266
[63] KIDS Count Data Center. (2017). *Teen Pregnancy in Tennessee.* Retrieved from https://datacenter.kidscount.org/data/tables/3000-teen-pregnancy#detailed/2/any/false/871,870,573,869,36,868,867,133,38,35/any/10133,13266
[64] KIDS Count Data Center. (2017). *Teen Pregnancy in Tennessee.* Retrieved from https://datacenter.kidscount.org/data/tables/3000-teen-pregnancy#detailed/2/any/false/871,870,573,869,36,868,867,133,38,35/any/10133,13266
[65] Dreyzhner, J. (2017). The Big 4: Using Primary Prevention to Drive Population Health. *Journal of Public Health Management & Practice, 23* (January/February 2017 Number 1), pp.1-2. Retrieved from https://www.nursingcenter.com/journalarticle?Article_ID=3891768&Journal_ID=420959&Issue_ID=3891767

Obesity and Physical Activity – Adult

Behaviors that affect the likelihood of adult obesity include physical activity and eating patterns. Other contributing factors include food, built environment, education, and access to opportunities for physical activity. The impacts of obesity in adulthood include higher risk for poor physical outcomes such as hypertension, diabetes, high cholesterol, heart disease, and stroke, as well as emotional and psychological consequences such as depression/anxiety and lower quality of life.[66]

The Centers for Disease Control defines Adult Obesity as the percentage of the adult population (age 20 and older) that reports a body mass index (BMI) greater than or equal to 30, while overweight is defined as a BMI between 25-30.[67]

Figure 28 shows over the last 10+ years Rutherford County's percentage of obese adults has been higher than the state and the nation, and in 2015 matched the state rate at 33%. Both Tennessee and Rutherford County have historically been above the national obesity rate for adults, which in 2015 was 28%.[68] **Figure 29** represents the obesity rate compared to state and nation in 2018.[69]

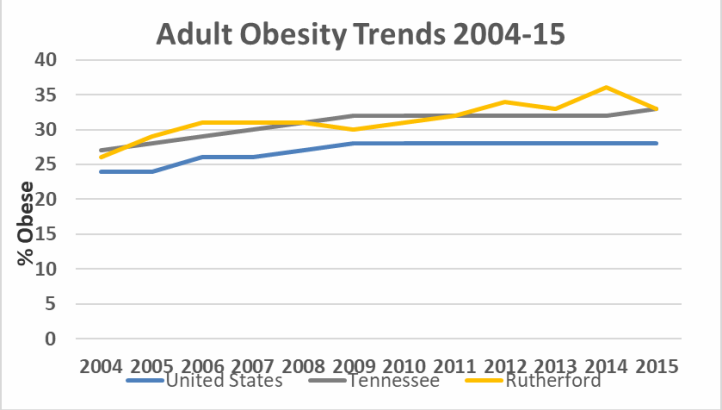

Figure 28: Adult Obesity Trends, County Health Rankings, 2018.

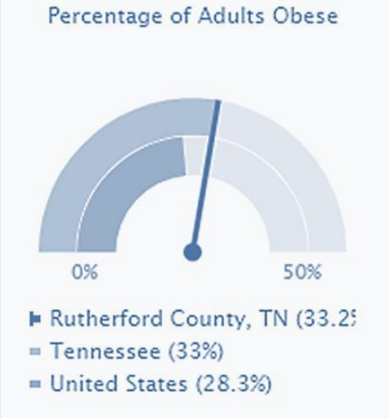

Figure 29: Rutherford Obesity Trends, County Health Rankings, 2018.

Additionally, in the 2017 Behavioral Risk Factor Surveillance System Survey, 30.6% of Tennessee adults reported not receiving any physical activity or exercise outside of their regular jobs in the previous 30-day period.[70]

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[66] Centers for Disease Control and Prevention. (2017). *Adult Obesity Causes & Consequences.* Retrieved February 26, 2019 from https://www.cdc.gov/obesity/adult/causes.html

[67] Centers for Disease Control and Prevention. (2017). *Defining Adult Overweight and Obesity.* Retrieved February 26, 2019 from https://www.cdc.gov/obesity/adult/defining.html

[68] University of Wisconsin Population Health Institute. (2018). *2018 County Health Rankings.* Retrieved from http://www.countyhealthrankings.org/app/tennessee/2018/measure/factors/11/data

[69] Community Commons. (2018). *Percentage of Adults Obese.* Retrieved November 12, 2018 from https://assessment.communitycommons.org/CHNA/report?page=3&id=408&reporttype=libraryCHNA

[70] Tennessee Department of Health. (2017). *Behavioral Risk Factor Surveillance System: Tennessee Calculated Variable Data Report.* Retrieved from https://www.tn.gov/content/dam/tn/health/documents/brfss/2017_Calculated_Variables.pdf

Obesity and Physical Activity – Youth

Lack of physical activity and consumption of high-calorie, low-nutrient food and beverages can lead to childhood obesity. Childhood obesity is related to several adverse physical and psychosocial problems in childhood and beyond. Obesity is correlated with hypertension, higher cholesterol, greater risk of type 2 diabetes, breathing issues, and joint problems for children. It is also linked to psychological and emotion problems like anxiety, depression, and lower self-esteem. There is a linked risk of these conditions becoming more severe in adulthood.[71]

The Centers for Disease Control and Prevention defines a child as overweight with a BMI in the 85th-94th percentile of children of the same age and sex, and childhood obesity is a BMI in the 95th percentile and above.[72] Tennessee has the second-highest rate of obesity in the nation among high school students at 20.5% compared to a nationwide rate of 14.8%[73]. In Rutherford County, roughly 40% of public school students are overweight or obese. The rate has been on the rise over the last several years.[74]

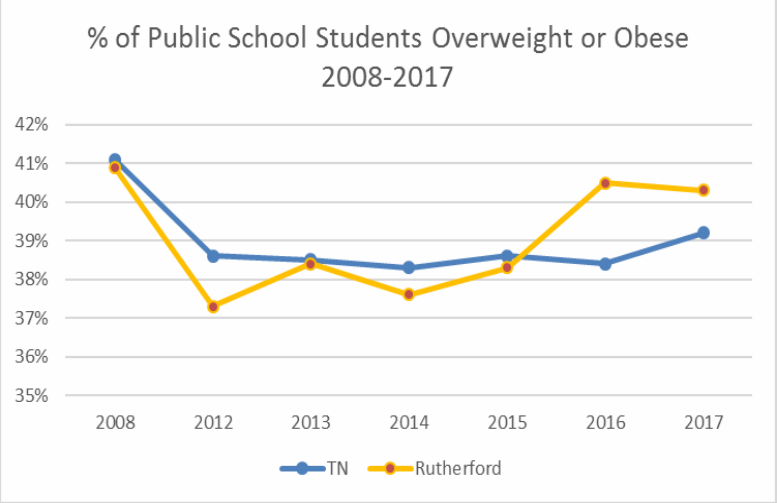

Figure 30: Rutherford Obesity Trends, County Health Rankings, 2018.

Figure 30 outlines the percent of public school students in Tennessee and Rutherford County that are deemed overweight or obese.

[71] Centers for Disease Control and Prevention. (2016). *Childhood Obesity Causes & Consequences.* Retrieved February 26, 2019 from https://www.cdc.gov/obesity/childhood/causes.html

[72] Centers for Disease Control and Prevention. (2018). *Defining Childhood Obesity.* Retrieved February 26, 2019 from https://www.cdc.gov/obesity/childhood/defining.html

[73] Centers for Disease Control and Prevention. (2017). *Adolescent and School Health – Nutrition, Physical Activity, & Obesity Data & Statistics.* Retrieved on July 8, 2018 from https://www.cdc.gov/healthyyouth/data/topics/npao.htm

[74] The Annie E. Casey Foundation Kids Count Data Center. (2019). *Public School Students Measured as Overweight or Obese.* Retrieved July 6, 2018 from https://datacenter.kidscount.org/data/tables/8705-public-school-students-measured-as-overweight-or-obese?loc=44&loct=5#detailed/5/6420-6514/false/871,870,573,869,36,868,35/any/17473

According to the Youth Risk Behavior Survey, more than half of Tennessee's children (56%) did not receive the recommended amount of physical activity weekly (at least 60 minutes per day on 5 or more days). Furthermore, 16.8% of Tennessee high school youth did not participate in 60 minutes of physical activity on at least one day of the week.[75]

Recreation Opportunities

Opportunities to exercise and be physically active are important in maintaining a healthy weight and staying fit through all stages of life. According to Community Commons, "A community's health […]is affected by the physical environment. A safe, clean environment that provides access to healthy food and recreational opportunities is important to maintaining and improving community health[…]This indicator is relevant because easy access to recreation and fitness facilities encourages physical activity and other healthy behaviors."[76] Recreation and fitness facilities can include exercise centers, skating rinks, gymnasiums, physical fitness centers, tennis clubs, swimming pools, and others.

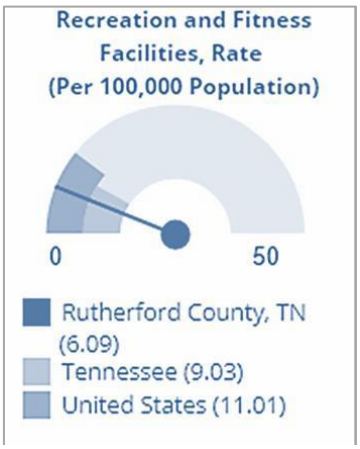

Figure 31: Rutherford Obesity Trends, Community Commons, 2018.

Figure 31 compares the state and nation to Rutherford County and shows that Rutherford has fewer recreation and fitness facilities with a rate of 6 recreation facilities per 100,000 persons.[77]

Substance Use

Tobacco Use

Smoking and tobacco use are health behaviors that affect almost every part of the body negatively. According to the Centers for Disease Control, "Smoking causes cancer, heart disease, stroke, lung diseases, diabetes, and chronic obstructive pulmonary disease (COPD), which includes emphysema and chronic bronchitis. Smoking also increases risk for tuberculosis, certain eye diseases, and problems of the immune system, including rheumatoid arthritis. Secondhand smoke exposure contributes to approximately 41,000 deaths among nonsmoking adults and 400 deaths in infants each year. Secondhand smoke causes stroke, lung cancer, and coronary heart disease in adults. Children who are exposed to secondhand smoke are at increased risk for sudden infant death syndrome, acute respiratory infections, middle ear disease, more severe asthma, respiratory symptoms, and slowed lung growth."[78]

[75] Centers for Disease Control and Prevention. (2017). *Adolescent and School Health – Nutrition, Physical Activity, & Obesity Data & Statistics.* Retrieved on July 8, 2018 from https://www.cdc.gov/healthyyouth/data/topics/npao.htm
[76] Community Commons. (2018). *Recreation and Fitness Facilities, Rate (Per 100,000 Population).* Retrieved November 12, 2018 from
[77] Community Commons. (2018). *Recreation and Fitness Facilities, Rate (Per 100,000 Population).* Retrieved November 12, 2018 from https://assessment.communitycommons.org/CHNA/report?page=3&id=408&reporttype=libraryCHNA

[78] Centers for Disease Control and Prevention. (2018). *Smoking & Tobacco Use – Health Effects.* Retrieved February 27, 2019 from https://www.cdc.gov/tobacco/basic_information/health_effects/index.htm

According to the 2016 Behavioral Risk Factor Surveillance System survey, Tennessee ranks among the top states in the nation for smoking rates among adults **(Figure 32).**[79] Nationwide, 15.5% of adults report smoking cigarettes; in Tennessee the rate is 22%, and in Rutherford County, 20% of adults report smoking cigarettes.[80] **Figure 33** shows both the state of Tennessee and Rutherford County lag behind the Healthy People 2020 nationwide goal of 12% of adults smoking.[81]

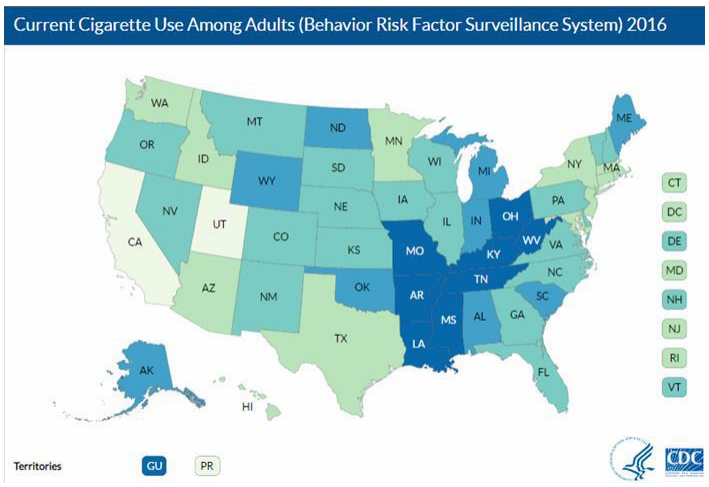

Figure 32: Cigarette Use Among Adults, BRFSS, 016.

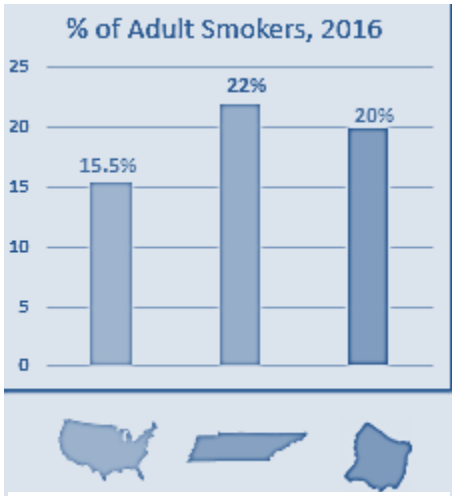

Figure 33: Adult Smokers, County Health Rankings, 2018.

Alcohol

Excessive drinking is defined by the Centers for Disease Control as excessive drinking includes binge drinking, heavy drinking, and any drinking by pregnant women or people younger than age 21.

- Binge drinking, the most common form of excessive drinking, is defined as consuming
  - For women, 4 or more drinks during a single occasion.
  - For men, 5 or more drinks during a single occasion.
- Heavy drinking is defined as consuming
  - For women, 8 or more drinks per week.
  - For men, 15 or more drinks per week.[82]

The health consequences of excessive drinking include, in the short term, susceptibility to injuries, accidents, violence, and poor decisions about sexual behaviors that can lead to poor health outcomes. Over the long term, excessive drinking can lead to the development of chronic diseases like

[79] Centers for Disease Control and Prevention. (2018). *Current Cigarette Smoking Among Adults in the United States.* Retrieved November 15, 2018 from https://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/cig_smoking/index.htm

[80] University of Wisconsin Population Health Institute. (2018). *2018 County Health Rankings.* Retrieved from http://www.countyhealthrankings.org/app/tennessee/2018/rankings/rutherford/county/outcomes/overall/snapshot

[81] Office of Disease Prevention and Health Promotion. (2019). *Tobacco Use.* Retrieved June 1, 2018 from https://www.healthypeople.gov/2020/topics-objectives/topic/tobacco-use/objectives

[82] Centers for Disease Control and Prevention. (2018). *Alcohol and Public Health – Fact Sheets – Alcohol Use and Your Health.* Retrieved February 27, 2019 from https://www.cdc.gov/alcohol/fact-sheets/alcohol-use.htm

hypertension and heart disease, liver disease, certain cancers, and anxiety or depression. Avoiding excessive drinking can help reduce likelihood of developing these conditions.[83]

According to the 2016 Behavioral Risk Factor Surveillance System survey in Rutherford County, 18% of adults reported drinking excessively in the last 30 days. This is lower than the national rate of 27%, though higher than the state rate of 14%.[84] 25% of driving deaths involved alcohol impairment[85], and in 48% of admissions to substance abuse treatment services, alcohol was named the substance.[86]

Table #2: Alcohol Use, BRFSS, (2018).

Excessive Drinking	**27%**	**14%**	**18%**
Alcohol-impaired driving deaths	**28%**	**28%**	**25%**
% of admissions to treatment for alcohol abuse	**34%**	**42%**	**48%**



Drug use

Death due to drug overdose is on the rise in the US, according to the Centers for Disease Control. Currently, around two-thirds of drug overdose deaths involve an opioid, including prescription drugs like Oxycodone and Hydrocodone, synthetic opiates like Fentanyl, and heroin. In 2017, 47,000 people in the US died from an opioid overdose. This is a nearly 6-fold increase since 1999.[87]

Tennessee has been at the forefront of the opioid crisis as one of the states with the highest rates of opioid prescriptions, ranking third behind Alabama and Arkansas for the number of prescriptions written for every 100 residents. In 2017, there were 94.4 opioid prescriptions written for every 100 Tennesseans

[83] Centers for Disease Control and Prevention. (2018). *Alcohol and Public Health – Fact Sheets – Alcohol Use and Your Health.* Retrieved February 27, 2019 from https://www.cdc.gov/alcohol/fact-sheets/alcohol-use.htm
[84] University of Wisconsin Population Health Institute. (2018). *2018 County Health Rankings, Excessive Drinking.* Retrieved from http://www.countyhealthrankings.org/app/tennessee/2018/measure/factors/49/map
[85] : University of Wisconsin Population Health Institute. (2018). *2018 County Health Rankings, Excessive Drinking.* Retrieved from http://www.countyhealthrankings.org/app/tennessee/2018/measure/factors/134/map
[86] The TN Department of Mental Health and Substance Abuse Services. (2017). *2017 TN Behavioral Health County and Region Services Data Book.* Retrieved from https://www.tn.gov/content/dam/tn/mentalhealth/documents/DPRF_BH_county_region_service_data_book_9-2017_FINAL.pdf
[87] Centers for Disease Control and Prevention. (2018). *Overview of the Drug Overdose Epidemic: Behind the Numbers.* Retrieved February 27, 2019 from https://www.cdc.gov/drugoverdose/data/index.html

(Alabama and Arkansas had 107.2 and 105.4 respectively).[88] **Figure 34** shows the states with the highest opioid prescription rates.

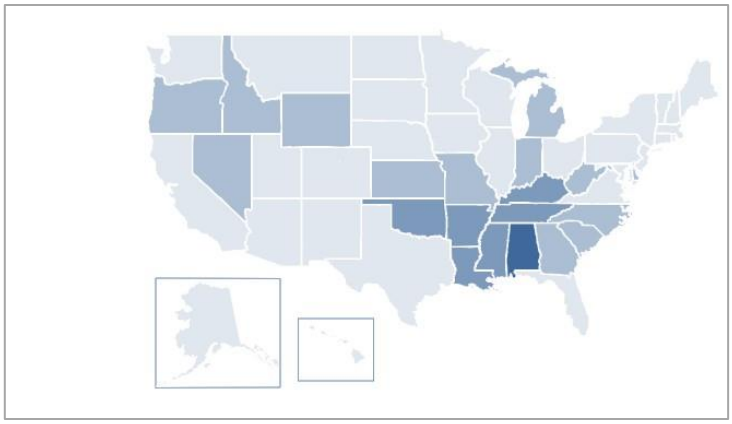

Figure 34: Opioid Prescribing Rate Map, Centers for Disease Control and Prevention (2017).

Prescription rates have trended downward over the last 8 years and in Rutherford County, the rate of opiate prescriptions per 100 people is 82.8, which is lower than the state overall (94.4) but still higher than the national rate of 58.7.[89] **Figure 35** illustrates these rates per 100 people.

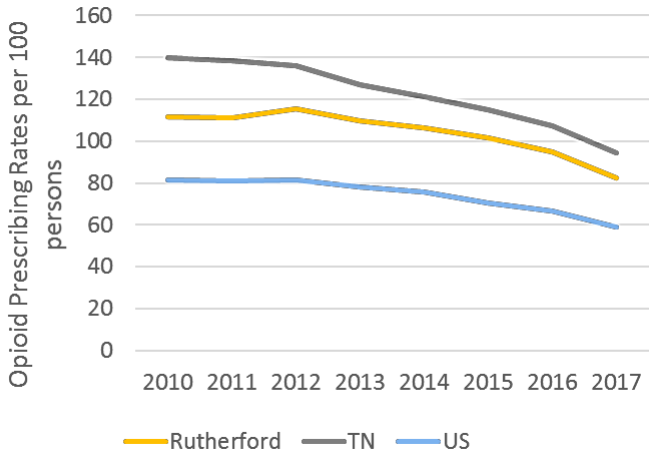

Figure 35: Opioid Prescribing Rate, Centers for Disease Control and Prevention (2017).

[88] Centers for Disease Control and Prevention. (2017). *U.S. County Prescribing Rate Maps.* Retrieved from https://www.cdc.gov/drugoverdose/maps/rxrate-maps.html

[89] Centers for Disease Control and Prevention. (2017). *U.S. County Prescribing Rate Maps.* Retrieved from https://www.cdc.gov/drugoverdose/maps/rxrate-maps.html

In 2017, there were 12,680 opioid-related deaths in Tennessee. **Figure 36** shows Rutherford County's drug overdose deaths between 2013-2017. In 2017, Rutherford had 65 total drug overdose deaths. The blue portion of the bars (dark and light combined) represents all opioid deaths, showing that 48 of those 65 overdose deaths in 2017 were opioids such as hydrocodone, oxycodone, opium, and morphine. The dark portion of the bar represents heroin overdose deaths. The use of heroin, an illegal opioid, is on the rise, as opioid prescriptions have begun to be more tightly restricted. Of the 48 opioid deaths in 2017, 18 represented a heroin overdose. The figure below demonstrates the increase in heroin overdose deaths over the last 5 years.[90]

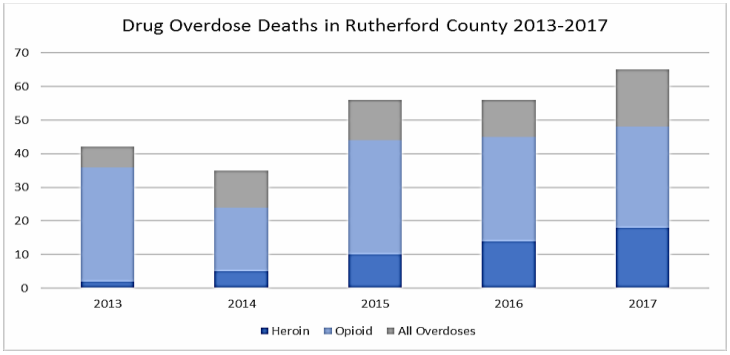

Figure 36: Rutherford Drug Overdose Deaths, TN Dept of Health (2017).

Figure 37 displays the reasons people in Rutherford county sought treatment for substance abuse over 2014-2016 from the TN Department of Mental Health and Substance Abuse Services. These numbers represent duplicated admissions; so, a single individual might have been admitted more than one time to several levels of care or have had several admissions during the fiscal year. From year to year, while alcohol and marijuana (yellow and gray) declined, opioids (blue) and methamphetamines (light blue) continued to rise. From 2015 to 2016, opioid admissions rose from 40% to 47%.

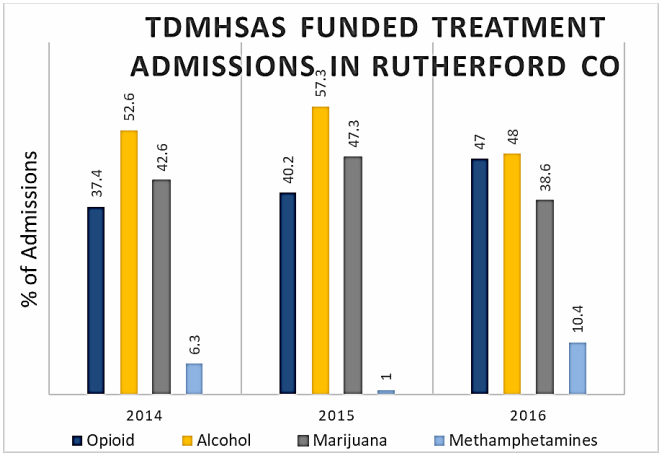

Figure 37: Treatment Admissions in Rutherford by Substance, TN Dept of Health (2017).

[90] Tennessee Department of Health. (2017). *Tennessee Drug Overdose Data Dashboard.* Retrieved on November 15, 2018 from https://www.tn.gov/health/health-program-areas/pdo/pdo/data-dashboard.html

Outpatient rehabilitation programs accounted for 43.7% of admissions statewide, while 56.3% were referred to an inpatient program. The referrals were made to freestanding residential detoxification programs (25.9%), intensive outpatient programs (23% statewide), and short term (<30 days) residential services (23.2%).[91]

Mental and Emotional Health

Mental Health

According to the CDC, "Mental health includes our emotional, psychological, and social well-being. It affects how we think, feel, and act. It also helps determine how we handle stress, relate to others, and make healthy choices, […] important at every stage of life, from childhood and adolescence through adulthood." Mental health is as important as physical health to overall wellbeing. Poor mental health conditions, like depression, can lead to poor physical health outcomes which can become cyclic.[92]

In the Behavioral Risk Factor Surveillance System survey in Rutherford County, residents self-reported a monthly average of 4.2 poor mental health days. Looking at poor mental health days per month can help to shed light on the quality of life in an area. This number has been steadily increasing since 2011, Rutherford County ranks in the top 3 for fewest poor mental health days throughout Tennessee. Overall, Tennesseans experience 4.5 poor mental health days monthly, and nationwide, 3.7.[93]

Provider ratios speak to the number of healthcare providers there are available for members of a given community. In the case of mental healthcare, providers include psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, mental health providers that treat alcohol and other drug abuse, and advanced practice nurses specializing in mental health care.[94]

Over the last several years in Rutherford County, mental health has emerged as a top as area of need in the community, and the data bear out this community concern over the shortage of mental health providers. Nationwide, there are 529: 1. In Tennessee overall, there are 740: 1. But in Rutherford County, there are 1,270: 1.[95]

Mental health also includes having adequate social support. In Rutherford County, 13.4% of people report that they feel that they have a lack of social or emotional support all or most of the time.

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[91] The Tennessee Department of Mental Health and Substance Abuse Services. (2017). Retrieved from https://www.tn.gov/content/dam/tn/mentalhealth/documents/DPRF_BH_county_region_service_data_book_9-2017_FINAL.pdf

[92] Centers for Disease Control and Prevention. (2018). *Learn About Mental Health.* Retrieved February 27, 2019 from https://www.cdc.gov/mentalhealth/learn/index.htm

[93] University of Wisconsin Population Health Institute. (2018). *Poor Mental Health Days.* Retrieved from http://www.countyhealthrankings.org/app/tennessee/2018/rankings/rutherford/county/outcomes/overall/snapshot

[94] University of Wisconsin Population Health Institute. (2018). *Mental Health Providers.* Retrieved from http://www.countyhealthrankings.org/app/tennessee/2018/measure/factors/62/description

[95] University of Wisconsin Population Health Institute. (2018). *Rutherford County Snapshot.* Retrieved from http://www.countyhealthrankings.org/app/tennessee/2018/rankings/rutherford/county/outcomes/overall/snapshot

Furthermore, 1.52% of those in Rutherford live in a linguistically isolated household, meaning that no one over the age of 14 in the household speaks English adequately. This linguistic barrier limits access to necessary services and the ability to seek healthcare. **Figure 38** shows where those households are concentrated. In the darkest tracts, between 5.5-7.2% of households would be considered linguistically isolated.[96]

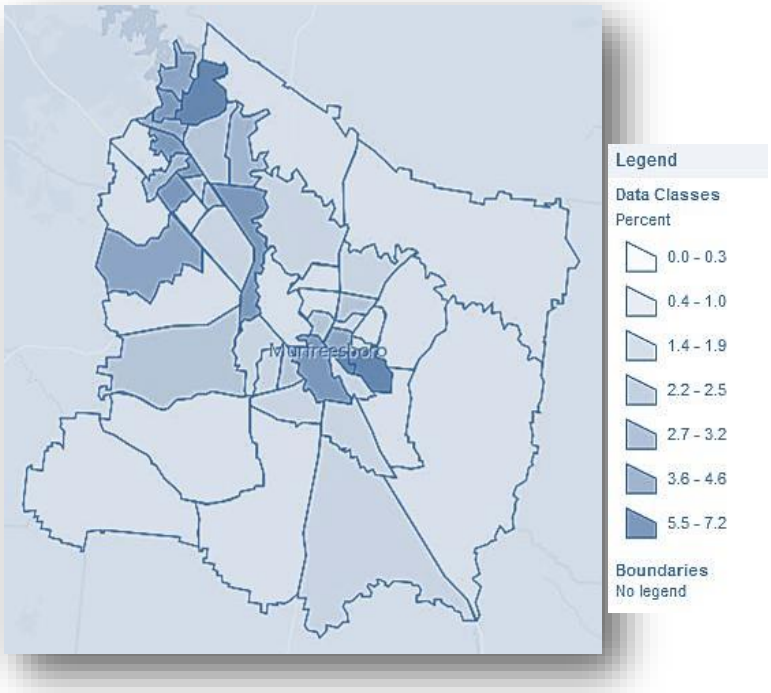

Figure 38: Households Linguistically Isolated, US Census Bureau (2016)

Another source of social support is the faith community. There are 10 faith congregations per 10,000 people in Rutherford County.[97] Statewide, Tennessee has 18: 10,000 people, which is the 9th highest in the nation.[98]

[96] US Census Bureau. (2016). *% in Limited English-Speaking Households, 2016 ACS 5-year Estimates.* Retrieved from https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml#none

[97] The Association of Religious Data Archives. (2010). *U.S. Religion Census: Religious Congregations and Membership Study, 2010 (County File).* Retrieved from http://www.thearda.com/Archive/Files/Descriptions/RCMSCY10.asp

[98] Stebbins, S. (2018, March 18) The most religious counties of every state in the U.S. *USA Today*. Retrieved from

Primary Data Results

Input from the community included an online community survey, interviews with community leaders, listening sessions and a health summit.

Online Community Survey

In Rutherford County, an online community survey was distributed to focus on the health status and needs of a representative sample of the population. The community survey was an electronic 63-item survey of open and closed-ended questions designed in collaboration with Saint Thomas Rutherford Hospital and Vanderbilt University Medical Center. The questions were created under domains based on the 2016 prioritized needs and considered feedback from the Circle of Engagement (COE). Many of the questions were adapted from the Behavioral Risk Factor Surveillance System (BRFSS) and other validated sources. After development of the questions, the survey was translated into Spanish and piloted for timing and accuracy. The survey was then distributed to the health system networks, schools, and other community partner networks.

Most respondents were female between the ages of 36 and 55. Most individuals (77%) were college graduates or higher and 15% were veterans or lived with a veteran. Most respondents were employed (84%), and about half of individuals had a household income of more than $75,000.

When asked about general health, about half of respondents noted their health to be “very good” (43%) or “excellent” (14%), and 8% described their health as “poor” or “fair.” Majority of individuals have exercised in the previous month (81%), have seen a doctor in the last year (86%), and about 7.5% of respondents currently use tobacco or e-cigarettes.

The next question asked how often individuals were stressed in the last two weeks, to which about half of responses were "none" (17%) or "a little" (39%). Approximately one-third of individuals noted they have been stressed some of the time (30%) within the last two weeks, and 14% answered they have been stressed most of the time or all the time.

Participants were then asked how many days have you felt sad, blue, or depressed within the last 30 days. The majority of respondents answered 0-2 days (66%), while 19% of people reported feeling sad for 3-6 days and 15% said 7-30 of the last 30 days.

About half of respondents had a child under the age of 18 in the house, and most individuals had one child (42%) or two children (41%) in the house. Nearly all respondents reported they are *always* able to take their children to a doctor when needed.

Participants were then asked about their primary source of health care coverage, to which most people said employer or union. 16% of respondents said there was a time in the past 12 months that they needed to see a doctor but were unable to because of cost. When asked why people delayed getting needed medical care in the last 12 months, 13% of people cited needing an appointment as a barrier and 10% said the hours were not convenient. Respondents were then asked about dental care including dentists, orthodontists, oral surgeons, and other specialties, and 75% of individuals noted it has been a year since they last visited a dentist for any reason. About a third of individuals responded they are somewhat satisfied with the general health care they receive, and about two thirds noted they are very satisfied.

In Rutherford County, there are enough resources and education surrounding…		
Topic	**Agree/ Strongly Agree**	**Don't Know**
Child Abuse & Neglect Prevention	**18%**	**57%**
Safe Car Seat Use	**42%**	**47%**
Safe Sleep Practice Education	**34%**	**58%**
Safe Seatbelt Use (9-14)	**41%**	**45%**
Teen Driver Safety	**41%**	**42%**
Prevention of Falls (0-5)	**23%**	**65%**

When asked about mental health and substance abuse, most people agreed or strongly agreed that drug use and abuse (70%) is a problem in their county. 55% of individuals agreed or strongly agreed that alcohol abuse is a problem in their county, while 42% of respondents marked they did now know. The next question asked whether there are accessible, affordable resources in their county for people who want to stop using drugs or alcohol, to which over half of individuals reported they did not know. Additionally, about half of respondents noted they did not know if there are accessible, affordable resources for people who need mental health services. Individuals were then asked if mental illness is a problem in their county, to which 58% agreed or strongly agreed and about 40% did not know.

Respondents were asked whether they can meet basic needs such as food, clothing, housing, and medication, to which most individuals reported having the ability to meet basic needs both for their families (90%) and for themselves (95%). In response to questions about resource availability in their

community, about a third of people agreed there are accessible resources to address transportation and housing, a third disagreed, and a third did not know. Most people agreed there is accessible and affordable healthy food in their county, while about a quarter did not know. Additionally, about a third of individuals agreed there are accessible affordable resources to address problems of domestic violence in their county, while over half of participants did not know. Finally, respondents were asked how safe they consider their neighborhood to be, to which 17% said extremely safe and 78% said safe.

Additional open-ended questions were also part of the survey:

1. What do you think is the most important health issue for children in Rutherford County? (n=565):
    - Nutrition – Overall nutritional status is dependent on many things. In Rutherford County, there are identified issues with obesity and lack of exercise, food access, and education/resources around nutrition.
    - Parenting/Home Life – There is an interwoven cycle of neglect/abuse, poor parenting, and drug use.
    - Stress/Anxiety – Issues feeding stress and anxiety in children include the impact of increased social media/technology use, the lack of basic needs, and school pressure.

2. Are there other issues related to health care access, insurance, or the health system in Rutherford County that you would like to share? (n=183):
    - Affordability and Coverage of Insurance – Identified issues include family inclusion on health insurance plans, cost of health insurance vs. what is covered, and lack of coverage in dental/mental health/other specialty services.
    - Access (Healthcare) – Access issues include difficulty using the healthcare system related to convenience and lack of knowledge on how to access. The healthcare system is confusing. There are additional access issues related to dental care, mental health care, and other specialty care.
    - Healthcare Equity – Healthcare is not accessible to everyone in ways that meet their individual needs. All persons should be able to access services regardless of ability to pay, cultural barrier, or other specialized populations such as seniors and children

3. What are the important characteristics of a healthy community for all who work, live, learn, and play in Rutherford County? (n=309):
    - Safety – Safety is noted in both in a wish to increased infrastructure and a feeling of increased crime with the growth of the community. Safety was a consistent theme in both English and Spanish surveys.
    - Neighborliness/Community – This includes the way people treat each other.
    - Basic Resources – Basic resources include housing, education, childcare, food access, and support for seniors.

- Environment – Environment includes the natural environment such as clean air and water, and the built environment such as sidewalks.

4. What else would you like to share related to the health and wellness of Rutherford County? (n=127):
    - Better Support for Children
    - Mental Health
    - Resources/Communication

Community Listening Sessions

Four listening sessions were held in Rutherford County with a total of 60 participants. Two of the sessions were held at First Baptist Church, one was at Journey Home, and the other was at Rutherford County Health Department with recruitment by Bradley Academy. The moderators guided discussion topics including community assets, issues and concerns, barriers to addressing issues, and priorities. A brief survey was given to obtain demographic information about the participants. Thematic analysis was then conducted by a team of four reviewers. The listening session guide can be found in **Appendix C.**

The listening session participants were primarily female, Black or African American, and spoke English as primary language. 22% of individuals were Hispanic or Latino, and one-third were over the age of 65. About one-third of participants were uninsured, and one-third had Medicare or Medicaid.

When asked about the community's strongest assets, responses included public services, non-profit organizations, healthy options particularly in the built environment, child friendly programs and community, local community health centers, growth, social networks, and the faith community. Participants were then asked about the top three community issues. The primary responses were housing and homelessness, vulnerable populations, navigating and accessing health care, built environment and transportation, racism and feeling national discourse at local levels, childcare costs, growth, and lack of positive opportunities for youth. Vulnerable populations referred to older adults, formerly incarcerated, veterans, people with disabilities, and others. The next question asked participants about the barriers to addressing these issues in the community, to which the responses were racism, stigma, political climate, lack of civic engagement, accessibility of resources due to literacy levels and language barriers, inconsistent and unsustainable solutions, and lack of transportation and affordable housing. Responses also included healthy choices not being "easy" choices due to a lack of availability and affordability.

Community members were then asked, "If you had a magic wand, what would be your top initiatives/priorities?" The main responses were homelessness and housing, addressing racism, self-sufficiency, reproductive health, support for vulnerable populations, strengthen families and invest in youth, walkability and traffic, and resources for older adults. In addition to addressing racism,

respondents also noted a need to address stigma and discrimination. This was reiterated and summarized, and participants had a desire for their community/neighbors to "love each other."

The main overall themes discussed in the Rutherford County listening sessions were housing and homelessness, positive and negative impacts of population growth, resource accessibility and awareness, community cohesion and networks, and racism and stigma.

Top Community Issues **Listening Sessions in Rutherford County**	
Housing & Homelessness	Vulnerable Populations
Navigating & Accessing Health Care	Built Environment & Transportation
Opportunities for Youth	Hidden Racism
Growth	Childcare Costs

Interviews

Community stakeholders and leaders, who represented a broad interest of the community, were identified by the partnering organizations to participate in these interviews. The interviewee constituency was diverse and included those with professional experience and/or the ability to represent populations which are medically underserved, low-income, minority and/or with chronic disease needs. Community representatives and leaders also included those with special knowledge and expertise in public health. Interviewees represent areas of healthcare services, law enforcement, education, non-profit agencies, faith communities, government representatives, safety net service providers, economic and workforce development, mental/behavioral health services, housing and homelessness and other interest groups working with vulnerable populations. The interviews were conducted by representatives from Saint Thomas Health, Vanderbilt University Medical Center and graduate students using a standardized interview instrument, which can be found in **Appendix B.** Questions focused on community assets, issues/concerns, obstacles to addressing concerns, and priorities. Twenty-six interviews (26) were conducted, consisting of five (5) open-ended questions and time for additional comments at the end. Additional information regarding the interview process and analysis are included in the Methodology section of this report. The top responses for each question follow:

1. What do you think are your community's strongest assets?
    - **Community** – the Rutherford community is engaged and connected. There is social support within the community.
    - **Growth** – there has been an increase in available resources, businesses, the built environment, and community activities due to growth.
    - **Education/Schools** – there is a strong public education system. MTSU adds extra support and stability to the community in resources, jobs, and community involvement.

2. Based on your experience, what are the top three issues that you are most concerned about in your community (Probe: think broadly, beyond health)?
    - **Housing** – issues include increased homelessness, decreased affordability of housing, and decrease or lack of suitable housing options (for example, for seniors).

- **Growth** – challenges include maintaining infrastructure (including transportation), increases in crime, and availably/access to healthcare and other resources.
- **Equity** – disparities and inequality are particularly apparent with minorities (cultural and racial), and those in poverty.

3. What would you say are the top three issues specific to health or health care that you are most concerned about in your community?
    - **Affordable Care** – specific concerns include affordability of specialty services and medication. There are also issues with health insurance related to lack of coverage, complexity of utilizing coverage, and delays in service.
    - **Mental Health/Addiction** – there is a lack of resources and access to mental health/addiction services – especially for families, children, and the uninsured. There is an overall shortage of providers. There is an overall lack of acute treatment options, including treatment for overdoses.
    - **Lifestyles/Behaviors** – in Rutherford County, obesity, lack of knowledge and education, and issues with access to housing and transportation have a negative impact on the health of the community.

4. What do you think are the obstacles or challenges to addressing these issues?
    - **Lack of Resources –** There is a lack of both financial resources and human resources in addressing these identified needs**.**
    - **Need for Increased Collaboration –** Although there are many resources and services available within the community, often these resources are not connection and/or there is not awareness that the services are available. Some services are duplicative, and some needs are not met.
    - **Culture of Health (hard to change) –** Generational, cyclic, and diverse underlying cultures all play an impact on shifting community health.

5. If you had a magic want, what top initiatives would you implement in your community in the next three years?
    - **Affordable Living** – key components of affordable living include housing, education, and healthcare access.
    - **Built Environment** – enhancing the built environment involved increasing green spaces and sidewalks, as well as addressing landfill issues and recycling.
    - **Overall Equity** – Equity for all with special attention to seniors, children, and minorities.

Crosscutting themes in interviews included:

- Need for increased coordination, collaboration, and communication - Within all sectors of the community, there is a lack of consistent and reliable collaboration, coordination, and communication. This has been intensified with the rapid growth and increasing diversity within Rutherford County.
- Addiction – Increased addiction issues, including stigma, lack of treatment resources, and effects on families/children were identified.

Community Health Summit

The results of the systematic review, secondary data, listening sessions, online community survey and interviews were presented by Saint Thomas Rutherford Hospital, Vanderbilt University Medical Center and Rutherford County Health Department, to the community on December 11th, 2018 at Patterson Park Community Center. The forty-seven (47) meeting attendees provided collective input into the needs of the community.

The purpose of the Summit was to solicit input and consider the broad interests of the community in identifying and prioritizing the community's health needs. After hearing the data, summit participants provided input into prioritizing the most important health needs in the community through a prioritization process. Steps of the Needs Prioritization are below:

- Summit participants individually selected three health issues
- Summit participants worked with tablemates to group and consolidate the health issues into categories
- Summit hosts collected the consolidated categories and entered the list into an electronic voting system (REDcap)
- Summit participants used electronic devices to vote on REDCap for the top three health needs to prioritize

The results of this voting are shown in **Figure 39**. Summit hosts also consulted the Rutherford County Wellness Council for feedback regarding final interpretation of these results.

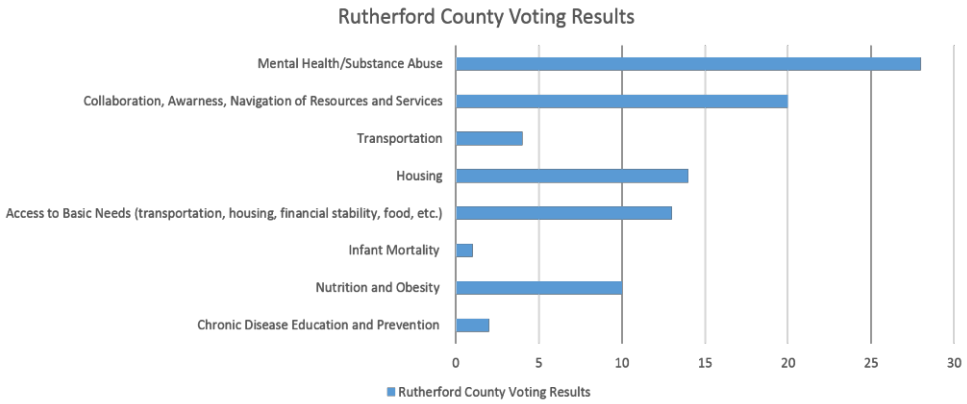

Figure 39: 2018 Rutherford County Health Summit Voting Results

Rutherford County Needs Description

Given the results of the needs prioritization voting described above and the feedback from the Rutherford County Wellness Council the prioritized needs for Rutherford County are:

Mental Health/Substance Abuse

Access to Basic Needs

Concentration on Housing

Enhance Resources & Services

Nutrition and Obesity

Mental Health/Substance Abuse

The needs prioritization process at the Rutherford County summit revealed the most prominent areas of focus in this category, which included the coordination of mental health care among healthcare sectors and social services, increasing substance abuse services, and making mental health care affordable and accessible to all. Individuals at the summit were asked to name three goals for this priority, which were: (1) Education-- increasing the number of people in the workforce and educating community members and state leaders, (2) Preventative programming, and (3) Advocacy with state leaders to increase funding for these issues. Participants stressed the necessity for increased collaboration among different entities for success to occur in the next three years. Some of the organizations mentioned include the Mental Health Action Committee in Rutherford County, the Tennessee State Government, and Rutherford County Government officials.

Access to Basic Needs

Needs prioritization efforts at the summit revealed that focuses should be on vulnerable populations and that to address the issues there are many organizations that need to collaborate on solutions. Some of the populations most burdened by lack of access to basic needs are under and unemployed populations, refuges, and minority populations. The goals for this priority were determined to be: (1) creation of a community bank of resources, (2) increasing access to affordable housing, and (3) increasing public transportation throughout the entire county with more inclusive hours. Some of the organizations mentioned that could be part of collaborative efforts include Big Brothers/Big Sisters, the Rover transportation system, churches, Journey Home, and the United Way.

Concentration of Housing

Throughout prioritization at the summit, participants focused on there being a greater awareness of the issue and making it a priority to increase affordable housing units in the county. Other populations affected by a lack of affordable housing include those with mental health issues, disabled, seniors, and lower middle class and below. In addition to affordable housing, there needs to be increased supportive services. A large part of the conversation focused on the need for sustainable solutions. For sustainable solutions to be created, collaboration from many involved is essential. Some of the involved organizations include Habitat for Humanity, Journey Home, the Housing Authority, and government officials at all levels (local, state, and federal).

Nutrition and Obesity

During the prioritization process prevention, education and access were the three most important components in addressing nutrition and obesity issues. Furthermore, prevention initiatives were mentioned such as activities in schools and adding walkable parks and trails. There is a lack of access to healthy foods, making food access a huge priority in Rutherford County. Schools can greatly decrease the impact of this by implementing various policies. For example, schools can implement policies that wave the cost of food for low-income students. Sustained system changes require effort from a variety of stakeholders. This includes policymakers, who must improve access to necessary resources.

Enhance Resources & Services

Needs prioritization efforts at the summit revealed what success looks like in three years for this need. This priority highlight was different from others in that this was really seen as essential to achieving and key for success in the other priorities to occur. Prioritization at the summit highlighted this priority as "keeping a pulse on all issues that the community faces." Continued and regular attendance in interdisciplinary, collaborative meetings is essential for addressing the largest needs throughout Rutherford County. Potential collaborators on this effort include H3ARC, schools, law enforcement, and medical and mental health providers.

APPENDIX

A. ACKNOWLEDGMENTS

We would like to acknowledge the contributions of those who supported, advised, and participated in this Community Health Needs Assessment of Rutherford County, Tennessee. We greatly appreciate their contributions.

- Interview Participants
- Community Survey Participants
- Community Health Summit Attendees
- The Journey Home
- First Baptist Church

Circle of Engagement

- Katina Beard, Matthew Walker CHC
- Chandra Story, MTSU
- Cindy Chafin, MTSU
- Kahler Stone, MTSU
- Jennifer Devan, Veterans Affairs (VA)
- Jenna Stizel, Coordinated School Health
- Darla Sampson, Coordained School Health
- Kaysi Paul, Prevention Coalition for Success (PC4S)
- Jermonde Bey, Prevention Coalition for Success (PC4S)

Rutherford County Health Department

- Dana Garrett, Public Health County Director
- LaShan Matthews, Assistant Public Health County Director

Rutherford County Wellness Council

- Lisa Terry, Chair

Saint Thomas Rutherford Hospital and Saint Thomas Health

- Gordon Ferguson, Chief Executive Officer
- Tracey Biles, Ministry Formation Director
- Bailey Pratt, VP Finance
- Elizabeth Malmstrom, Community Benefit Director
- Lindsay Voigt, Community Benefit Manager
- Nancy Anness, Chief Advocacy Officer
- Amber Sims, Chief Strategy Officer
- Bridget Del Boccio, Community Benefit Coordinator

Vanderbilt University Medical Center

- Elisa C. Friedman, Director, Planning and Community Engagement Meharry-Vanderbilt Alliance and Vanderbilt Institute for Medicine and Public Health
- Chelsei Granderson, Research Coordinator, Institute for Medicine and Public Health, Vanderbilt University
- JW Randolph, Research Coordinator, Institute for Medicine and Public Health, Vanderbilt University
- Sarah Ray, Associate Program Manager, Institute for Medicine and Public Health, Vanderbilt University

The intention was to provide a complete and accurate list of contributors; we apologize, in advance, for any unintentional errors in the listing of acknowledgments.

B. COMMUNITY LEADERS & REPRESENTATIVE INTERVIEW

Saint Thomas Health

2019 Community Health Needs Assessment

Interview Summary Sheet

INTERVIEWER NAME: _____
RECORDER NAME: _____
CHNA AREA/COUNTY: ___
DATE: _____
INTERVIEWEE NAME: _____
ORGANIZATION: _____
TITLE: _____
DATA ENTRY DATE: _____
DATA ENTRY BY: _____

Hello, my name is_____. I am a representative of _Saint Thomas Hospital and, with me is_____from Saint Thomas Health.

Thank you for taking your time to meet with us and agreeing to participate in the Community Health Needs Assessment. As part of the assessment we are interviewing Community Leaders and Representatives as a way of understanding and identifying the priority health needs of Rutherford County.

We anticipate the interview will take approximately 30 minutes. We have a set of questions we will be asking. Both_____and I will be recording your selections and comments, so that the information may be combined with the responses of the other interview participants.

Please note: As required by the IRS Community Health Needs Assessment (CHNA) guidelines, the CHNA which will be made publicly available and posted on the hospital's website. We will be acknowledging the participation of community leaders and representatives by industry grouping. Your responses will be summarized and aggregated with others and your name will not be linked to specific responses or comments.

Are you ready to begin?

1. Could you tell us a little about yourself and your role here at _*(organization name)*_?

2. What do you think are your community's strongest assets?

3. Based on your experience, what are the top three issues that you are most concerned about in your community?
   [*Probe: think broadly, beyond health]*

4. What would you say are the top three issues specific to health or health care that you are most concerned about in your community?
   [INTERVIEWER NOTE: Assess previous response]

5. What do you think are the obstacles or challenges to addressing these issues?

6. If you had a magic wand, what top initiatives would you implement in your community in the next three years?
   [*Probe: What resources, policies or supports would you like to see put in place to address your counties' health needs?*

7. Was there anything you wanted to discuss today that we didn't cover?

8. Do you have any questions for us?

Thank you for your time. We appreciate your participation and willingness to share your and your constituents' concerns.

The complete Community Health Needs Assessment is anticipated to be released in mid-2019 and will be posted on the website for both hospitals and the health department.

Thank you again for your participation.

ADDITIONAL INTERVIEWER NOTES RE: INTERVIEW (OPTIONAL)

C. LISTENING SESSION FACILITATOR GUIDE

Introduction

Good Morning/Afternoon/Evening. My name is _ and I'll be your moderator today for this very important discussion on [Community Health Needs]. My role as the moderator is to direct the content and flow of the discussion and to make sure that we cover the main topics.

[If an assistant is present, introduce him/her]
I would like to introduce_____who will be observing and assisting in this discussion.

[If a transcriber is present, introduce him/her]
I would like to introduce_____who will be taking notes during this discussion.

Objectives and Agenda

Currently - Vanderbilt University Medical Center, Saint Thomas Health, and the Metro Public Health Department are conducting a Community Health Assessment in Davidson County. We are collecting several types of data including the first-hand opinions of community members through the use of listening sessions, like this one. We want to take into account the broad interests, experiences, and viewpoints of this community, which is why each of you has been invited to join this listening session. Today we want to get your understanding of the issues that face your community, what barriers exist – when it comes to health and healthcare, and what resources are either present, or missing.

Description of process and consent

Your participation in this listening session is voluntary. You are free to withdraw from this group at any time. The questions we ask will focus on your thoughts and feelings about the health needs of yourself and your community. We are interested in all feedback and opinions.
We will be taking notes during this conversation. However, your name and other information that might identify you will not be included in any reports from this session. The responses you share will be combined with other responses so that we can look for common themes in each question area.

We will also ask you to complete a brief background survey so that we can describe the composition of our groups. Please do not include your name on this survey.

The group discussion will last about one hour. Once the group discussion is over, your participation is finished. Please see me to receive your gift card.

The reports describing what we learned from this and other groups will be shared with leadership at both hospitals, with the community and will also be publicly available on the Vanderbilt University Medical Center, Saint Thomas Health, and Metro Public Health Department web sites. It will also be shared with the federal tax entity (i.e., the IRS) that both hospitals are required to report to annually.

If you stay in this group, we will assume you agree with what I have shared. Please do know that you can leave the group or ask me questions at any time.

Ground Rules

Before we begin I would like to go over a few basic ground rules for our discussion.
There are no right or wrong answers.
You do not have to speak in any particular order.
When you do have something to say, please do so. It is helpful for me to obtain the views of each of you.
You do not have to agree with the views of other people in the group.
Only one person should speak at a time. There may be temptation to jump in when someone is talking but please wait until they have finished.
Does anyone have any questions? Are any ground rules missing?

Introductions

I would like to quickly go around the group and give each person a moment to introduce him or herself. We will go by first names only. In particular, please tell me:

- How long you lived in Rutherford County?

Community Health Issues

First, let's talk about the health issues in your community. By community, we mean your friends, neighbors, family, coworkers, and other people you have contact with on a regular basis. I am going to start by asking you about broad issues

1. What do you think are your community's strongest assets?
2. Based on your experience, what are the top three issues that you are most concerned about in your community? [*Probe: think broadly, beyond health]*
3. What do you think are the barriers to addressing these issues?
4. If you had a magic wand, what top health initiatives would you implement in your community in the next three years?
5. Was there anything you wanted to discuss today that we didn't cover?
6. Do you have any questions for us?
7. Those are all my questions. Thank you for your participation. Your feedback is very valuable to us.

D. ONLINE COMMUNITY SURVEY

2019 Community Survey – English

- **Introduction**
  - This survey is being conducted by the Rutherford County Health Department, Saint Thomas Health, and Vanderbilt University Medical Center in order to better understand the needs of those who live and/or work in Rutherford County. If you are at least 18 years of age, please complete the following survey. All responses will remain anonymous. Thank you!
- **Consent to Participate**
  - Answering this survey is voluntary. You may exit the survey at any time without penalty. You are free to decline to answer any particular question you do not wish to answer for any reason. We will keep your answers completely anonymous. Your name and other identifiers will never be associated with your answers. Completing the survey should take 10-15 minutes.

Please check "yes" to show that you have read this statement and agree to participate. **If you do not wish to participate in this assessment, you can exit out of the web page now. **

  - Yes
  - No (*end survey*)

- **Eligibility**
  - Do you live and/or work in Rutherford County?
    - Yes
    - No (*end survey*)
- **Demographic Information**
  - Do you live in Rutherford County?
    - Yes
    - No
      - If no, please name the county where you live.
  - Length of time you've lived in Rutherford County:
    - Less than 1 year
    - 1 to 5 years
    - 6 to 10 years
    - More than 10 years
  - In which county do you work?
    - Davidson
    - Rutherford
    - Williamson
    - Other

        - If other, please name the county where you work.
- Zip code where you live: _____
- Age:
    - 18 to 25
    - 26 to 35
    - 36 to 45
    - 46 to 55
    - 56 to 65
    - Over 65
- Gender (check all that apply):
    - Man
    - Woman
    - Genderqueer or gender fluid
    - Transgender
    - Other
        - If you selected "Other," please describe.
- Sexual Orientation:
    - Straight, that is, not gay
    - Lesbian or gay
    - Bisexual
    - Other
        - If you selected "Other," please describe.
    - Prefer not to disclose
- Are you Hispanic, Latino/a, or of Spanish origin?
    - Yes
    - No
- Which of the following would you say is your race? (Check all that apply):
    - White
    - Black or African American
    - American Indian or Alaska Native
    - Asian
    - Pacific Islander
    - Other
        - If you selected "Other," please describe.
- Primary language spoken at home:
    - English
    - Spanish
    - Laotian
    - Arabic

    - Chinese
    - Hindi
    - Other
        - If you selected "Other," please describe.
- What is the highest grade or year of school you completed?
    - Never attended school or only attended kindergarten
    - Grades 1 through 8 (Elementary)
    - Grades 9 through 11 (Some high school)
    - Grade 12 or GED (High school graduate)
    - College 1 year to 3 years (Some college or technical school)
    - College 4 years (College graduate)
    - Graduate degree or higher
- Are you currently…? (Check all that apply.)
    - Employed for wages
    - Self-employed
    - Out of work for 1 year or more
    - Out of work for less than 1 year
    - A homemaker
    - A student
    - Retired
    - Unable to work
    - Other
- Is your annual household income from all sources…?
    - Less than $10,000
    - $10,000 to less than $15,000
    - $15,000 to less than $20,000
    - $20,000 to less than $25,000
    - $25,000 to less than $35,000
    - $35,000 to less than $50,000
    - $50,000 to less than $75,000
    - $75,000 or more
- How many people currently live in your household?
    - _____people
- Veteran status:
    - I am a veteran.
    - I am not a veteran, but there is a veteran in my household.
    - I am not a veteran, and there is not a veteran in my household.

- **Health Self-Assessment**
    - Would you say that in general your health is…?

- Excellent
- Very good
- Good
- Fair
- Poor

- During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?
  - Yes
  - No
- Do you currently use tobacco or e-cigarettes?
  - Yes
  - No
- About how long has it been since you last visited a doctor for a routine checkup?
  - Within the past year (anytime less than 12 months ago)
  - Within the past 2 years (1 year but less than 2 years ago)
  - Within the past 5 years (2 years but less than 5 years ago)
  - 5 or more years ago
  - Never
  - Don't know
- Stress is when a person feels tense, restless, nervous, or anxious, or can't sleep at night because their mind is troubled all the time. Over the past 2 weeks, how often have you felt this kind of stress?
  - None of the time
  - A little of the time
  - Some of the time
  - Most of the time
  - All of the time
- During the past 30 days, for about how many days have you felt sad, blue, or depressed?
  - _____days

- **Children's Health**
  - Do you currently have any children under the age of 18 living in your home?
    - Yes
    - No
  - If yes:
    - How many children under the age of 18 live in your home?
      - _____children
    - How old are the child(ren) currently living in your household? (Check all that apply.)
      - Less than 1 year

        - 1-4 years
        - 5-10 years
        - 11-14 years
        - 15-17 years
    - How often are you able to take the child(ren) who live in your household to visit a doctor when you need to?
        - Always
        - Sometimes
        - Never

- To what extent do you agree with the following statements?
    - In Rutherford County, enough is being done to prevent child abuse and neglect.
    - Strongly agree
    - Agree
    - Don't know
    - Disagree
    - Strongly disagree

    - The following questions ask about resources to prevent accidents that cause injury among children.
        - In Rutherford County, there are enough resources and education surrounding:
            - Safe car seat use
                - Strongly agree
                - Agree
                - Don't know
                - Disagree
                - Strongly disagree
            - Safe sleep practices for infants
                - Strongly agree
                - Agree
                - Don't know
                - Disagree
                - Strongly disagree
            - Safe seatbelt use for children ages 9-14
                - Strongly agree
                - Agree
                - Don't know
                - Disagree
                - Strongly disagree

- Driver safety for teens ages 15+
  - Strongly agree
  - Agree
  - Don't know
  - Disagree
  - Strongly disagree
- Home safety related to the prevention of falls for children ages 0-5
  - Strongly agree
  - Agree
  - Don't know
  - Disagree
  - Strongly disagree

- What do you think is the most important health issue for children in Rutherford County? (e.g. abuse, nutrition, stress, etc.)

Access to Care

- What is the primary source of your health care coverage?
  - A plan purchased through an employer or union (includes plans purchased through another person's employer)
  - A plan that you or another family member buys on your own
  - Medicare
  - Medicaid or another state program
  - TRICARE (formerly CHAMPUS), VA, or Military
  - Alaska Native, Indian Health Service, Tribal Health Services
  - Some other source
  - None (no coverage)
  - Don't know
- Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?
  - Yes
  - No
- Other than cost, there are many other reasons people delay getting needed medical care. Have you delayed getting needed medical care for any of the following reasons in the past 12 months? Select the most important reason.
  - You couldn't get through on the telephone.
  - You couldn't get an appointment soon enough.
  - Once you got there, you had to wait too long to see a doctor.
  - The hours at the clinic/doctor's office were not convenient
  - You didn't have transportation.

    - No, I did not delay getting medical care/did not need medical care.
    - Other
        - If you selected "Other," please describe.

- Including all types of dentists, such as orthodontists, oral surgeons, and all other dental specialists, as well as dental hygienists, how long has it been since you last visited a dentist or a dental clinic for any reason?
    - Within the past year (anytime less than 12 months ago)
    - Within the past 2 years (1 year but less than 2 years ago)
    - Within the past 5 years (2 years but less than 5 years ago)
    - 5 or more years ago
    - Never
    - Don't know
- In general, how satisfied are you with the health care you receive? Would you say…
    - Very satisfied
    - Somewhat satisfied
    - Not at all satisfied
- Are there other important issues related to health care access, insurance, or the health system in Rutherford county that you would like to share?

- **Mental Health and Substance Abuse**
    - To what extent do you agree with the following statements?
        - Drug use/abuse is a problem in my county.
            - Strongly agree
            - Agree
            - Don't know
            - Disagree
            - Strongly disagree
        - Alcohol abuse (i.e. more than 1 drink per day for women or 2 drinks per day for men) is a problem in my county.
            - Strongly agree
            - Agree
            - Don't know
            - Disagree
            - Strongly disagree
        - There are accessible, affordable resources for people in my county who want to stop using drugs or drinking alcohol.
            - Strongly agree
            - Agree

        - Don't know
        - Disagree
        - Strongly disagree
    - There are accessible, affordable resources for people in my county who need mental health services.
        - Strongly agree
        - Agree
        - Don't know
        - Disagree
        - Strongly disagree
    - Mental illness is a problem in my county.
        - Strongly agree
        - Agree
        - Don't know
        - Disagree
        - Strongly disagree
- **Social Determinants of Health**
    - To what extent do you agree with the following statements?
        - I have the ability to meet my basic needs such as food, clothing, housing, and medicine.
            - Strongly agree
            - Agree
            - Don't know
            - Disagree
            - Strongly disagree
            - Not applicable
        - I have the ability to meet the basic needs of my family such as food, clothing, housing, and medicine.
            - Strongly agree
            - Agree
            - Don't know
            - Disagree
            - Strongly disagree
            - Not applicable
    - To what extent do you agree with the following statements?
        - Transportation in my county is safe, affordable, and accessible to everyone.
            - Strongly agree
            - Agree
            - Don't know
            - Disagree

        - Strongly disagree
    - There is affordable and accessible housing available in my county.
        - Strongly agree
        - Agree
        - Don't know
        - Disagree
        - Strongly disagree
    - There is accessible and affordable healthy food available to all in my county.
        - Strongly agree
        - Agree
        - Don't know
        - Disagree
        - Strongly disagree
    - There are accessible resources to address problems of domestic violence in my county.
        - Strongly agree
        - Agree
        - Don't know
        - Disagree
        - Strongly disagree
- How safe from crime would you consider your neighborhood to be?
    - Extremely safe
    - Safe
    - Unsafe
    - Extremely unsafe
- **Open-ended questions**
    - What are important characteristics of a healthy community for all who work, learn, live, and play in Rutherford County?
    - What else would you like to share related to the health and wellness of Rutherford County?

E. COMMUNITY HEALTH SUMMIT WORKSHEET

Rutherford County Community Health Summit
Participant Worksheet

Step 1: Reflecting on the data shared today, please write down 3 Health Needs that you consider high priority on the sticky notes provided.

Step 2: Discuss your thoughts with your tablemates.

- Which Needs are similar?
- How can these Needs be consolidated?
- What are the outliers, if any?

Step 3: Consolidate similar Needs into up to 3 "buckets" for your table. Write Needs (up to 3) on the stickies provided (1 Need / Sticky)

Please also discuss needs that did not fit in to one of the buckets and share those with your table host

Electronic Voting: Using the electronic voting system, please select the top THREE (3) priorities that you think should be addressed in Rutherford County.

Please use one of the options below to access the survey.

- Enter **redcap.vanderbilt.edu/surveys** into your web browser.
  Survey Access Code: **ENKCCNNHE**
- Scan this QR Code using your Smart Phone or Tablet

F. COMMUNITY HEALTH SUMMIT TABLE DISCUSSION

Rutherford County Community Health Summit
Table Discussions Worksheet

Health Issue:

_____

1) After 3 years, what does success look like for this need?

2) Please identify one to three goals that your group would like to see achieved related to this need.

3) Which population(s) are most affected by this need or problem?

4) What organizations are already working on issues related to this need? Who are the potential collaborators?

G. EVALUATIONS OF IMPACT

Evaluation of Impact of Actions Taken to Address Needs Identified in 2016 CHNA
Saint Thomas Rutherford Hospital – Rutherford County

SIGNIFICANT HEALTH NEED **Identified in Prior CHNA and Addressed in Implementation Strategy**	ACCESS TO CARE/CARE COORDINATION	
ACTIONS PROPOSED **to Address Significant Health Need**	**STATUS OF ACTION**	**RESULTS**
Strategy 1: **Engage state legislators and other key stakeholders to advocate for expanded access to care in Tennessee.**	Completed.	January-May 2017 January-May 2018 January -May 2019 All Tennessee legislators from all counties and neighboring counties/districts we serve were engaged weekly via in person visits, calls, or e-mails by Chief Advocacy Officer or senior leaders during the months of the legislative sessions listed above. In addition, meetings with TennCare Director and Deputy Director as well as Commissioner of Health and Commissioner of Mental Health and Disabilities. During the Summer and Fall legislators are engaged as well during hospital ministry tours or Summer study meetings, but less frequently. Chief Advocacy Officer conducted follow-up: Federal legislators and staff visits made in person and engaged regularly in Washington and in local district regarding health policy. **FY17:** 36 Legislative visits and follow up in person visits. **FY18:** 30 Legislative visits. **FY19**: 25 Legislative visits at time of report – additional planned – including visit with

		Governor Lee. Chief Advocacy Officer appointed to Tennessee Access to Care Board. Health Policies: 100% Access and 100% Coverage for All Medicaid Expansion Insure Tennessee 3-Star Healthy Plan Hospital Assessment Expansion of Ascension PACE Opioid Epidemic Policy Balanced Billing Compact Medicine Policy Nurse Practice Act Certificate of Need 340B Corporate Practice of Medicine Sexual Assault Transports Psych Patient Transports Rural Hospitals Rural Health Access Behavioral Health/Substance Abuse Future of Medicaid
Strategy 2: **Address the outpatient care needs of recently hospitalized vulnerable individuals by going beyond usual discharge planning.**	Completed.	**FY17:** 5 patients received additional healthcare charity resources post-discharge **FY18:** 12 patients received additional healthcare charity resources post-discharge
Strategy 3: **Operate a Dispensary of Hope Charitable Pharmacy to provide medication assistance for uninsured and underinsured individuals who experience financial**	Completed.	**FY17:** A total of 9,041 patients were served in 12,236 individual encounters

hardship, as well as to assist patients with navigating other community resources as needed.		**FY18:** A total of 8,386 were served in 15,117 individual encounters with 37,434 prescriptions filled **FY19:** At time of report, a total of 7,856 patients have been served in 14,590 encounters with 35,429 prescriptions filled
Strategy 4: **Provide a medical home for an increased number of uninsured and underinsured individuals, thus expanding their access to a full range of needed medical care.**	Completed.	Full service primary care with wrap-around services and referral systems in place available at the Saint Louise Clinic in Murfreesboro, TN. This clinic has additional focus on serving the poor and vulnerable, with bilingual services and resources available to meet the needs of those served.
Strategy 5: **Increase access to healthcare by removing traditional financial and insurance hurdles, through financial assistance and emergency care policies.**	Completed.	Policy change enacted July 1, 2016 (FY17) to provide community members with income levels at or below 400% of the Federal Poverty Level with financial assistance as outlined in the Saint Thomas Health Financial Assistance Policy.
Strategy 6: **Increase access to hospice care and grief support & counseling.**	Completed.	Saint Thomas Rutherford provided financial support to Alive Hospice to open 10-bed hospice respite and residential facility in Rutherford County offering extensive resources including grief support and counseling.
Strategy 7: **Implement community-wide Medical Missions at Home that integrate medical, dental, vision and behavioral health, along with broader community resources.**	Completed.	**FY17:** A medical mission event was held in Rutherford County within a low-income community on April 29, 2017. Volunteers from all Saint Thomas Health entities participated along with community volunteer providers offering health screenings, referrals, consultations, dental care, eye exams, glasses, health education, and a health ministry presence to persons who otherwise have limited access to health care. This event served 324 community members in a total of 815 encounters. **FY18:** A medical mission event was held in Rutherford County within a low-income community on April 28, 2018. Services as

		indicated above. This event served 275 community members in a total of 951 encounters. **FY19:** A medical mission event was held in Rutherford County within a low-income community on April 13, 2019. Services as indicated above. This event served 370 community members in a total of 993 encounters.
Strategy 8: **Convene a Middle Tennessee Oral Health Coalition to improve the oral and overall health of the dentally underserved in Middle Tennessee.**	Completed.	A coalition of oral health stakeholders was formed in 2014, with the financial support of STH, to address the current oral health system and work towards a sustainable system of care for vulnerable populations in Middle TN. STH advocacy and community health leaders participate in the coalition. **FY17:** Dental net safety list developed and distributed throughout Middle Tennessee and posted on multiple websites.
Strategy 9: **Increase access to acute dental care for residents of Rutherford County by providing triage services on the Mobile Health Unit.**	Not Completed.	This strategy was dependent on coverage from the Rutherford Health Department dentistry program – there was not enough provider bandwidth for them to be able to partner in this outreach initiative at during this implementation cycle.
Strategy 10: **Increase access to both primary and mental health care to residents of Rutherford County by providing services on the Mobile Health Unit.**	Completed.	**FY17:** The Mobile Health Unit facilitated 385 behavioral health encounters including screenings, intakes, and follow-ups; 5,488 blood pressure screenings, 1892 glucose screenings, 3,486 BMI screenings and 1,000 flu shots were provided during 110 days of screenings and flu shot administration. In fiscal year 2017, Saint Louise Clinic residents and nurse practitioners provided 974 patient encounters on the Mobile Health Unit. **FY18:** During FY18, the Mobile Health Unit facilitated 263 events including health screenings, behavioral health intakes and

		counseling, flu vaccinations, and CPR training. **FY19:** Oversight of the MHU converted FY19 to standardize medical practice quality, reporting, and metrics resulting in restructuring. At time of report, 57 events were facilitated in partnership with 8 organizations in three counties. Events included: flu vaccinations, sports physicals, lab tests, health screenings, vision and hearing screenings, smoking cessation, and behavioral health intake and counseling.
Strategy 11: **Increase breast cancer compliance through Our Mission in Motion Mobile Mammography.**	Completed.	**FY17:** 29 events held serving 476 patients with 136 qualifying for free care. 57 patients had never had a mammogram and for 144 it had been greater than two years. **FY18:** 27 events serving 460 patients, with 166 qualifying for free care. 58 patients had never had a mammogram and for 133 it had been greater than two years. **FY19:** 18 events (at time of report with additional scheduled) serving 320 patients, with 127 qualifying for free care. 43 patients had never had a mammogram and for 29 it had been greater than two years.
Strategy 12: **Pharmacist-driven improvement in medication management through community education sessions and patient-specific pharmacotherapy clinic appointments.**	Completed.	**FY17:** Based in the Saint Louise Family Clinic, the Pharmacotherapy Clinic offers medication support and management those with chronic conditions, including diabetes, hypertension, hyperlipidemia, heart failure, chronic obstructive pulmonary disease, and more. Opened in fiscal year 2017, the clinic recorded 158 encounters for 82 unique patients in its initial months. The clinic is currently recording outcomes for the managed disease states and has already shown a significant improvement in glycemic control as measured by hemoglobin A1C. In addition to patient care, the clinical pharmacist specialist has already provided

		a total of 7 hours of didactic lectures and workshops for the UT Family Medicine Residents. **FY18:** At year one, the clinic has demonstrated a 3% reduction in hemoglobin A1C as well as a reduction of systolic blood pressure by 33% at six months. **FY19:** At time of report, 1,314 patients had been counselled in a total of 1,873 individual encounters
Strategy 13: **Empower victims of sexual assault through the provision of SANE care and advocacy, ensuring that victims receive trauma-informed care and are connected to appropriate resources.**	Completed.	**FY17:** Saint Thomas Rutherford Hospital provides victim-centered comprehensive medical-forensic exams to victims age 13 and older. The SANE program goal is to provide comprehensive compassionate care for sexual assault patients in Rutherford County, as well as surrounding rural communities: medical-forensic examinations, prophylactic treatment of some Sexually Transmitted Diseases, including HIV nPEP, emergency contraception, advocate accompaniment, and referral for follow-up services. The program works to empower victims to make informed choices regarding reporting options, medical care, evidence collection, and the law enforcement and judicial systems. The program also provides community education to raise awareness of sexual assaults. In FY17, 14 victims were examined by Sexual Assault Nurse Examiners. **FY18:** In FY18, there were 61 exams performed by sexual assault nurse examiners. **FY19:** At time of report, 36 exams had been performed by sexual assault nurse examiners.

Strategy 14: **Improve access to care via telemedicine consultations when acute stroke symptoms are present.**	Completed.	Telemedicine stroke services implemented at Saint Thomas Rutherford Hospital in FY17 with management of services through Saint Thomas Health transfer center. 6 consults were completed in FY17. 10 consults were completed in FY18. This service remains in place.
Strategy 15: **Provide community-based organizations with financial support toward their work in one of the Prioritized Need areas.**	Completed.	Multiple Organizations Funded: **FY17:** *Enroll America:* Saint Thomas Rutherford Hospital provided funds to support the Get Covered America campaign, connecting uninsured individuals with resources to enroll in health insurance. **FY17/FY18/FY19:** *Hope Smiles:* Saint Thomas Rutherford Hospital provided funds to support their participation Medical Missions at Home events providing outreach dental care. *Special Kids:* Saint Thomas Rutherford Hospital provided funds to support the Speech Language Pathology program, specifically to allow for low-income families to access needed services. *Tennessee Justice Center (TJC):* Saint Thomas Rutherford Hospital works together with TJC to improve access to care through providing enrollment assistance and training. Financial support for this collaboration is also provided. **FY18/FY19:** *Interfaith Dental Clinic:* Saint Thomas Rutherford (in conjunction with other Saint Thomas hospitals) provided funds to support Interfaith Dental's mission to provide oral health care and oral health education for uninsured, low-income working people, their families, and the elderly.

		FY19: *Family and Children's Services:* Saint Thomas Rutherford (in conjunction with other Saint Thomas hospitals) provided funds to support the organization's work to improve access to quality, affordable health care by connecting consumers to insurance coverage and/or community-based low or no cost health care options.
SIGNIFICANT HEALTH NEED **Identified in Prior CHNA and Addressed in Implementation Strategy**	**MENTAL AND EMOTIONAL HEALTH/SUBSTANCE ABUSE**	
ACTIONS PROPOSED **to Address Significant Health Need**	**STATUS OF ACTIONS**	**RESULTS**
Strategy 1: **Implement a Faith Community Wellness Program, partnering with faith communities, to provide state of the art wellness promotion and health care that embodies physical, psychological, social and spiritual care for individuals.**	Completed.	A Faith Health Community Task Force was established to bring local clergy together in an atmosphere of fellowship and education. "Lunch and Learn" sessions were conducted on Pastoral Wellness, End-of-Life Documents & Crucial Conversations. In-person interviews were also conducted with different faith groups in Rutherford County to develop a list of community resources not easily found on the internet. This information along with select scripture; common prayers from the Christian and Jewish traditions; and guides for creating personal prayers were combined into a printed Faith & Community Resource Folder. These folders are available for patients at Saint Thomas Rutherford who are experiencing spiritual or social anxiety and are distributed by the

		Pastoral Care and Case Management Departments.
Strategy 2: **Provide mental health screenings, counselling, and psychiatric medication management to community members who seek care at Saint Thomas Medical Partners' Rutherford Family Health Center PCMH sites.**	Completed.	As of FY19, Saint Louise clinic has a full-time primary mental health nurse practitioner serving the mental health needs of patients from that clinic and other clinics including psychiatric medication management. Patients are screened using the PHQ-2 or 9 with appropriate referrals made as needed. Number of unique patients served: **FY17:** 368 patients served **FY18:** 283 patients served **FY19:** 198 patients served
Strategy 3: **Offer chaplain services at the Saint Louise Family Medicine Center to integrate spiritual care with physical and mental care, seeking to care holistically for patients.**	Completed.	Program was in place through 2017 with a chaplain visiting every other Wednesday to provide services. Program discontinued in 2018 due to staffing and financial restrictions.
Strategy 4: **Increase access to hospice care and grief support & counseling.**	Completed.	Saint Thomas Rutherford Hospital provided financial support to Alive Hospice to open 10-bed hospice respite and residential facility in Rutherford County offering extensive resources including grief support and counseling.
Strategy 5: **Increase access to both primary and mental health care to residents of Rutherford County by providing services on the Mobile Health Unit.**	Completed.	**FY17:** The Mobile Health Unit facilitated 385 behavioral health encounters including screenings, intakes, and follow-ups; 5,488 blood pressure screenings, 1892 glucose screenings, 3,486 BMI screenings and 1,000 flu shots were provided during 110 days of screenings and flu shot administration. In fiscal year 2017, Saint Louise Clinic residents and nurse practitioners provided 974 patient encounters on the Mobile Health Unit. **FY18:** During FY18, the Mobile Health Unit facilitated 263 events including health screenings, behavioral health intakes and

		counseling, flu vaccinations, and CPR training. **FY19:** Oversight of the MHU converted FY19 to standardize medical practice quality, reporting, and metrics resulting in restructuring. At time of report, 57 events were facilitated in partnership with eight organizations in three counties. Events included: flu vaccinations, sports physicals, lab tests, health screenings, vision and hearing screenings, smoking cessation, and behavioral health intake and counseling.
Strategy 6: **Pharmacist-driven improvement in medication management through community education sessions and patient-specific pharmacotherapy clinic appointments.**	Completed.	**FY17:** Based in the Saint Louise Family Clinic, the Pharmacotherapy Clinic offers medication support and management those with chronic conditions, including diabetes, hypertension, hyperlipidemia, heart failure, chronic obstructive pulmonary disease, and more. Opened in fiscal year 2017, the clinic recorded 158 encounters for 82 unique patients in its initial months. The clinic is currently recording outcomes for the managed disease states and has already shown a significant improvement in glycemic control as measured by hemoglobin A1C. In addition to patient care, the clinical pharmacist specialist has already provided a total of 7 hours of didactic lectures and workshops for the UT Family Medicine Residents. **FY18:** At year one, the clinic has demonstrated a 3% reduction in hemoglobin A1C as well as a reduction of systolic blood pressure by 33% at six months. **FY19:** At time of report, 1,314 patients had been counselled in a total of 1,873 individual encounters
Strategy 7: **Empower victims of sexual assault through the provision of SANE care and advocacy, ensuring that victims**	Completed.	**FY17:** Saint Thomas Rutherford Hospital provides victim-centered comprehensive medical-forensic exams to victims age 13 and older. The SANE program goal is to

receive trauma-informed care and are connected to appropriate resources.		provide comprehensive compassionate care for sexual assault patients in Rutherford County, as well as surrounding rural communities: medical-forensic examinations, prophylactic treatment of some Sexually Transmitted Diseases, including HIV nPEP, emergency contraception, advocate accompaniment, and referral for follow-up services. The program works to empower victims to make informed choices regarding reporting options, medical care, evidence collection, and the law enforcement and judicial systems. The program also provides community education to raise awareness of sexual assaults. In FY17, fourteen victims were examined by Sexual Assault Nurse Examiners. **FY18:** In FY18, there were 61 exams performed by sexual assault nurse examiners. **FY19:** At time of report, 36 exams had been performed by sexual assault nurse examiners.
Strategy 8: **Provide community-based organizations with financial support toward their work in one of the Prioritized Need areas.**	Completed.	Multiple Organizations Funded: **FY17/FY19:** *Kymari House, Inc.:* Saint Thomas Rutherford provided funds to support court-ordered supervised visitation services for parents and children in a trauma-informed setting, promoting healthy bonding between parents and children. *Nurses for Newborns:* Saint Thomas Rutherford Hospital provided funds to support their mission to provide a safety net for families most at-risk, to help prevent infant mortality, child abuse and neglect through in-home nursing visits (up to 2 years) which provide healthcare, education and positive parenting skills. Additionally, they work closely with Nurses

		for Newborns to promote a visit with a Nurses for Newborn representative for families prior to going home so that a relationship may be developed to ensure an easy transition. **FY17/FY18:** *Insight Counseling Centers:* Saint Thomas Rutherford provided funds to support their Community Access Program, through which clients are extended financial assistance to remove financial barriers to needed mental health counseling support. **FY17/FY18/FY19:** *Sexual Assault Center:* Saint Thomas Rutherford provided funds to support their mission to provide healing for those affected by sexual assault and end sexual violence. The funds are restricted to provide treatment and mental health support to low-income clients.
SIGNIFICANT HEALTH NEED **Identified in Prior CHNA and Addressed in Implementation Strategy**	**WELLNESS AND DISEASE PREVENTION**	
ACTIONS PROPOSED **to Address Significant Health Need**	**STATUS OF ACTIONS**	**RESULTS**
Strategy 1**: Operate a community-based breastfeeding clinic to support and educate breastfeeding families.**	Completed.	**FY17:** Opened in fiscal year 2017, Saint Thomas Rutherford Hospital offers breastfeeding outreach and assistance through a walk-in clinic, available to all community members and provided by Certified Lactation Consultants. The service is available to breastfeeding mothers, infants and support persons, regardless of delivery hospital; additional resources, such as breastfeeding classes for first-time breastfeeding mothers, are recommended as needed. This outreach program is working to improve the breastfeeding rates for the community, thereby reducing

		maternal morbidity and improving infant health. **FY18:** In FY18, there were 467 unique persons served for a total of 653 encounters in the breastfeeding clinic. **FY19:** At time of report, there had been 365 unique persons served with a total of 495 encounters at the clinic**.**
Strategy 2: **Implement a Faith Community Wellness Program, partnering with faith communities, to provide state of the art wellness promotion and health care that embodies physical, psychological, social and spiritual care for individuals.**	Completed.	A Faith Health Community Task Force was established to bring local clergy together in an atmosphere of fellowship and education. "Lunch and Learn" sessions were conducted on Pastoral Wellness, End-of-Life Documents & Crucial Conversations. In-person interviews were also conducted with different faith groups in Rutherford County to develop a list of community resources not easily found on the internet. This information along with select scripture; common prayers from the Christian and Jewish traditions; and guides for creating personal prayers were combined into a printed Faith & Community Resource Folder. These folders are available for patients at Saint Thomas Rutherford who are experiencing spiritual or social anxiety and are distributed by the Pastoral Care and Case Management Departments.
Strategy 3: **Implement a community-wide campaign that integrates education and barrier reduction to increase breast cancer screenings.**	Completed.	Community outreach events specific to educating the Rutherford community about breast cancer is routinely held every October both at Saint Thomas Rutherford Hospital and at an established community event in the city of Murfreesboro. More than 200 community members have received this information during this implementation cycle. In addition, a total of 5,544 diagnostic radiologic tests to assess for breast cancer have been performed at the Saint Thomas Rutherford

		Hospital site with 2,389 patients screening positive within the three-year implementation cycle.
Strategy 4: **Implement a community-wide campaign to provide nutrition counseling that will improve food choices.**	Completed.	Jointly with other Saint Thomas Clinics, a registered dietician has been employed. The dietician provides counseling on-site for diabetic and overweight patients once/month. **FY17:** 69 patient referrals **FY18:** 115 patient referrals **FY19:** At time of report, 87 patient referrals
Strategy 5: **Improve maternal and infant health through offering prenatal education and lactation consulting.**	Completed.	Although there have been challenges with maintaining qualified bilingual lactation consultants, Saint Louise Clinic continues to make progress towards improving breastfeeding education including grant funds for supplies for patients and conducting lactation classes in Spanish and English.
Strategy 6: **Pharmacist-driven improvement in medication management through community education sessions and patient-specific pharmacotherapy clinic appointments.**	Completed.	**FY17:** Based in the Saint Louise Family Clinic, the Pharmacotherapy Clinic offers medication support and management those with chronic conditions, including diabetes, hypertension, hyperlipidemia, heart failure, chronic obstructive pulmonary disease, and more. Opened in fiscal year 2017, the clinic recorded 158 encounters for 82 unique patients in its initial months. The clinic is currently recording outcomes for the managed disease states and has already shown a significant improvement in glycemic control as measured by hemoglobin A1C. In addition to patient care, the clinical pharmacist specialist has already provided a total of 7 hours of didactic lectures and workshops for the UT Family Medicine Residents. **FY18:** At year one, the clinic has demonstrated a 3% reduction in

		hemoglobin A1C as well as a reduction of systolic blood pressure by 33% at six months. **FY19:** At time of report, 1,314 patients had been counselled in a total of 1,873 individual encounters
Strategy 7: **Increase community physical activity by creating a public use walking trail on the hospital campus.**	Completed.	Walking trails for 1 ½, 1 ¾, and 4 miles mapped around the campus of Saint Thomas Rutherford and in use.
Strategy 8: **Increase the physical activity of youth by constructing outdoor walking tracks at three Rutherford County Middle Schools.**	Completed.	Walking tracks were installed at Four locations: LaVergne Middle, Roy Waldron, Kittrell, and Buchanan Middle Schools. These tracks are used for PE classes and by teachers/classes internally, as well as being open to the community.
Strategy 9: **Provide community-based organizations with financial support toward their work in one of the Prioritized Need areas.**	Completed.	Multiple Organizations Funded: **FY17/FY18/FY19:** *Boys and Girls Club of Rutherford County:* Saint Thomas Rutherford Hospital provided funds to support their work to improve health through the Triple Play program. *Lutheran Services in Tennessee:* Saint Thomas Rutherford Hospital provided funds to support the Healthy Gardens initiative, an individualized raised-bed garden program that teaches families in poverty to grow their own vegetables, increasing the amount of nutritious food available and consumed. *One Generation Away:* Saint Thomas Rutherford provided funds to support their mission of increasing access to healthy foods to those experiencing food insecurity.
SIGNIFICANT HEALTH NEED **Identified in Prior CHNA and Addressed in Implementation Strategy**	**SOCIAL DETERMINANTS**	
ACTIONS PROPOSED **to Address Significant Health Need**	**STATUS OF ACTIONS**	**RESULTS**
Strategy 1: **Implement an anti-trafficking initiative throughout Saint Thomas Health so that victims of human**	In-progress.	Anti-human trafficking initiative started with charter in place. Four training

trafficking who seek medical care will be identified and connected with the assistance they need.		modules and localized protocols have been developed for roll-out to all Saint Thomas Health employees. The training modules are available for all employees currently. Training has begun in Davidson County. One clinic, UT Internal Med, has had all staff including physicians trained. Saint Thomas Midtown ED has trained the majority of staff/physicians. Roll-out and training will continue to occur throughout all Saint Thomas Health facilities.
Strategy 2: **Provide resource navigation support to community members in need, recognizing how critical economic stability and social environments that promote good health are to improve an individual's and a community's health.**	Not Completed.	The strategy for the development of a centralized call center in which this resource was to be imbedded shifted with the development not at a point to implement this resource during 2016 implementation strategy period.
Strategy 3: **Implement community-wide Medical Missions at Home that integrate medical, dental, vision and behavioral health, along with broader community resources.**	Completed.	**FY17:** A medical mission event was held in Rutherford County within a low-income community on April 29, 2017. Volunteers from all Saint Thomas Health entities participated along with community volunteer providers offering health screenings, referrals, consultations, dental care, eye exams, glasses, health education, and a health ministry presence to persons who otherwise have limited access to health care. This event served 324 community members in a total of 815 encounters. **FY18:** A medical mission event was held in Rutherford County within a low-income community on April 28, 2018. Services as indicated above. This event served 275 community members in a total of 951 encounters. **FY19:** A medical mission event was held in Rutherford County within a low-income community on April 13, 2019. Services as indicated above. This event served 370

		community members in a total of 993 encounters.
Strategy 4: **Formalize community partnerships to pilot a model for better meeting the resource needs of residents of a specific geography.**	Completed.	Saint Thomas Medical Partners opened a new clinic within the identified zip code in FY17 to better serve the access needs of the community. FY17: In FY17, 1,573 individual patients had received care at the clinic. FY18: In FY18, the number of individual patients from the identified zip code increased to 3,994. FY19: At time of report, 4,604 unique patients had received care.
Strategy 5: **Remove the barrier of transportation to increase the needed follow-up care received by patients of the Mobile Health Unit.**	Not Completed.	This initiative proved too complex at this time to initiate with tracking and potential CMS compliance issues.

H. COMMUNITY ASSETS

Rutherford County offers a variety of different resources and services for those in need. The resources listed on the following pages are examples of wonderful organizations and services within Rutherford County. This is not an all-inclusive list, nor is it a guarantee of services. It is intended to be a guide to provide helpful information to anyone living or visiting Rutherford County.

Addiction/Recovery

180 Degrees Ministries
1418 Kensington Square CourtMurfreesboro, TN
615-426-4180

Alcoholics Anonymous
www.aa.org

Al-Anon
www.al-anon.org

Fellowship UMC
2511 New Salem Highway Murfreesboro, TN
615-278-0324

First Baptist Church of Murfreesboro
738 E. Castle Street Murfreesboro, TN
615-893-5322

Lost & Found
210 Heritage Circle, LaVergne, TN
615-315-1048

Narcotics Anonymous
www.na.org

Nar-Anon
www.nar-anon.org

North Boulevard Church of Christ
1112 N. Rutherford Blvd. Murfreesboro, TN
615-893-1520

Spring 2 Life
707 N. Maple Street Murfreesboro, TN
615-427-2282

Warrior 180 Foundation
120 Rockingham Dr. Murfreesboro, TN

270-925-9873

Food Pantries

Nourish Food Bank
211 Bridge Ave. Murfreesboro, TN
• Grocery Program for low-incomefamilies
• Distribution Center
• Weekend Food Backpacks for schoolchildren
• Food Pantry at Motlow College & emergency food for Motlow students
https://www.nourishfoodbanks.org
615-624-7297

Greenhouse Ministries
*(**additional services of Greenhouse Ministries Listed Under Community Outreach Services)*
309 S. Spring Street Murfreesboro, TN 615-494-0499

Victory Christian Center
1641 Middle Tennessee Blvd. Murfreesboro, TN
615-893-5683

Shelters

RutherfordCountyShelter–SalvationArmy
1137 West Main Street Murfreesboro, TN
615-895-7071

Journey Home Day Shelter
308 West Castle StreetMurfreesboro, TN
• Clothes Closet
• Housing Services
• Outreach Center
• Meals – check website for days/times http://lovegodservepeople.org
615-809-2644

Cold Patrol
• Mobile outreach to homeless
• One-on-one volunteers
• Coldest Nights program
• Connection to other resources https://murfreesborocoldpatrol.com 901-674-3239

Dental Care – Free/Reduced Cost

Interfaith Dental Clinic
210 Robert Rose Drive Murfreesboro, TN
615-225-4141

Matthew Walker, Smyrna Health Center
739 President Pl.Smyrna, TN
615-984-4290

Rutherford County Health Department
100 W BurtonStreet Murfreesboro, TN 615-898-7880

Federally Qualified Health Center (FQHC)
Matthew Walker Comprehensive Health Center (OB/GYN)
448 East Burton StreetMurfreesboro, TN
615-895-1023

Matthew Walker Comprehensive Health Center
730 President Place, Suite 100 Smyrna, TN
615-866-6115

Primary Care Hope Clinic
1453 Hope Way Murfreesboro, TN
615-893-9390

Hope ClinicII
317 C January St. Murfreesboro, TN
615-893-9390

Community Outreach Services

Advent Lutheran
• Caregivers Afternoon Out
• Disabilities Ministries
http://www.theadventchurch.com
615-893-9705

All Saints Episcopal Church
• The Farm food growing ministry
• Karen and refugee congregants
• Services and classes in Karen language and English
http://www.allsaintstn.org
615-223-7157

Branches Counseling
• Counseling services (regardless ofability to pay_
• 5-day intensives
• Support groups

• Coaching & classes https://branchescounselingcenter.com
615-904-7170

Central Christian Church
• Backpack Ministry/Local Schools Food support
• Domestic Violence Support Group
• Journey Home Meal Sponsor
• Coldest Nights ministry https://www.borodisciples.org 615-893-2764

Community Servants
• English as a Second Language (ESL) Program (September-May)
• GED Prep (for non-native English speakers)
• Citizenship prep
• After School Program (for children that go to John Coleman Elementary)
• Clothes Closet Outreach www.communityservants.org 615-223-1391

Doors of Hope
•Mentoring and training program for women nearing release from jail
http://opendoorsofhope.org 615-900-0634

Fair Havens Baptist Church
• Single Mom's Ministry
• Coldest Nights Emergency Shelter Site http://fhibctn.org
615-896-0997

Family Worship Center
• Hispanic Worship Service
• Parents Day Out http://familywc.com 615-893-0968

Fellowship U.M.C.
• F.U.E.L. Children's Food Assistance
• Gap Grocery Assistance Program
• Project Linus Quilts for Kids with Cancer http://tnfellowship.com/
615-893-4659

First Baptist Castle Street
• Benevolence Ministry
• Prison Ministry
• Melek Summer Camp
• Murfreesboro R.I.S.E. Conference http://fbcmurfreesboro.org
615-893-5322

First Baptist Church

• Special Needs Ministries
• Coldest Nights Emergency Shelter for Men
• Benevolence Ministry http://www.fbcmboro.org 615-893-2514

First Cumberland Presbyterian Church

• Emergency/Dropoff childcare managed by First Steps
• Stepping Stones site for overnighthousing
• School Back Pack Program http://www.murfreesborocpc.org/ 615-893-6755 for First Steps/Stepping Stones

615-893-6755 for School Back Pack Program

First Methodist Church

• Project Transformation Children'sLiteracy Camp
https://www.fumcm.org 615-893-1322

First Presbyterian

• ESL Classes https://www.mborofpc.org 615-893-3882

Grace Lutheran Church

• Katie's Garden – Community Garden http://www.glc-lcms.com
615-893-0338

Greenhouse Ministries

• Education and Classes (Computer skills, literacy, GED prep, parenting, budgeting, careeradvancement)
• Food bank and mobile food pantry
• Garden Patch Thrift Shop
• Legal Clinic
• Nursing Clinic
• Occupational Therapy
• Recycle Bicycle Program
• Veterans for Volunteers
• Men's Housing Program http://www.greenhousemin.org 615-494-0499

Insight Counseling Services

• Counseling
• Services in Spanish
• Income based fee scale
• Life Enrichment Events Workshops http://insightcounselingcenters.org 615-383-2115

Kymari House

• Family and children services
• Supervised visitation
• Parenting classes and coaching
• Therapeutic groups for middle andhigh school aged children
https://www.kymarihouse.org

Last Call 4Grace

• Meals
• Donations
• Free ChristianCounseling 615-900-1786

LifePoint Church, all campuses

• Special Needs Ministry
• Addiction Ministry
• Foster Care Ministry
• Shepherd's Closet/Foster Closet http://lifepointchurch.org
615-459-3311

Murfreesboro Muslim Youth

• Sponsor of food vouchers for free meals at The Kwik Mart on Front St. in Murfreesboro
• Love Your Neighbor picnics
• Back to School supply drive https://www.murfreesboromus-limyouth.org

N. Blvd. Church of Christ, all campuses

• Celebrate Recovery
• Chinese & LatinoServices https://northboulevard.com 615-893-1520

New Vision Baptist Church

• Prison Ministry
• Special Needs Ministry http://newvisionlife.com 615-895-7167

Portico

• Pregnancy Support Center,Consultation, Education
• Mobile Unit
• Services in Spanish http://www.porticostory.org 615-893-0228

S.E. Baptist Church

• Hispanic Service http://sebaptist.org 615-896-0940

Springhouse Worship & Arts Center

• Theater Ministry
• Single Parent Ministry
• Elderly Outreach
• "Biker Xmas" for single parent/ low-income families
• Mealsandworkdaysfor WherryHousing http://springhousesmyrna.com
615-459-3421

Saint Louise Family Medicine Center

• Sliding scale medical care
• Dispensary of Hope Pharmacy 615-396-6620

I. DATA APPENDIX

In identifying the health needs of Hickman County, the partnering organization reviewed publicly available secondary data, for the following health indicator topics: demographics, socioeconomic status, social determinants, access to care, social environment, mental health, maternal/infant health, health status, natural environment, children's health and behavioral risk factors. Data tables and references for each topic are included below.

Indicator	Rutherford	TN	U.S.	Source
Demographics/Socio-Economic Status				
Population				
Land area in square miles, 2017	619.37	41,234.95	3,532,315.66	Cares Engagement Network (2018)
Population 2017 estimate	317,157	6,715,984	325,719,178	US Census Bureau, Quick Facts
Population density, persons per square mile, 2017	481.87	159.99	90.88	Cares Engagement Network (2018)
Population, percent change - April 1, 2010 to July 1, 2017	20.80%	5.80%	5.5	US Census Bureau, Quick Facts
Population growth special population—elderly 2017-2030 (percent change)	125%	37%	31%	The Tennessee Commission on Aging and Disability. 2017 State of Aging in Tennessee
Projected population 2030	414119	7390535	373,504,000.00	TN State Data Center. TN Population Projections: 2016-2070
Population growth 2010-2040 (percent change)	103%	34%	24.10%	Tennessee Department of Transportation (2015)
Urban-Rural Population mix - Percent Urban	82.98%	66.39%	80.89%	Cares Engagement Network (2018)
Urban-Rural mix - Percent Rural	17.02%	33.61%	19.11%	Cares Engagement Network (2018)
Gender				
Female persons, percent, 2013-2017	50.68%	51.24%	50.77	Cares Engagement Network (2018)
Male persons, percent, 2013-2016	49.32%	4876.00%	49.23	Cares Engagement Network (2018)
Special Populations				
Veterans, 2013-2017	18,254	441,554	18,939,219	US Census Bureau, Quick Facts
Population with Any Disability, percent	10.4%	15.4%	12.6%	Cares Engagement Network (2018)
Foreign born persons, percent, 2013-2017	7.3%	5.0%	13.4%	US Census Bureau, Quick Facts
Age				
Median age, years	33.1	38.6	37.8	Cares Engagement Network (2018)

Persons under 5 years, percent, 2017	6.7%	6.1%	6.1%	US Census Bureau, Quick Facts
Persons under 18 years, percent, 2017	24.7%	22.4%	22.6%	US Census Bureau, Quick Facts
Persons 65 years and over, percent, 2017	9.7%	15.4%	14.9%	Cares Engagement Network (2018)
Race/Ethnicity				
White alone, percent, 2017 (a)	78.5%	77.8%	73.0%	Cares Engagement Network (2018)
Black or African American alone, percent, 2017 (a)	14.1%	16.8%	12.7%	Cares Engagement Network (2018)
American Indian and Alaska Native alone, percent, 2017 (a)	0.2%	0.3%	0.8%	Cares Engagement Network (2018)
Asian alone, percent, 2017 (a)	3.1%	1.7%	5.4%	Cares Engagement Network (2018)
Native Hawaiian and Other Pacific Islander alone, percent, 2017 (a)	0.0%	0.1%	0.2%	Cares Engagement Network (2018)
Multiple Races, percent, 2017	3.0%	2.1%	3.1%	Cares Engagement Network (2018)
Hispanic or Latino, percent, 2017 (b)	7.4%	5.2%	17.6%	Cares Engagement Network (2018)
Total Hispanic population	22,213	340,063	56,510,571	Cares Engagement Network (2018)
White alone, not Hispanic or Latino, percent, 2017	78.4%	78.3%	74.6%	Cares Engagement Network (2018)
Language other than English spoken at home, pct. age 5+, 2013-2017	10.5%	7.0%	21.3%	US Census Bureau, Quick Facts
Educational Attainment				
Percent Popul Age 25+ with No High School Diploma, 2013-2017	9.15%	13.48%	12.69%	Cares Engagement Network (2018)
- White	8.37%	12.65%	10.74%	Cares Engagement Network (2018)
- Black or African American	10.66%	15.19%	15.12%	Cares Engagement Network (2018)
- Native American/Alaska Native	24.29	21.71%	20.29%	Cares Engagement Network (2018)
- Asian	15.24%	14.18%	13.47%	Cares Engagement Network (2018)
- Native Hawaiian / Pacific Islander	0.00%	16.44%	13.31%	Cares Engagement Network (2018)
- Some Other Race	32.11%	48.61%	39.83%	Cares Engagement Network (2018)
- Multiple Race	7.21%	14.83%	12.54%	Cares Engagement Network (2018)

Bachelor's degree or higher, percent, 2013-2017	31.8%	26.1%	31%	Cares Engagement Network (2018)
Income/Poverty				
Median household income, 2013-2017	$62,149	$48,708	$57,652	US Census Bureau, Quick Facts
Per capita money income in past 12 months (2017 dollars), 2013-2017	$27,932	$27,277	$31,177	US Census Bureau, Quick Facts
Adults in poverty, count, 2013-2017	34,716	1,072,360	45,650,345	Cares Engagement Network (2018)
Persons below poverty level, percent, 2013-2107	11.8%	16.7%	14.6%	Cares Engagement Network (2018)
- White	10.3%	14.1%	12.0%	Cares Engagement Network (2018)
- Black	19.0%	27.1%	25.2%	Cares Engagement Network (2018)
- Native American and Alaska Native	8.6%	17.8%	26.8%	Cares Engagement Network (2018)
- Asian	9.0%	10.7%	11.9%	Cares Engagement Network (2018)
-Native Hawaiian / Pacific Islander	15.8%	32.7%	19.0%	Cares Engagement Network (2018)
- Some other race	22.7%	34.2%	23.8%	Cares Engagement Network (2018)
- Two or more races	18.1%	24.0%	18.4%	Cares Engagement Network (2018)
- Hispanic or Latino origin (of any race)	25.1	30.5%	22.2%	Cares Engagement Network (2018)
Children in Poverty, percent	13%	23%	20%	Cares Engagement Network (2018)
-- Non-Hispanic White	9.88%	17.16%	12.18%	Cares Engagement Network (2018)
- Black	26.20%	41.34%	36.13%	Cares Engagement Network (2018)
- Native American	29.51%	20.15%	34.31	Cares Engagement Network (2018)
- Asian	7.87%	9.56%	11.86%	Cares Engagement Network (2018)
- Native Hawaiian/Pacific Islander	no data	50.76%	25.50%	Cares Engagement Network (2018)
- Some other race	31.59%	46.78%	32.77%	Cares Engagement Network (2018)
- Multiple Race	15.92%	27.53%	20.63%	Cares Engagement Network (2018)
Poverty - Children Below 100% FPL	14,75%			Cares Engagement Network (2018)
Poverty - Children Below 200% FPL	39.42%	49.36%	43.29%	Community Commons (2018)
Children eligible for Free/Reduced Price Lunch, (%)	43.62%	58.82%	52.61%	Community Commons (2018)
Percent of public school student who are economically disadvantaged, 2016-2017	21.4%	34%	30.4million (see notes)	TN Dept of Educ., State Report Card, 2016-2017

Population Receiving SNAP Benefits	11.4%	17.3%	13.90%	Cares Engagement Network (2018)
Households with Cash Public Assistance Income 2013-2017	2.2%	2.6%	2.60%	US Census Bureau, Quick Facts
Income inequality: Ratio of household income at the 80th percentile to income at the 20th percentile (the higher the ratio the greater inequality)	3.8	4.7	5	University of Wisconsin, County Health Rankings (2018)
Income inequality, County 80th Percentile Income	$103,602			University of Wisconsin, County Health Rankings (2018)
Income inequality, County 20th Percentile Income	$27,595			University of Wisconsin, County Health Rankings (2018)
Federal Poverty Threshold, Family of 1 (48 contiguous states)			$12,140.00	US Department of Health & Human Services (2018)
Federal Poverty Threshold, Family of 4 (48 contiguous states)			$25,100.00	US Department of Health & Human Services (2018)
Unemployment				-
Unemployment rate, August 2018	3.10%	3.80%	4.00%	Cares Engagement Network (2018)
Number of Jobs, 2015	155,284			Nashville Metro Planning Organization, Population Forecast
Projected Jobs, 2025	187,195	3433000, by 2024		Nashville Metro Planning Organization, Population Forecast
Projected Jobs, 2035	226,453			Nashville Metro Planning Organization, Population Forecast
Population, 2015	288,734			Nashville Metro Planning Organization, Population Forecast
Projected Population, 2025	349,083			Nashville Metro Planning Organization, Population Forecast
Projected Population, 2035	409,986			Nashville Metro Planning Organization, Population Forecast
Average annual weekly wage (2017)	$922	$939	$1,065	Bureau of Labor Statistics
Annual establishments (2017)	5,547.00	156,905.00	9,835,104.00	Bureau of Labor Statistics
Social Determinants of Health				
Education				
Students in public schools, White, percent	62.1%	62.7%		TN Dept of Educ., State Report Card, 2016-2017
Student in public schools, Black or African American, percent	19.5%	24.0%		TN Dept of Educ., State Report Card, 2016-2018

Students in public schools, Hispanic or Latino, percent	13.2%	10.4%		TN Dept of Educ., State Report Card, 2016-2019
Students in public schools, Asian, percent	4.7%	2.3%		TN Dept of Educ., State Report Card, 2016-2020
Students in public schools, Native American/Alaskan, percent	0.3%	0.04		TN Dept of Educ., State Report Card, 2016-2021
High School Graduation Rate (NCES), 2008-2009	89.3%	77.4%	75.5%	Community Commons (2018)
High School Graduation Rate, 2013-2014	92.5%	87.2%		TN Dept of Educ., State Report Card, 2016-2017
High School Graduation Rate, 2014-2015	93.9%	87.8%		TN Dept of Educ., State Report Card, 2016-2018
High School Graduation Rate, 2015-2016	95.2%	88.5%	86.1%	TN Dept of Educ., State Report Card, 2016-2019
High School Graduation Rate, 2016-2017	95.3%	89.1%		TN Dept of Educ., State Report Card, 2016-2020
High school graduate or higher, percent, 2013-2017	90.8%	86.5%	87.3%	US Census Bureau, Quick Facts (2018)
Event High School Dropouts, 2012	2.3%	4.3%	3.4%	Annie E. Casey Foundation (2018)
Event High School Dropouts, 2013	1.7%	3.4%	4.7%	Annie E. Casey Foundation (2018)
Event High School Dropouts, 2014	1.5%	3.4%	5.2%	Annie E. Casey Foundation (2018)
Event High School Dropouts, 2015	1.0%	2.5%		Annie E. Casey Foundation (2018)
Event High School Dropouts, 2016	1.1%	2.7%		Annie E. Casey Foundation (2018)
College Going Rate among Public High School graduates, Fall 2015	63.9%	62.5%		TN Higher Education Commission (2018)
4th grader not proficient in reading, 2014-2015	49.1%	54%	46%	Community Commons (2018)
3-8th grade proficient or advance - language, 2015-2016	40.8%	33.8%		TN Dept of Educ., State Report Card, 2016-2017
3-8th grade proficient or advance - language, 2015-2016 Asian	44.0%	57.6%		TN Dept of Educ., State Report Card, 2016-2018
3-8th grade proficient or advance - language, 2015-2016 Black	28.0%	18.6%		TN Dept of Educ., State Report Card, 2016-2019

3-8th grade proficient or advance - language, 2015-2016 Hawaiian or Pacific Islander	no data	44.2%		TN Dept of Educ., State Report Card, 2016-2020
3-8th grade proficient or advance - language, 2015-2016 Hispanic	25.8%	22.4%		TN Dept of Educ., State Report Card, 2016-2021
3-8th grade proficient or advance - language, 2015-2016 White	47.8%	40.5%		TN Dept of Educ., State Report Card, 2016-2022
3-8th grade proficient or advance - math, 2015-2016	46.6%	38.0%		TN Dept of Educ., State Report Card, 2016-2023
3-8th grade proficient or advance - math, 2015-2016 Asian	57.2%	68.0%		TN Dept of Educ., State Report Card, 2016-2024
3-8th grade proficient or advance - math, 2015-2016 Black	30.9%	19.9%		TN Dept of Educ., State Report Card, 2016-2025
3-8th grade proficient or advance - math, 2015-2016 Hawaiian or Pacific Islander	54.3%	47.2%		TN Dept of Educ., State Report Card, 2016-2026
3-8th grade proficient or advance - math, 2015-2016 Hispanic	33.5%	27.7%		TN Dept of Educ., State Report Card, 2016-2027
3-8th grade proficient or advance - math, 2015-2016 White	53.7%	45.4%		TN Dept of Educ., State Report Card, 2016-2028
Student-to-Teacher Ratio, 2015-2016	14.84	14.89		TN Dept of Educ., State Report Card, 2016-2029
Housing				
Residential segregation - black/white 2012-2016 (where 0 is complete integration and 100 is complete segregation)	29.12	66.97		University of Wisconsin, County Health Rankings (2018)
Residential segregation - nonwhite/white 2012-2016 (where 0 is complete integration and 100 is complete segregation)	24.89	58.69		University of Wisconsin, County Health Rankings (2018)
Living in same house 1 year & over, percent, 2012-2016	82.0%	84.9%	85.2%	US Census Bureau, Quick Facts (2018)
Housing units, 2016	115,467	2,919,671	135,697,926	US Census Bureau, Quick Facts (2018)

Households, 2012-2016	103,562	2,522,204	117,716,237	US Census Bureau, Quick Facts (2018)
Owner-occupied housing unit rate, 2012-2016	65.4%	66.3%	63.6%	US Census Bureau, Quick Facts (2018)
Owner occupied Black householder households, % of Black occupied households (2012-2016)	42.2%			Community Commons (2018)
Owner occupied Asian householder households, % of Asian occupied households (2012-2016)	69.5%			Community Commons (2018)
Owner occupied Hispanic householder households, % of Hispanic occupied households (2012-2016)	46.5%			Community Commons (2018)
Owner occupied white householder households, % of white occupied households (2012-2016)	69.9%			Community Commons (2018)
Persons per household, 2012-2016	2.76	2.54	2.64	US Census Bureau, Quick Facts (2018)
Median value of owner-occupied housing units, 2012-2016	$164,800	$146,000	$184,700	US Census Bureau, Quick Facts (2018)
Median household income, 2012-2016	$58,032	$46,574	$55,322	US Census Bureau, Quick Facts (2018)
Persons below poverty level, percent, 2012-2016	10.3%	15.8%	12.7%	US Census Bureau, Quick Facts (2018)
Housing Cost Burden (>30% monthly income), 2012-2016	28.0%	28.7%	32.9%	Community Commons (2018)
% of Rental Households that are Cost Burdened, 2012-2016	44.2%	44.2%	47.3%	Community Commons (2018)
Severe Housing Problems, 2010-2014	15%	16%	19%	University of Wisconsin, County Health Rankings (2018)
Overcrowded housing, 2012-2016	3.11%	2.1%	3.3%	Community Commons (2018)
Homelessness (2017)	316	8,309	554,000	Rutherford County, Point in Time Count (2017)
Homelessness (2015)	289	9123	564,708	HUD Exchange, PIT and HIC (2007)

Residential Segregation - black / white	29	67		University of Wisconsin, County Health Rankings (2018)
Transportation				
Mean travel time to work (minutes), workers age 16+, 2012-2016	28.1	24.7	26.1	US Census Bureau, Quick Facts (2018)
Households with No Vehicles, 2012-2016	3.4%	6.25%	8.97%	Community Commons (2018)
Driving Alone to work, 2012-2016	85%	84%	76%	University of Wisconsin, County Health Rankings (2018)
Long commute - driving alone	42%	34%	35%	University of Wisconsin, County Health Rankings (2018)
Workers Commuting by Public Transportation, 2012-2016	0.34%	0.78%	5.13%	US Census Bureau, American Community Survey (2012-2016)
Workers Commuting by Public Transportation, 2013-2017	0.30%	0.7%	5.15%	US Census Bureau, American Community Survey (2012-2016)
Percent of workers who walk or bike to work, 2013-2017	1.00%	1.49%	3.37%	Community Commons (2018)
Mortality - Motor Vehicle Accident, age-adj. rate per 100,000, 2010-2016	10	15	11	University of Wisconsin, County Health Rankings (2018)
Mortality - Pedestrian Accident, number of pedestrians killed, 2016	4	97	5,987.00	National Highway Traffic Safety Administration
Annual public transit trips per capita (2011)	2.00	4.40		US Department of Transportation (2018)
Annual public transit trips per capita score/100 (percentile) (urbanized area, 2011)	7.00	25.00		US Department of Transportation (2018)
Percent of population who commute by private vehicle (for Nashville-Davidson-Murfreesboro-Franklin Metropolitan Statistical Area and State)	92.20%	93.20%		US Department of Transportation (2018)
Percent of population who commute by public transit (for Nashville-Davidson-Murfreesboro-Franklin Metropolitan	1.10%	0.80%		US Department of Transportation (2018)

Statistical Area and State)			
Percent of population who commute by bicycle (for Nashville-Davidson-Murfreesboro-Franklin Metropolitan Statistical Area and State)	0.20%	0.10%	US Department of Transportation (2018)
Percent of population who commute by walking (for Nashville-Davidson-Murfreesboro-Franklin Metropolitan Statistical Area and State)	1.20%	1.30%	US Department of Transportation (2018)
Annual rate of DUI/DWI Fatalities per 10,000 residents (2012) (for Nashville-Davidson-Murfreesboro-Franklin Metropolitan Statistical Area and State)	3.1	4.60	US Department of Transportation (2018)
Annual rate of DUI/DWI Fatalities per 10,000 residents score/100 (percentile) (for Nashville-Davidson-Murfreesboro-Franklin Metropolitan Statistical Area and State)	48	26.00	US Department of Transportation (2018)
% of income average household spends on housing and transportation combined (for Nashville-Davidson-Murfreesboro-Franklin Metropolitan Statistical Area and State)	49.50%		US Department of Transportation (2018)
% of income average household spends on housing and transportation combined score/100 (percentile) (for Nashville-Davidson-Murfreesboro-	61.00		US Department of Transportation (2018)

Franklin Metropolitan Statistical Area)				
Road traffic fatalities per 100,000 residents - automobile (5-year avg. data 2008-2012) (for Nashville-Davidson-Murfreesboro-Franklin Metropolitan Statistical Area and State)	11.20	14.50		US Department of Transportation (2018)
Annual person miles of travel by private vehicle		31,480.00		US Department of Transportation (2018)
Annual person miles of travel by private vehicle score/100 (percentile)		35.00		US Department of Transportation (2018)
Annual person miles of travel by walking		95.00		US Department of Transportation (2018)
Annual person miles of travel by walking score/100 (percentile)		3.00		US Department of Transportation (2018)
% of foot/bicycle trips that are at least 10 minutes long (sustained exercise)		4.50%		US Department of Transportation (2018)
% of foot/bicycle trips that are at least 10 minutes long (sustained exercise) score/100 (percentile)		5.00		US Department of Transportation (2018)
Seat belt use by drivers and front seat passengers		83.70%		US Department of Transportation (2018)
Seat belt use by drivers and front seat passengers score/100 (percentile)		39.00		US Department of Transportation (2018)
Access to Healthy Food				
Food Environment Index (indicator of access to healthy foods with 0 being worst and 10 being best)	7.80	6.20		University of Wisconsin, County Health Rankings (2018)
Food Insecurity Rate, 2014	13.52%	16.90%	14.91%	Community Commons (2018)
Child Food Insecurity, 2014	20.80%	25.45%	23.49%	Community Commons (2018)

Percent Households Receiving SNAP Benefits, 2012-2016	11.44%	16.53%	13.05%	Community Commons (2018)
Limited Access to Health Foods	8%	8%	6%	University of Wisconsin, County Health Rankings (2018)
Fast food restaurants/1,000 pop. (2014)	0.70			USDA Food Environment Atlas
Fast food restaurants (% change) 2009-2014	18.13%			USDA Food Environment Atlas
Expenditures per capita on fast food (2012)	$665.32	$665.32		USDA Food Environment Atlas
Farmers' markets (2016)	4.00			USDA Food Environment Atlas
Farmers' markets (% change 2009-2016)	300.00%			USDA Food Environment Atlas
Fast Food Restaurant Access, rate per 100,000 pops., 2015	80.35%	75.12%	74.60%	Community Commons (2018)
Fast Food Restaurant Access, rate per 100,000 pop., 2012	72.73%	72.15%	72.84%	Community Commons (2018)
Grocery Store Access, rate per 100,000 pop. 2015	12.19%	17.41%	21.19%	Community Commons (2018)
% Population with low access to grocery store	24.78%			USDA Food Environment Atlas
% Low income population with low access to grocery store (2015)	7.96%			USDA Food Environment Atlas
Convenience stores/1,000 population (2014)	0.35			USDA Food Environment Atlas
Convenience stores % change 2009-2014	0.00%			USDA Food Environment Atlas
Liquor Store Establishments, Rate per 100,000 Population, 2016	10.66	9.71	11.00	Community Commons (2018)
Low Income Population with Low food Access, 2010	28.60%	24.10%	18.94%	Community Commons (2018)
Percent Population in Census Tract with No Food Outlet, Mod. Retail Food Environment Index	0.00%	0.34%	0.99%	Community Commons (2018)
Percent Population in Census Tract with No Healthy Food Outlet, Mod. Retail Food Environment Index	14.63%	23.74%	18.63%	Community Commons (2018)

Percent Population in Census Tract with Low Healthy Food Access, Mod. Retail Food Environment Index	33.74%	24.77%	30.89%	Community Commons (2018)
Percent Population in Census Tract with Moderate Healthy Food Access, Mod. Retail Food Environment Index	51.62%	48.87%	43.28%	Community Commons (2018)
Percent Population in Census Tract with High Healthy Food Access, Mod. Retail Food Environment Index	0.00%	2.27%	5.02%	Community Commons (2018)
Population with Low Food Access	28.74%	27.87%	22.43%	Community Commons (2018)
Neighborhood Safety - Crime				
Substantiated Child abuse/neglect cases, per 1,000 children, 2013	3.6	4.9		Annie E. Casey Foundation (2018)
Substantiated Child abuse/neglect cases, per 1,000 children, 2014	3.5	5.4		Annie E. Casey Foundation (2018)
Substantiated Child abuse/neglect cases, per 1,000 children, 2015	3.9	5.9		Annie E. Casey Foundation (2018)
Substantiated Child abuse/neglect cases, per 1,000 children, 2016	3.2	4.6		Annie E. Casey Foundation (2018)
Substantiated Child abuse/neglect cases, per 1,000 children, 2017	3.5	4.7		Annie E. Casey Foundation (2018)
Violent Crime Rate, rate per 100,000, 2012-2014	437	614	380	University of Wisconsin, County Health Rankings (2018)
Injury deaths, per 100,000, 2012-2016	55	83	65	University of Wisconsin, County Health Rankings (2018)
Economic Opportunity				
Opportunity Index Score (score/100 where 100 is best) (2017)	53.2	48.1		Opportunity Index (2017)
ACCESS TO HEALTH CARE				

PCP / Provider Availability				
Primary Care Provider Ratio, (population: provider), 2018	2300:1	1380:1		University of Wisconsin, County Health Rankings (2018)
Dentists Ratio, (population: provider), 2018	1860:1	1890:1		University of Wisconsin, County Health Rankings (2018)
Mental Health Provider Ratio, (population: provider), 2018	1270:1	740:1	529: 1	University of Wisconsin, County Health Rankings (2018)
Population Living in a Health Professional Shortage Area, Percent, 2016	0.00%	70.32%	33.13%	Community Commons (2018)
No Usual source of care (Adult), Percent - TN BRFSS				TN Department of Health, BRFSS (2013)
Percent Adults who needed to see a doctor but could NOT due to Cost, last 12 mo. BRFSS 2017		15.00%	13.5%	TN Department of Health, BRFSS (2013)
Less than $15,000		27.00%		TN Department of Health, BRFSS (2017)
$15,000-$24,999		23.30%		TN Department of Health, BRFSS (2017)
$25,000-$34,999		22.30%		TN Department of Health, BRFSS (2017)
$35,000-$49,999		14.80%		TN Department of Health, BRFSS (2017)
$50,000-74,999		9.10%		TN Department of Health, BRFSS (2017)
$75,000 +		4.00%		TN Department of Health, BRFSS (2017)
White		12.80%		TN Department of Health, BRFSS (2017)
Black		19.90%		TN Department of Health, BRFSS (2017)
Hispanic		18.30%		TN Department of Health, BRFSS (2017)
Other Race Non-Hispanic		26.50%		TN Department of Health, BRFSS (2017)
Multi Race Non-Hispanic		35.50%		TN Department of Health, BRFSS (2017)
Have one person you think of as a personal doctor or health care provider, percent, TN BRFSS 2016 [NO]		22.60%		TN Department of Health, BRFSS (2017)
White		20.80%		TN Department of Health, BRFSS (2017)
Black		24.80%		TN Department of Health, BRFSS (2017)
Hispanic		36.70%		TN Department of Health, BRFSS (2017)
Other Race Non-Hispanic		32.40%		TN Department of Health, BRFSS (2017)
Multi Race Non-Hispanic		31.70%		TN Department of Health, BRFSS (2017)
18-24		45.70%		TN Department of Health, BRFSS (2017)

25-34		36.60%		TN Department of Health, BRFSS (2017)
35-44		28.60%		TN Department of Health, BRFSS (2017)
45-54		15.60%		TN Department of Health, BRFSS (2017)
55-64		13.70%		TN Department of Health, BRFSS (2017)
65+		6.10%		TN Department of Health, BRFSS (2017)
Less than $15,000		29.20%		TN Department of Health, BRFSS (2017)
$15,000-$24,999		23.40%		TN Department of Health, BRFSS (2017)
$25,000-$34,999		24.30%		TN Department of Health, BRFSS (2017)
$35,000-$49,999		23.40%		TN Department of Health, BRFSS (2017)
$50,000-74,999		21.70%		TN Department of Health, BRFSS (2017)
$75,000 +		17.10%		TN Department of Health, BRFSS (2017)
Health Insurance				
Uninsured (<65) 2016	5.50%	20.70%	20.50%	US Census Bureau, American Community Survey (2013-2017)
Uninsured children (<19) 2017	3.00%	4.80%	5.70%	US Census Bureau, American Community Survey (2013-2017)
Health Insurance Coverage of Total Population, 2013 - Employer	61.90%	52.20%	54.50%	US Census Bureau, American Community Survey (2011-2013)
Health Insurance Coverage of Total Population, 2013 - Medicare	10.50%	17.10%	15.50%	US Census Bureau, American Community Survey (2011-2013)
Health Insurance Coverage of Total Population, 2013 - Medicaid	13.00%	19.10%	17.80%	US Census Bureau, American Community Survey (2011-2013)
Health Insurance Coverage of Total Population, 2013 - Other Private	71.50%	64.00%	65.20%	US Census Bureau, American Community Survey (2011-2013)
Health Insurance Coverage of Total Population, Uninsured 2014 ACS 5-year estimates	13.00%	13.60%	14.20%	US Census Bureau, American Community Survey (2011-2013)
Percent Uninsured, Total civilian noninstitutionalized population. American FactFinder 2013-2017 ACS Health Insurance Status	10.10%	10.90%	10.50%	US Census Bureau, American Community Survey (2013-2017)
Percent Uninsured, age Under 18 years American FactFinder 2011-2013 ACS Health Insurance Status	6.10%	5.70%	7.30%	US Census Bureau, American Community Survey (2011-2013)

Percent Uninsured, age 18-64 yrs. American FactFinder 2011-2013 ACS Health Insurance Status	18.60%	20.30%	20.60%	US Census Bureau, American Community Survey (2011-2013)
Percent Uninsured, age 65 years and older American FactFinder 2011-2013 ACS Health Insurance Status	1.20%	0.5	1.00%	US Census Bureau, American Community Survey (2011-2013)
Percent Uninsured, age 19 to 25 years American FactFinder 2011-2013 ACS Health Insurance Status	24.00%	25.50%	26.70%	US Census Bureau, American Community Survey (2011-2013)
Uninsured Population by Race: Non-Hispanic White	9.60%	10.00%	9.40%	US Census Bureau, American Community Survey (2013-2017)
Uninsured Population by Race: Black or African American	10.40%	12.50%	12.30%	US Census Bureau, American Community Survey (2013-2017)
Uninsured Population by Race: Native American / Alaska Native	2.8	18.50%	21.60%	US Census Bureau, American Community Survey (2013-2017)
Uninsured Population by Race: Asian	15.60%	13.20%	9.20%	US Census Bureau, American Community Survey (2013-2017)
Uninsured Population by Race: Native Hawaiian / Pacific Islander	0	14.00%	12.00%	US Census Bureau, American Community Survey (2013-2017)
Uninsured Population by Race: Non-Hispanic Other	24.10%	39.60%	23.60%	US Census Bureau, American Community Survey (2013-2017)
Uninsured Population by Race: Non-Hispanic Multiple Race	8.70%	9.40%	9.20%	US Census Bureau, American Community Survey (2013-2017)
Uninsured Population by Ethnicity Alone: Hispanic/Latino	33.70%	33.50%	21.20%	US Census Bureau, American Community Survey (2013-2017)
Dental Care				
Visited the dentist or dental clinic for any reason in past year (2016)		59.10%		TN Department of Health, BRFSS (2016)
<$15,000		36.00%		TN Department of Health, BRFSS (2016)
$15,000-$24,999		45.70%		TN Department of Health, BRFSS (2016)
$25,000-$34,999		50.40%		TN Department of Health, BRFSS (2016)
$35,000-$49,000		59.30%		TN Department of Health, BRFSS (2016)

$50,000-$74,000		70.20%	TN Department of Health, BRFSS (2016)
$75,000+		79.00%	TN Department of Health, BRFSS (2016)
Adults that have had 6+ permanent teeth removed because of tooth decay or gum disease (2016)		11.80%	TN Department of Health, BRFSS (2016)
<$15,000		22.00%	TN Department of Health, BRFSS (2016)
$15,000-$24,999		18.20%	TN Department of Health, BRFSS (2016)
$25,000-$34,999		12.50%	TN Department of Health, BRFSS (2016)
$35,000-$49,000		10.40%	TN Department of Health, BRFSS (2016)
$50,000-$74,000		10.70%	TN Department of Health, BRFSS (2016)
$75,000+		3.00%	TN Department of Health, BRFSS (2016)
College graduate		4.10%	TN Department of Health, BRFSS (2016)
H.S. or G.E.D.		13.80%	TN Department of Health, BRFSS (2016)
Less than H.S.		21.90%	TN Department of Health, BRFSS (2016)
Adults aged 65+ who have had all their natural teeth extracted, TN BRFSS 2016		21.60%	TN Department of Health, BRFSS (2016)
Have Not visited a dentist, dental hygienist or dental clinic within the past year, TN BRFSS 2016		59.10%	TN Department of Health, BRFSS (2016)
Hospitalizations			
Preventable Hospital Stays, per 100,000 Medicare enrollees	6,148	5,305	University of Wisconsin, County Health Rankings (2015)
Preventive Care			
Mammography Screening (% of Medicare enrollees ages 67-69 who have had mammogram in last 2 years - 2014) - White	67.90%	62.90%	University of Wisconsin, County Health Rankings (2018)
Mammography Screening (% of Medicare enrollees ages 67-69 who have had mammogram in last 2 years - 2014) - Black	77.90%	61.00%	University of Wisconsin, County Health Rankings (2018)
Males 40+ who have had PSA test in past 2 years (2016)		56.80%	TN Department of Health, BRFSS (2016)
Vaccinations			

During past 12 mths, had a seasonal flu shot or vaccine spray (Adults) 2016		36%	TN Department of Health, Immunization Status Survey (2018)
During past 12 mths, had a seasonal flu shot or vaccine spray (Adults 65 yo +) 2014		56.90%	TN Department of Health, BRFSS (2016)
Ever had a pneumonia shot (Adult) 2016		34%	TN Department of Health, BRFSS (2016)
Ever had a pneumonia shot (Adult Age 65+) 2016		74.10%	TN Department of Health, BRFSS (2016)
24-Month Vaccinations, 7 vaccine series, % complete 2017		82.00%	TN Department of Health, Immunization Status Survey (2018)
24-Month Vaccinations, Tap, % complete 2017		82.00%	TN Department of Health, Immunization Status Survey (2018)
24-Month Vaccinations, Poliomyelitis, % complete 2017		92.30%	TN Department of Health, Immunization Status Survey (2018)
24-Month Vaccinations, MMR, % complete 2017		90.10%	TN Department of Health, Immunization Status Survey (2018)
24-Month Vaccinations, Hepatitis B, % complete 2017		92.70%	TN Department of Health, Immunization Status Survey (2018)
24-Month Vaccinations, Hib, % complete 2017		78.70%	TN Department of Health, Immunization Status Survey (2018)
24-Month Vaccinations, Varicella, % complete 2017		90.30%	TN Department of Health, Immunization Status Survey (2018)
24-Month Vaccinations, Pneumococcus, % complete 2017		82.40%	TN Department of Health, Immunization Status Survey (2018)
24-Month Vaccinations, Hepatitis A series, % complete 2017		58.90%	TN Department of Health, Immunization Status Survey (2018)
24-Month Vaccinations, Influenza, % complete 2017		49.00%	TN Department of Health, Immunization Status Survey (2018)
24-Month Vaccinations, Rotavirus, % complete 2017		77.50%	TN Department of Health, Immunization Status Survey (2018)

Social Environment				
Social / emotional supports				
Linguistically isolated households, % of all households, 2012-2016	1.52%	1.54%		Community Commons (2018)
Lack of social or emotional support	13.4%	19%	21%	Community Commons (2018)
Social associations, memberships per 10,000 pop., 2015	7.0	11.3	9.3	University of Wisconsin, County Health Rankings (2018)
Children in single-parent households, 2012-2016	29%	36%	34%	University of Wisconsin, County Health Rankings (2018)
Faith congregations per 10K People, 2010	10			U.S. Religion Census (2010)
How often do you get the social and emotional support you need?				TN Department of Health, BRFSS (2016)
Always		49.40%		TN Department of Health, BRFSS (2016)
Usually		24.20%		TN Department of Health, BRFSS (2016)
Sometimes		14.50%		TN Department of Health, BRFSS (2016)
Rarely		4.90%		TN Department of Health, BRFSS (2016)
Never		7.10%		TN Department of Health, BRFSS (2016)
In general, how satisfied are you with your life?				TN Department of Health, BRFSS (2016)
Very satisfied		42.90%		TN Department of Health, BRFSS (2016)
Satisfied		49.80%		TN Department of Health, BRFSS (2016)
Dissatisfied		5.40%		TN Department of Health, BRFSS (2016)
Very dissatisfied		1.90%		TN Department of Health, BRFSS (2016)
Mental Health				
Mental Health				
Poor Mental Health Days, last 30 days (2016)	4.2	4.5	3.7 (2015)	University of Wisconsin, County Health Rankings (2018)
% for whom mental health days not good, 30 (2015)		33.9	34.3	TN Department of Mental Health & Substance Abuse Services (2017)
Adults with Mental Illness in the Past Year (2015)		19.90%	18.00%	TN Department of Mental Health & Substance Abuse Services (2017)
MH Providers (2017)	1180:1	700:1	529: 1	University of Wisconsin, County Health Rankings (2018)
Serious Mental Illness in the past year (18+) (2012-2014)		5.0 (2016)	3.9 (2015)	National Survey on Drug Use and Health (2016)

Received MH Services (18+)		15.1		National Survey on Drug Use and Health (2016)
Had serious thoughts of suicide (18+)		4.6		National Survey on Drug Use and Health (2016)
Major depressive episode (18+)		7.1 (2016)	6.1 (2015)	National Survey on Drug Use and Health (2016)
Frequent Mental Distress (% of adults reporting 14+ days of poor mental health per month)	12%	14%		University of Wisconsin, County Health Rankings (2018)
TDMHSAS-funded Admissions to substance abuse treatment services (female) (2016)		4,944		TN Department of Mental Health & Substance Abuse (2017)
TDMHSAS-funded Admissions to substance abuse treatment services (male) (2016)		9,057		TN Department of Mental Health & Substance Abuse (2017)
TDMHSAS-funded Admissions to substance abuse treatment services (2016)				TN Department of Mental Health & Substance Abuse (2017)
TDMHSAS-funded Admissions to substance abuse treatment services, % Black/African American (2016)		20.80%		TN Department of Mental Health & Substance Abuse (2017)
TDMHSAS-funded Admissions to substance abuse treatment services, % White (2016)		77.10%		TN Department of Mental Health & Substance Abuse (2017)
TDMHSAS-funded Admissions to substance abuse treatment services, % of admissions with prescription opioids as a substance of abuse (2016)	47.00%	41.40%		TN Department of Mental Health & Substance Abuse (2017)
TDMHSAS-funded Admissions to mental health services in regional mental health/private psych hospitals - rate/1,000 pop 18+ (2016)	1.8	2.3		TN Department of Mental Health & Substance Abuse (2017)
TDMHSAS-funded Admissions to mental health services in regional mental	407	12284		TN Department of Mental Health & Substance Abuse (2017)

health/private psych hospitals - # of admissions (2016)				
TDMHSAS-funded Admissions to mental health services in regional mental health/private psych hospitals - % female (2016)		33.60%		TN Department of Mental Health & Substance Abuse (2017)
TDMHSAS-funded Admissions to mental health services in regional mental health/private psych hospitals - % male (2016)		66.40%		TN Department of Mental Health & Substance Abuse (2017)
TDMHSAS-funded Admissions to mental health services in regional mental health/private psych hospitals - % 18-25 (2016) (dropped for 18-25)		16.10%		TN Department of Mental Health & Substance Abuse (2017)
TDMHSAS-funded Admissions to mental health services in regional mental health/private psych hospitals - % 26+ (2016) (grew for 26+)		83.90%		TN Department of Mental Health & Substance Abuse (2017)
TDMHSAS-funded Admissions to mental health services in regional mental health/private psych hospitals - % black/African American (2016) (grew for black's region 4)		23.80%		TN Department of Mental Health & Substance Abuse (2017)
TDMHSAS-funded Admissions to mental health services in regional mental health/private psych hospitals - % white (2016)		73.40%		TN Department of Mental Health & Substance Abuse (2017)
Behavioral Health Safety Net enrollees/1,000 individuals 18+ living in poverty (2016)		38.58		TN Department of Mental Health & Substance Abuse (2017)
TDMHSAS-funded Admissions to mental	1.8	2.3		TN Department of Mental Health & Substance Abuse (2017)

health services in regional mental health/private psych hospitals - rate/1000 pop 18+ (2016)				
Behavioral health Safety Net enrollees - declined in all three counties				TN Department of Mental Health & Substance Abuse (2017)
TDMHSAS-funded crisis services face-to-face assessments - rate/1000 pop 17 and under (2016)	5.9	7.38		TN Department of Mental Health & Substance Abuse (2017)
TDMHSAS-funded crisis services face-to-face assessments - rate/1000 pop 18+ (2016)	7.19	12.29		TN Department of Mental Health & Substance Abuse (2017)
Alcohol and drug abuse adolescent residential rehabilitation sites as of 05/15/2017 - # of beds available	0	333		TN Department of Mental Health & Substance Abuse (2017)
Substance abuse adolescent treatment sites in FY2016	0	15		TN Department of Mental Health & Substance Abuse (2017)
Alcohol and drug abuse adult residential rehabilitation sites as of 05/15/2017 - # of beds available	53	1305		TN Department of Mental Health & Substance Abuse (2017)
Substance abuse addictions recovery program sites in FY2016	0	84		TN Department of Mental Health & Substance Abuse (2017)
Mental Health Residential treatment sites for children / youth as of 05/15/2017 - # of beds available	40	1540		TN Department of Mental Health & Substance Abuse (2017)
Mental Health Residential treatment sites for adults as of 05/15/2017 - # of beds available	0	377		TN Department of Mental Health & Substance Abuse (2017)
Mental Health Adult supportive residential sites as of 05/15/2017 - # of beds available	0	651		TN Department of Mental Health & Substance Abuse (2017)
Licensed MH Psychosocial rehab	2	54		TN Department of Mental Health & Substance Abuse (2017)

program sites as of 05/19/2017 - # of beds available				
Opioid prescription rate per 100 population (2006-2017) (note that TN is ranked 3rd for this behind Alabama and Arkansas)	82.2	94.4		CDC, Opioid Prescribing Maps (2017)
Drug overdose deaths per 100,000 population (2010)		16.9		CDC, Opioid Prescribing Maps (2017)
Drug overdose deaths per 100,000 population (2016)		24.5		CDC, Opioid Prescribing Maps (2017)
Youth 12-17 who had at least one major depressive episode in last year (2015)		10.90%	11.90%	TN Department of Health, Behavioral Health Indicators (2017)
Youth high school grades 9-12 who reported depression (feeling sad or hopeless almost every day for 2 weeks + in a row) in previous 12 mo. (2015) (TN Ranked 17 of 37)		28.00%	29.90%	TN Department of Health, Behavioral Health Indicators (2017)
Youth high school grades 9-12 who attempted suicide in previous 12 mo. (2015) (TN ranked 22 of 35)		9.90%	8.60%	TN Department of Health, Behavioral Health Indicators (2017)
Youth high school grades 9-12 who were electronically bullied in previous 12 mo. (2015) (TN ranked 17 of 36)		15.30%	15.50%	TN Department of Health, Behavioral Health Indicators (2017)
Youth high school grades 9-12 who were bullied at school in previous 12 mo. (2015) (TN ranked 30 of 35)		24.10%	20.20%	TN Department of Health, Behavioral Health Indicators (2017)
Children 2-17 with a parent reporting doctor told them child has autism, developmental delays, depression, anxiety, ADD/ADHD, or behavioral		21.00%	17.00%	TN Department of Health, Behavioral Health Indicators (2017)

problems (2012) (TN ranked 43/50)				
Children 2-17 with emotional, developmental, or behavioral problems that received mental health care/counseling of some type in past 12 mo. (2011) (TN ranked 29/50)		60.20%	61.00%	TN Department of Health, Behavioral Health Indicators (2017)
Adults who report being very satisfied with access to mental health services, quality of services, and overall satisfaction (FY12-15)		>90%		Mental Health Statistical Improvement Project (2016)
Children who report being very satisfied with participation in treatment, cultural sensitivity, social connectedness, and satisfaction with services (FY12-15)		>90%		Mental Health Statistical Improvement Project (2016)
BIRTH OUTCOMES Infant Mortality				
Infant Mortality Rate (/1000 live births)	5.9	8.20	6.50	CARES Engagement (2018)
Infant Mortality Rate - Black	13.9	14.80	4.5	CARES Engagement (2018)
Infant Mortality Rate - White	5.6	6.50	5.5	CARES Engagement (2018)
Low Birth Weight				
Low birth weight, % (2017)	8.9	9.10	8.27	TN Department of Health
Low birthweight - black	12.3	14.60	13.88	TN Department of Health
Low birthweight - white	8	7.70	7.00	TN Department of Health
Very Low birth weight, % (2017)	1.4	1.50	1.40	TN Department of Health
Very Low Birthweight - black	2.7	2.90	2.95	TN Department of Health
Very Low Birthweight - white	1.3	1.20	1.05	TN Department of Health
Prenatal Care				
Adequate Prenatal Care, 2017	54	57.40		Annie E. Casey Foundation (2016)
Adequate Prenatal Care, 2016	55.6	52.40		Annie E. Casey Foundation (2016)

Adequate Prenatal Care, 2015	57.4	55.00		Annie E. Casey Foundation (2016)
Adequate Prenatal Care, 2014	55.7	56.60		Annie E. Casey Foundation (2016)
Adequate Prenatal Care, 2013	57.8	60.00		Annie E. Casey Foundation (2016)
Adequate Prenatal Care, 2012	56.4	59.10		Annie E. Casey Foundation (2016)
Percentage of women who smoked during pregnancy, 2017, All	8.7	12.70	7.20	Annie E. Casey Foundation (2016)
Percentage of women who smoked during pregnancy, 2017, White	9.7	14.50	10.50	Annie E. Casey Foundation (2016)
Percentage of women who smoked during pregnancy, 2017, African American	7.1	7.90	6.00	Annie E. Casey Foundation (2016)
Maternal outcomes				
Maternal mortality (per 100,000 births)		23.30	20.70	America's Health Rankings, United Health Foundation (2018)
Maternal mortality - Black		38.20	47.20	America's Health Rankings, United Health Foundation (2018)
Maternal mortality - White		20.80	18.10	America's Health Rankings, United Health Foundation (2018)
Aged 15-24		8.70	11.00	America's Health Rankings, United Health Foundation (2018)
Aged 25-34		19.20	14.00	America's Health Rankings, United Health Foundation (2018)
Aged 35-44		54.40	38.50	America's Health Rankings, United Health Foundation (2018)
Maternal Depression				
Told by provider had depression before pregnancy (2015)		10.50		Pregnancy Risk Assessment Monitoring System, PRAMS (2015)
Self-reported postpartum depressive symptoms (2015)		12.80		Pregnancy Risk Assessment Monitoring System, PRAMS (2015)
Breastfeeding Rates				
Ever Breastfed (2015)		87.10		Pregnancy Risk Assessment Monitoring System, PRAMS (2015)
Ever Breastfed (2016)		71.10	81.10	Breastfeeding Report, CDC (2016)
Teen Pregnancy				
Teen Pregnancy, rate/1,000 females age 15-17, 2017	9.2	12.4		Annie E. Casey Foundation (2018)
Teen Birth, rate/1,000 females age 15-17, 2016	7.8	28.00	20.00	Annie E. Casey Foundation (2018)

Teen Birth, rate/1,000 females age 15-19, 2011-2017	23	33.00	36.60	University of Wisconsin, County Health Rankings (2018)
Teen Birth, rate/1,000 Black, 2017	23			University of Wisconsin, County Health Rankings (2018)
Teen Birth, rate/1,000 White, 2017	21			University of Wisconsin, County Health Rankings (2018)
Vaccinations Percent of children complete at 24-months				
DTAP		82.00		TN Department of Health (2018)
Polio		92.30		TN Department of Health (2018)
MMR		90.10		TN Department of Health (2018)
Hib		78.70		TN Department of Health (2018)
Hep B		92.70		TN Department of Health (2018)
Varicella		90.30		TN Department of Health (2018)
Morbidity and Mortality Self-reported health status				
% Fair or Poor Health (2014-2016)	16%	19%	18.0%	University of Wisconsin, County Health Rankings (2018)
# Days in 30 - Physical Health Not Good (2016)	4.1	4.7	3.8	University of Wisconsin, County Health Rankings (2018)
- <$25k		9.4	7.2	University of Wisconsin, County Health Rankings (2018)
- $25k - 49.9k		4.1	4.1	University of Wisconsin, County Health Rankings (2018)
- $50-74.9k		2.6	3.1	University of Wisconsin, County Health Rankings (2018)
- $75k+		2.2	2.2	University of Wisconsin, County Health Rankings (2018)
- Age 18-44		2.7	2.6	University of Wisconsin, County Health Rankings (2018)
- Age 45-64		6.5	4.9	University of Wisconsin, County Health Rankings (2018)
- Age 65+		6	5.2	University of Wisconsin, County Health Rankings (2018)
- Black		4.1	4	University of Wisconsin, County Health Rankings (2018)
- Hispanic		3.6	3.6	University of Wisconsin, County Health Rankings (2018)
- Multiracial		9.5	5.9	University of Wisconsin, County Health Rankings (2018)
- White		4.7	4	University of Wisconsin, County Health Rankings (2018)
- Female		5.1	4.2	University of Wisconsin, County Health Rankings (2018)

- Male		4.2	3.5	University of Wisconsin, County Health Rankings (2018)
- < HS		9.6	6.6	University of Wisconsin, County Health Rankings (2018)
- HS Grad		5.4	4.6	University of Wisconsin, County Health Rankings (2018)
- College Grad		2.5	2.4	University of Wisconsin, County Health Rankings (2018)
Poor mental health days, past 30 days, 2016	4.2	4.5	3.8	University of Wisconsin, County Health Rankings (2018)
- <$25k		7.4	5.9	University of Wisconsin, County Health Rankings (2018)
- $25k - 49.9k		4.1	3.6	University of Wisconsin, County Health Rankings (2018)
- $50-74.9k		3.1	2.9	University of Wisconsin, County Health Rankings (2018)
- $75k+		2.4	2.3	University of Wisconsin, County Health Rankings (2018)
- Age 18-44		4.6	4.2	University of Wisconsin, County Health Rankings (2018)
- Age 45-64		5.2	3.9	University of Wisconsin, County Health Rankings (2018)
- Age 65+		2.6	2.4	University of Wisconsin, County Health Rankings (2018)
- Black		4.7	4	University of Wisconsin, County Health Rankings (2018)
- Hispanic		4.2	3.4	University of Wisconsin, County Health Rankings (2018)
- Multiracial		7.7	6.2	University of Wisconsin, County Health Rankings (2018)
- White		4.2	3.8	University of Wisconsin, County Health Rankings (2018)
- Female		5.2	4.3	University of Wisconsin, County Health Rankings (2018)
- Male		3.5	3.1	University of Wisconsin, County Health Rankings (2018)
- < HS		7.6	5.1	University of Wisconsin, County Health Rankings (2018)
- HS Grad		4.1	3.8	University of Wisconsin, County Health Rankings (2018)
- College Grad		2.7	2.5	University of Wisconsin, County Health Rankings (2018)
MORTALITY				
Life expectancy		76.3	80 (2017)	World Factbook, CIA (2017)
- male (2014)	75.8	73.5	77.7	World Life Expectancy, Tennessee (2014)
- female	80.2	79	82.2	World Life Expectancy, Tennessee (2014)
# of Deaths, by Cause	2014-2016	2016	2016	-
Total	5500	67857	2,744,248	Wonder, CDC (2018)
Heart Disease: Diseases of heart (I00-I09, I11, I13, I20-I51)	1234	15429	635,260	Wonder, CDC (2018)

Cancer: Malignant neoplasms (C00-C97)	1222	14450	598,038	Wonder, CDC (2018)
Accidents: Accidents (unintentional injuries) (V01-X59), Y85-Y86)	344	4318	161,374	Wonder, CDC (2018)
Lung Disease: Chronic lower respiratory diseases (J40-J47)	314	4238	154,596	Wonder, CDC (2018)
Alzheimer's Disease: Alzheimer's disease (G30)	318	3250	116,103	Wonder, CDC (2018)
Stroke: Cerebrovascular diseases (I60-I69)	285	3508	142,142	Wonder, CDC (2018)
Diabetes: Diabetes mellitus (E10-E14)	152	1883	80,058	Wonder, CDC (2018)
Suicide: Intentional self-harm (suicide) (*U03,X60-X84,Y87.0)	120	1111	44,965	Wonder, CDC (2018)
Flu / Pneumonia: Influenza and pneumonia (J09-J18)	109	1533	51,537	Wonder, CDC (2018)
Liver Disease / Cirrhosis: Chronic liver disease and cirrhosis (K70,K73-K74)	79	960	40,545	Wonder, CDC (2018)
Nephritis ((N00-N07,N17-N19,N25-N27))	72	1150	50,456	Wonder, CDC (2018)
% of deaths	2014-2016	2016	2016	-
Heart Disease: Diseases of heart (I00-I09,I11,I13,I20-I51)	22.4	22.7	23.1	Wonder, CDC (2018)
Cancer: Malignant neoplasms (C00-C97)	22.2	21.3	21.8	Wonder, CDC (2018)
Accidents: Accidents (unintentional injuries) (V01-X59), Y85-Y86)	6.3	6.4	5.9	Wonder, CDC (2018)
Lung Disease: Chronic lower respiratory diseases (J40-J47)	5.7	6.2	5.6	Wonder, CDC (2018)
Alzheimer's Disease: Alzheimer's disease (G30)	5.8	4.8	4.2	Wonder, CDC (2018)
Stroke: Cerebrovascular diseases (I60-I69)	5.2	5.2	5.2	Wonder, CDC (2018)
Diabetes: Diabetes mellitus (E10-E14)	2.8	2.8	2.9	Wonder, CDC (2018)

Suicide: Intentional self-harm (suicide) (*U03,X60-X84,Y87.0)	2.2	1.6	1.6	Wonder, CDC (2018)
Flu / Pneumonia: Influenza and pneumonia (J09-J18)	2.0	2.3	1.9	Wonder, CDC (2018)
Liver Disease / Cirrhosis: Chronic liver disease and cirrhosis (K70,K73-K74)	1.4	1.4	1.5	Wonder, CDC (2018)
Nephritis ((N00-N07,N17-N19,N25-N27))	1.3	1.7	1.8	Wonder, CDC (2018)
Septicemia (A40-A41)	0.0	0.0	0.0	Wonder, CDC (2018)
Age adjusted Death Rate / 100k, by Cause	2014-2016	2016	2016	
Total Death Rate	614.0	1020.2	728.8	Wonder, CDC (2018)
- Black male			1,081.2	Mortality in the United States, CDC (2016)
- Black female			734.1	Mortality in the United States, CDC (2016)
- white male			879.5	Mortality in the United States, CDC (2016)
- white female			637.2	Mortality in the United States, CDC (2016)
- Hispanic male			631.8	Mortality in the United States, CDC (2016)
- Hispanic female			436.4	Mortality in the United States, CDC (2016)
Heart Disease: Diseases of heart (I00-I09,I11,I13,I20-I51)	177.5	198.8	165.5	Wonder, CDC (2018)
Cancer: Malignant neoplasms (C00-C97)	163.1	179.9	155.8	Wonder, CDC (2018)
Accidents: Accidents (unintentional injuries) (V01-X59), Y85-Y86)	41.7	61.1	47.4	Wonder, CDC (2018)
Lung Disease: Chronic lower respiratory diseases (J40-J47)	46.4	54.7	40.6	Wonder, CDC (2018)
Alzheimer's Disease: Alzheimer's disease (G30)	55.0	44.2	30.3	Wonder, CDC (2018)
Stroke: Cerebrovascular diseases (I60-I69)	44.2	46.0	37.3	Wonder, CDC (2018)
Diabetes: Diabetes mellitus (E10-E14)	21.9	24.0	21.0	Wonder, CDC (2018)
Suicide: Intentional self-harm (suicide) (*U03,X60-X84,Y87.0)	13.5	16.3	13.5	Wonder, CDC (2018)
Flu / Pneumonia: Influenza and pneumonia (J09-J18)	16.4	20.1	13.5	Wonder, CDC (2018)

Liver Disease / Cirrhosis: Chronic liver disease and cirrhosis (K70,K73-K74)	9.2	12.2	10.7	Wonder, CDC (2018)
Assault (homicide) (*U01-*U02,X85-Y09,Y87.1)	--	--	--	Wonder, CDC (2018)
Nephritis ((N00-N07,N17-N19,N25-N27))	10.5	14.9	13.1	Wonder, CDC (2018)
Septicemia (A40-A41)	8.0	11.9	10.7	Wonder, CDC (2018)
Years of Potential Life Lost (YPLL)	2016	2016	2016	
Premature Death (YPLL <75)	20582	613214	22047384	TN Department of Health, YPPL (2016)
- White YPLL	16414	472,225	16750094	TN Department of Health, YPPL (2016)
- Black YPLL	3233	132,590	4359397	TN Department of Health, YPPL (2016)
Age Adjusted YPLL / 100k (2014-2016)	6379.0	8,760.0		University of Wisconsin, County Health Rankings (2018)
- Black	7199	--		University of Wisconsin, County Health Rankings (2018)
- Hispanic	3794	--		University of Wisconsin, County Health Rankings (2018)
- White	6589	--		University of Wisconsin, County Health Rankings (2018)
YPLL Rate / 100k	368.0	557.9	--	TN Department of Health, YPPL (2016)
- White rate	401.6	578.5	--	TN Department of Health, YPPL (2016)
- Black rate	293.5	575.1	--	TN Department of Health, YPPL (2016)
# YPLL from Cancer	4248	116,575	4362037	TN Department of Health, YPPL (2016)
# YPLL from Heart Disease	3177	104582	3225740	TN Department of Health, YPPL (2016)
# YPLL from Accidents	3674	103857	3901259	TN Department of Health, YPPL (2016)
# YPLL from Suicide	1280	31580	1289181	TN Department of Health, YPPL (2016)
# YPLL from deaths in Perinatal Period	1192	18725	860014	TN Department of Health, YPPL (2016)
# YPLL from Homicide	419	22748	795211	TN Department of Health, YPPL (2016)
# YPLL from Stroke	412	16942	543414	TN Department of Health, YPPL (2016)
# YPLL from Chronic Lung DIsease	643	23218	622866	TN Department of Health, YPPL (2016)
# YPLL from Diabetes	630	15878	596730	TN Department of Health, YPPL (2016)
# YPLL from Liver Disease	--	14342	610807	TN Department of Health, YPPL (2016)
# YPLL congenital anomalies	409	--	--	TN Department of Health, YPPL (2016)
Years of Potential Life Lost (YPLL), by % of Total YPLL (years reviewed)	2016	2016	2016	
% YPLL from Cancer	20.6	19.0	19.8	TN Department of Health, YPPL (2016)

% YPLL from Heart Disease	15.4	17.1	14.6	TN Department of Health, YPPL (2016)
% YPLL from Accidents	17.9	16.9	17.7	TN Department of Health, YPPL (2016)
% YPLL from Suicide	6.2	5.1	5.8	TN Department of Health, YPPL (2016)
% YPLL from deaths in Perinatal Period	5.8	3.1	3.9	TN Department of Health, YPPL (2016)
% YPLL from Homicide	2.0	3.7	3.6	TN Department of Health, YPPL (2016)
% YPLL from Stroke	2.0	2.8	2.5	TN Department of Health, YPPL (2016)
% YPLL from Chronic Lung DIsease	3.1	3.8	2.8	TN Department of Health, YPPL (2016)
% YPLL from Diabetes	3.1	2.6	2.7	TN Department of Health, YPPL (2016)
% YPLL from Liver Disease	--	2.3	2.8	TN Department of Health, YPPL (2016)
% YPLL from congenital anomalies	2.0	--	--	TN Department of Health, YPPL (2016)
Disability	2016	2016	2016	-
difficulty dressing or bathing %	2	3.30	2.70	US Census Bureau, American Community Survey (2018)
Difficulty seeing, even w/ glasses %	1.9	3.00	2.30	US Census Bureau, American Community Survey (2018)
Difficulty concentrating, remembering or making decisions %	4.2	6.30	5.00	US Census Bureau, American Community Survey (2018)
Difficulty walking or climbing stairs %	5.4	9.10	7.00	US Census Bureau, American Community Survey (2018)
Natural Environment				
Air				
Air Pollution - Particulate Matter, Avg. daily density of fine particulate matter in micrograms per cubic meter, 2014	11.2	10.0	8.7	University of Wisconsin, County Health Rankings (2018)
Behavioral Risk Factors				
Obesity & Nutrition				
Obese adults, 2019 (%)	33%	33%		University of Wisconsin, County Health Rankings (2018)

Obese adults, 2018 (%)	36%	32%	40%	University of Wisconsin, County Health Rankings (2018)
Adults who have a Body Mass Index Greater than 25 (Overweight or Obese), 2016		33.20%	35%	University of Wisconsin, County Health Rankings (2018)
Adults who have a Body Mass Index Greater than 30 (Obese), 2016	36%	34.80%	30%	University of Wisconsin, County Health Rankings (2018)
Access to Exercise Opportunities, 2019	74%	71%		University of Wisconsin, County Health Rankings (2018)
Leisure Time / Physical Activity				-
Adults who reported doing physical activity or exercise during past 30 days other than regular job		71.60%	76.9%	University of Wisconsin, County Health Rankings (2018)
Recreation and fitness facilities - total # of sites in county (2014)	18.00			USDA Food Environment Atlas (2018)
Recreation and fitness facilities/ 1,000 pop. (2014)	0.06			USDA Food Environment Atlas (2018)
Percentage of adults age 20 and over reporting no leisure-time physical activity, 2015	25%	27%		University of Wisconsin, County Health Rankings (2018)

Percentage of adults age 20 and over reporting no leisure-time physical activity, 2014	29%	30%	University of Wisconsin, County Health Rankings (2018)
Have you used internet in the past 30 days			
18 - 24			
		97.20%	TN Department of Health, BRFSS (2016)
25-34			
		95.20%	TN Department of Health, BRFSS (2016)
35-44			
		91.60%	TN Department of Health, BRFSS (2016)
45-54			
		80.70%	TN Department of Health, BRFSS (2016)
55-64			
		74.70%	TN Department of Health, BRFSS (2016)
65+			
		53.70%	TN Department of Health, BRFSS (2016)
College graduate			
		96.20%	TN Department of Health, BRFSS (2016)

H.S. or G.E.D.		75.70%		TN Department of Health, BRFSS (2016)
Less than H.S.		47.00%		TN Department of Health, BRFSS (2016)
Firearms				-
Handgun Carry Permits Issued, 2017	9149	218,536	16,358,844	Tennessee Department of Safety and Homeland Security (2017)
Handgun Carry Permits Revoked, Suspended, or Denied, 2017	261	5134		Tennessee Department of Safety and Homeland Security (2017)
Firearm Deaths-- all intents, 2016 (per 100,000)	149	1148		University of Wisconsin, County Health Rankings (2018)
Number of deaths due to firearms per 100,000 population, 2012-2016	10	16		University of Wisconsin, County Health Rankings (2018)
Substance Use / Abuse				-
Number of drug overdose deaths per 100,000, 2014-2016	147	22		University of Wisconsin, County Health Rankings (2018)

Number of TDMHSAS-licensed mental health and substance abuse sites	77	2671		TN Department of Mental Health and Substance Abuse (2018)
Estimates of current illicit drug use among youth ages 12-17, 2012-2014		7.5%	9.3%	TN Department of Mental Health and Substance Abuse (2018)
Estimates of current illicit drug use among adults 18+, 2012-2014		6.8%	9.6%	TN Department of Mental Health and Substance Abuse (2018)
Tobacco				-
Current smokers, Adult, Percent of Adults Age 18+, 2016	20%	21.9%	15.5%	University of Wisconsin, County Health Rankings (2018)
Current tobacco use among youth ages 12-17, 2012-2014		10.0%	7.8%	University of Wisconsin, County Health Rankings (2018)
Percent of Adults Ever Smoking 100 or More Cigarettes, 2011-2012	41.12%	47.97%	44.16%	Community Commons (2018)
Adults Ever Smoking 100 or More Cigarettes, White Non-Hispanic, Percent, 2011-12		50.64%	48.52%	Community Commons (2018)
Adults Ever Smoking 100 or More Cigarettes, Black Non-Hispanic, Percent, 2011-12		36.49%	38.34%	Community Commons (2018)

Adults Ever Smoking 100 or More Cigarettes, Other Race Non-Hispanic, Percent, 2011-12	44.11%	31.30%	Community Commons (2018)
Adults Ever Smoking 100 or More Cigarettes, Hispanic/Latino, Percent, 2011-12	45.36%	34.17%	Community Commons (2018)
Smoke Every Day			
	15.2%	12.4%	BRFSS (2016)
College graduate			
	4.5		BRFSS (2016)
H.S. or G.E.D.			
	18.6		BRFSS (2016)
Less than H.S.			
	27.5		BRFSS (2016)
<$15000			
	27.7		BRFSS (2016)
$15,000-$24,999			
	21.0		BRFSS (2016)
$25,000-$34,999			
	17.9		BRFSS (2016)

$35,000-$49,999				
		12.3		BRFSS (2016)
$50,000+				
		9.2		BRFSS (2016)
Annual deaths from smoking related causes				
			480,000	Tobacco Data, CDC (2018)
Percent Smokers with Quit Attempt in Past 12 Months, 2011-2012.				
	84.15%	61.54%	60.02%	Community Commons (2018)
Alcohol				
Excessive Drinking				
	18.0%	14.0%	26.9%	University of Wisconsin, County Health Rankings (2018)
Alcohol-impaired driving deaths, % of deaths with alcohol involvement, 2012-2016	25%	28%	29%	University of Wisconsin, County Health Rankings (2018)
Percent of admissions to substance abuse treatment services with alcohol as substance of abuse, FY 2016	48.0%	42.1%	34%	TN Department of Mental Health and Substance Abuse (2018)
Estimates of alcohol dependence or abuse among youth ages 12-17, 2012-2014		2.7%	3%	TN Department of Mental Health and Substance Abuse (2018)

Estimates of alcohol dependence or abuse among adults 18+, 2012-2014		5.8%	7%	TN Department of Mental Health and Substance Abuse (2018)
Binge drinkers, percent, TNBRFSS 2016		13.10%	16.9%	TN Department of Mental Health and Substance Abuse (2018)
Alcohol-impaired driving deaths, % of death with alcohol involvement, 2009-2013	25%	28%	29%	University of Wisconsin, County Health Rankings (2018)
Opioid Use				-
Past year nonmedical use of pain relievers, adults 18+, 2012-2014		4.1%	4.2%	TN Department of Mental Health and Substance Abuse (2018)
Past year nonmedical use of pain relievers, adults 18+, 2008-2010		4.6%	4.7%	TN Department of Mental Health and Substance Abuse (2018)
Percent of admissions to substance abuse treatment services with prescription opioids as substance of abuse, FY 2016	47.0%	41.4%	34.0%	TN Department of Mental Health and Substance Abuse (2018)
Percent of drug overdose deaths involving an opioid, 2015	78.6%	72%	73.00%	TN Department of Mental Health and Substance Abuse (2018)
Percent of drug overdose deaths involving heroin, 2015	17.9%	15.90%	25.00%	TN Department of Mental Health and Substance Abuse (2018)

Child / Adolescent Health				
Social / emotional supports				-
Disconnected Youth (ages 16-19 who are neither working nor in school) 2013-2017	4.00%	8.00%		-
Child Injury / Death				University of Wisconsin, County Health Rankings (2018)
Child mortality rate per 100,000 population, age <18, 2014		59.40	49.70	-
Child mortality rate per 100,000 population by race, age <18, 2014, Black		97.90		TN Department of Health, Child Fatality Annual Report (2017)
Child mortality rate per 100,000 population by race, age <18, 2014, White		50.80		TN Department of Health, Child Fatality Annual Report (2017)
Sleep-related deaths rate per 1,000 live births, 2014				TN Department of Health, Child Fatality Annual Report (2017)
Fatalities in crashes involving young drivers age 15 to 20, 2016		127	4,853	TN Department of Health, Child Fatality Annual Report (2017)

Child Abuse / Neglect				
Reported child abuse cases victims younger than 18, 2018, percent of same age population	3.4%	4.7%		Annie E. Casey Foundation (2018)
Youth Risk Behavior Survey High School Youth, ever tried cigarette smoking				
		31.6	28.9	Youth Risk Behavior Surveillance System, CDC (2013)
High School Youth, Smoked a whole cigarette before age 13 yrs. for first time				
		12.3	9.5	Youth Risk Behavior Surveillance System, CDC (2013)
High School Youth, Currently smoke cigarettes				
		9.4	8.8	Youth Risk Behavior Surveillance System, CDC (2013)
High School Youth, Currently smoke cigarettes, White				
		11.6	11.1	Youth Risk Behavior Surveillance System, CDC (2013)
High School Youth, Currently smoke cigarettes, Black or African American Students		1.9	4.4	Youth Risk Behavior Surveillance System, CDC (2013)
High School Youth, Currently smoke cigarettes, Hispanic/Latino				
		7.4	7	Youth Risk Behavior Surveillance System, CDC (2013)

High School Youth, Currently smoked cigarettes frequently	2.8	2.6	Youth Risk Behavior Surveillance System, CDC (2013)
High School Youth, were obese	20.5	14.8	Youth Risk Behavior Surveillance System, CDC (2013)
High School Youth, were obese, white	20.4	12.5	Youth Risk Behavior Surveillance System, CDC (2013)
High School Youth, were obese, black or African American	20.7	18.2	Youth Risk Behavior Surveillance System, CDC (2013)
High School Youth, were obese, Hispanic/Latino	22	18.2	Youth Risk Behavior Surveillance System, CDC (2013)
High School Youth, were overweight	17.5	15.6	Youth Risk Behavior Surveillance System, CDC (2013)
High School Youth, did not eat vegetables	10.0	7.2	Youth Risk Behavior Surveillance System, CDC (2013)
High School Youth, did not drink milk	30.2	26.7	Youth Risk Behavior Surveillance System, CDC (2013)
High School Youth, did not participate in at least 60 min of Physical activity on at least 1 day	16.8	15.4	Youth Risk Behavior Surveillance System, CDC (2013)

High School Youth, Were not physically active at least 60 min per day on 5 or more days		55.9	53.5	Youth Risk Behavior Surveillance System, CDC (2013)
High School Youth, did not play on at least one sports team				
		50.8	45.7	Youth Risk Behavior Surveillance System, CDC (2013)
Health Insurance Youth on Encore (2018)				
	33.5	44.8		Annie E. Casey Foundation (2018)
Uninsured Children and you're under age 19 (2016)				
	3.3	3.7		Annie E. Casey Foundation (2018)
Uninsured Children and youth qualify for CHIP or Medicaid (2016)				
	5.3	4.8		Annie E. Casey Foundation (2018)
Pediatrician Rate (/10k) (2015)				
	4.0			Children's Mental Health, CDC (2018)
Psychiatrist rate (/10k) (2015)				
	2.6			Children's Mental Health, CDC (2018)
Psychologist rate (/10k) (2015)				
	7.6			Children's Mental Health, CDC (2018)

LSW rate (/10k) (2015)	11.3			Children's Mental Health, CDC (2018)
Childhood Obesity				-
Public School students measured as overweight or obese	40.3	39.2		Annie E. Casey Foundation (2018)